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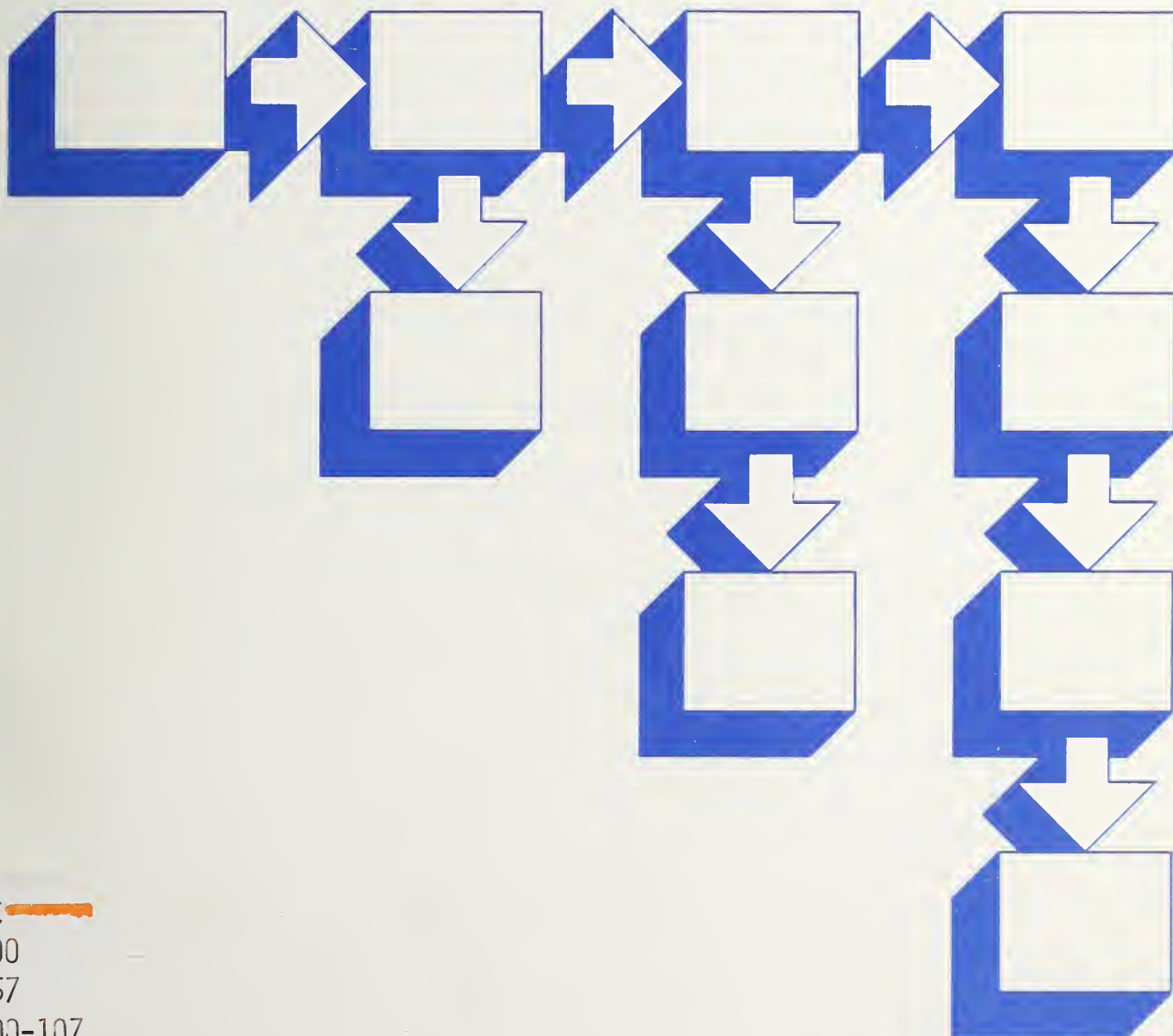
Computer Science and Technology

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NBS Special Publication 500-107

PUBLICATIONS

A Bibliography of the Literature on Optical Storage Technology



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A Bibliography of the Literature on Optical Storage Technology

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U.S. DEPARTMENT OF COMMERCE
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A BIBLIOGRAPHY OF THE LITERATURE ON OPTICAL STORAGE TECHNOLOGY

TABLE OF CONTENTS

Abstract

1.0	Introduction	1
2.0	How To Use This Bibliography	2
3.0	General Indexes	5
3.1	Author Index	5
3.2	Corporate Author Index	23
3.3	Title Index	36
3.4	Patent Number Index	64
3.5	Inventor Index	67
3.6	Patent Assignee Index	71
4.0	Classification Index	75
4.1	Ablation	75
4.2	Acoustics and Electrooptics	75
4.3	Archival	75
4.4	Curie-Point Recording	75
4.5	Detectors and Detection	76
4.6	Disk Drives and Servomechanisms	76
4.7	Error Detection and Correction, Coding	76
4.8	Holography and Holographic Recording	76
4.9	Lasers	77
4.10	Magneto-optics	77
4.11	Materials and Properties	77
4.12	Media	78
4.13	Optics	79
4.14	Overviews, Reviews, Surveys, and General	79
4.15	Physics	80
4.16	Recording Structures	80
4.17	System Descriptions	80
4.18	Thermomagnetic Recording	80
4.19	Thermoplastic Recording	80
5.0	Citations	81
5.1	Media Annotations	81
5.2	General Literature	102
5.3	Patent Literature	159

A BIBLIOGRAPHY OF THE LITERATURE ON OPTICAL STORAGE TECHNOLOGY

James R. Park

ABSTRACT

This bibliography contains nearly 700 references related to optical storage and retrieval of digital computer data. The citations are divided into two major groupings: General Literature and Patent Literature Documents. Annotations are provided under the General Literature for many of the references in the critical area concerned with the media used for the optical recording and playback of optical digital data disks. The documents have been classified into several broad categories for the user's convenience. Access to the individual citations for each category is obtained through cross indexes which facilitate the rapid selection of pertinent articles. In addition to the categorical classifications, several other indexes are included in this bibliography.

KEY WORDS: bibliography; computer disk; magnetooptic materials; optical computer disk; optical data disk; optical digital data disk; OD³; optical disk; optical storage; video disc.

1.0 INTRODUCTION

Within a few years, it is expected that some type of an optical device will be utilized for the storage and retrieval of digital computer data. At this time however, there are no commercial devices available for this purpose. Early attempts at utilizing optical storage for computer data were not successful due to a variety of reasons, most notably the lack of a suitable recording medium. However, recent research has led to the development of satisfactory media and the promise of viable commercial systems.

This bibliography has been compiled to serve as a working tool for those who are involved in optical storage research, planning, and development. Since the recording medium plays such a critical role in these systems, some of the citations which are directly concerned with the optical storage media have been annotated.

This is a non-critical, non-selective bibliography; no attempt has been made to prejudge the value of the documents. It is the opinion of the author that errors of inclusion are much less serious than errors of

omission, and within the available time span, every effort has been made to be as complete as possible. All documents cited in this bibliography have been obtained by NBS; however, the documents are not available from NBS for external use.

In order to increase the bibliography's usefulness and versatility, several indexes have been included.

A Classification Index can be used to search for papers on various topics such as magnetooptics, optics, thermoplastic recording, etc. The classification scheme is neither rigid nor exclusive. Some documents are indexed under more than one category. Other indexes lead to papers by particular authors or the papers produced by authors from a given organization. A Title Index is also included. Three indexes are given for the patent documents: a Patent Number Index, an Inventor Index, and a Patent Assignee Index. The citations have been made as complete as possible in order to facilitate the acquisition of desired documents. Document source names in the citations have been spelled out in their entirety in order to reduce the confusion which can arise from imprecise or unfamiliar abbreviations.

The principal information in this bibliography is concerned with the optical digital data disk (OD³); and although there are several video disc and holographic storage citations, no attempt was made to actively search in these areas. A few documents have been cited for 1982, but the primary collection extends only through 1981.

2.0 HOW TO USE THIS BIBLIOGRAPHY

The bibliographic information for each document is contained in a citation which can be accessed through a callout. Each citation contains:

- . The author's name(s)
- . The document title
- . The document source
- . The publication date
- . The number of references given.

Callouts are unique identifiers for the documents and their citations. Each callout consists of an author's name, one or two initials, and the year of publication--all enclosed in parentheses. In the event of multiple publications in the same year by the same author, letter suffixes following the year of publication are used for further identification. A typical callout is: (CHEN,D 70A); this designates the first paper published by Di Chen in 1970. Callouts for the patent documents are done in a similar manner using the inventor's name preceded by USP, for example (USP KLEINKNECHT,HP 79).

There are three groups of citations and within each group, the citations are arranged in alphabetical order based on the author's or inventor's names in the callouts. The largest group of citations is the General Literature Bibliography which contains the bulk of the bibliographic information. A companion group is the Annotated Media Bibliography containing citations which are identical to those found in the General Literature Bibliography but are accompanied by a short paragraph describing the major content and results presented in the document. The third group of citations is the Patent Literature Bibliography which contains bibliographic information relative to the patent documents.

HOW TO USE THE INDEXES

There are six general indexes which provide rapid access to document citations if some specific knowledge is known about a particular document. The Author Index enables the reader to find all of the cited documents which are attributed to a given author by searching for that author's name in the Author Index. When the author's name is found, one or more callouts will be associated with the name.

These callouts are then located in the General Literature Bibliography where the citations can be examined. Suppose that the reader desires to find the citations attributed to R. S. Mezrich. Look in the Author Index for Mezrich, R.S. and find the following callouts:

(LOHMAN, RD 71) (MEZRICH, RS 69) (MEZRICH, RS 70A)
(MEZRICH, RS 70B) (STEWART, WC 73).

This indicates that there are five papers attributed to R.S. Mezrich, three of which indicate principal authorship; i.e., Mezrich's name appeared first in the event of coauthorship. Two other papers for which Mezrich was a coauthor appear under the name of the principal author. One can now locate these callouts in the General Literature Bibliography and find the titles and source documents for these papers.

In a similar fashion, the papers sponsored by an organization can be found by looking for the organization's name in the Corporate Author Index and locating the citations in the General Literature Bibliography through use of the callouts associated with the organization's name. The Title Index, when consulted for a specific title, permits the reader to determine if the particular paper is included in this bibliography. If the title is indexed, there will only be one callout to be located in the General Literature Bibliography. The words "A," "An," and "The" were omitted in the process of alphabetizing the Title Index.

Access to patent citations is accomplished by using the Patent Number Index, Inventor Index, and the Patent Assignee Index. The procedure is similar to that for using the other general indexes. A specific feature; i.e., a patent number, inventor name, or a patent assignee, is searched for in the appropriate index and the callouts determined. These callouts

are then located in the Patent Literature Bibliography for examination of the citations.

Another index, the Classification Index, serves a somewhat different purpose. It is used to find groups of documents associated with particular topics. In the Classification Index, there are a number of topical headings accompanied by groups of callouts. These callouts designate the papers in this bibliography which are related to the topic heading. Suppose the reader wishes to find the papers related to archival storage of digital computer data. The procedure would be to locate the Archival heading in the Classification Index and find the callouts

(AMMON,GJ 78) (AMMON,GJ 80) (BOSCH,MA 82)
(DREXLER,J 81) (GELLER,SB 74) (REDDERSON,BR 80B).

These callouts may now be used to locate the citations in the General Literature Bibliography. There is one exception to using the General Literature Bibliography: If the Media category is consulted, the callouts should be located in the Annotated Media Bibliography, where not only the citations will be found, but also descriptions of the papers.

3.0 GENERAL INDEXES

3.1 AUTHOR INDEX

Aagard, Roger L.	(AAGARD,RL 68) (AAGARD,RL 71) (AAGARD,RL 71) (AAGARD,RL 71) (AAGARD,RL 72) (AAGARD,RL 73A) (AAGARD,RL 73B) (BERNAL,GE 70) (CHEN,D 68A) (CHEN,D 70A) (CHEN,D 70B)
Adachi, Kengo	(ADACHI,K 61)
Adams, Edmond	(ADAMS,E 56)
Ahn, Kie Y.	(AHN,KY 68) (AHN,KY 70A) (AHN,KY 70B) (AHN,KY 71) (AHN,KY 82) (HERD,SR 82A) (HERD,SR 82B) (MCGUIRE,TR 71) (TU,KN 72)
Ahrenkiel, Richard K.	(AHRENKIEL,RK 73) (AHRENKIEL,RK 74) (AHRENKIEL,RS 75)
Aisenberg, S.	(AISENBERG,S 81)
Alexandru, L.	(LAW,KY 80)
Allen, Thomas H.	(ALLEN,TH 81) (ASH,GS 80)
Almasi, G.S. 71	(ALMASI,GS 71)
Alphonse, G.A.	(BURKE,WJ 78)
Ammon, G.J.	(AMMON,GJ 78) (AMMON,GJ 79) (AMMON,GJ 80) (AMMON,GJ 81A) (AMMON,GJ 81B)
Amodei, Juan J.	(AMODEI,JJ 71) (AMODEI,JJ 72) (BORDOGNA,J 72)
Anderson, H.R., Jr.	(ANDERSON,HR 71)
Anderson, Lawrence K.	(ANDERSON,LK 66) (ANDERSON,LK 67) (ANDERSON,LK 68) (ANDERSON,LK 71)
Andresen, A.F.	(ANDRESEN,AF 67) (ANDRESEN,AF 72)
Arams, Frank R.	(MELCHIOR,H 70)
Argyle, B.E.	(SUITS,JC 66)
Arnett, R.J.	(GOODENOUGH,JB 61)
Asbeck, P.M.	(ASBECK,PM 79)
Aseltine, John A.	(NEALE,RG 73)
Ash, Gary S.	(ALLEN,TH 81) (ASH,GS 80)
Ashkin, A.	(ASHKIN,A 66)
Bacon, D.D.	(SHERWOOD,RC 71)
Bademian, Leo	(BADEMIAN,L 81)
Badoz, Jacques P.	(FERRE,J 71)
Ballman, A.A.	(ASHKIN,A 66)
Barbe, David F.	(BARBE,DF 75)
Bardos, Andrew	(BARDOS,A 74)
Barrett, R.	(BARRETT,R 81) (BARRETT,R 82)
Bartkus, E.A.	(ANDERSON,HR 71)
Bartolini, Robert A.	(BARTOLINI,RA 74) (BARTOLINI,RA 76) (BARTOLINI,RA 78) (BARTOLINI,RA 79) (BARTOLINI,RA 81A) (BARTOLINI,RA 81B) (BELL,AE 79A) (BELL,AE 79B)
Barton, Lucian B.	(HEILMEIER,GH 68)
Basov, N.G.	(BASOV,NG 72)

3.1 AUTHOR INDEX

3.1 AUTHOR INDEX

Bean, C.P.	(BEAN,CP 55) (ROBERTS,BW 54)
Beauchamp, H.L.	(LIN,LH 70)
Beck, J.W.	(BECK,JW 70) (MACDONALD,RE 69)
Becker, C.H.	(BECKER,CH 66)
Beesley, M.J.	(BEESLEY,MJ 70)
Bell, Alan E.	(BARTOLINI,RA 78) (BARTOLINI,RA 79)
	(BELL,AE 78) (BELL,AE 79A) (BELL,AE 79B)
	(BELL,AE 82)
Beni, G.	(BOSCH,MA 82)
Bennett, W.R.	(JAVAN,A 61)
Berg, A.D.	(BERG,AD 76)
Berg, N.J.	(LEE,JN 79)
Berkowitz, Ami E.	(BERKOWITZ,AE 71) (BERKOWITZ,AE 75)
Bernal G., Enrique	(BERNAL,GE 70) (BERNAL,GE 71A) (BERNAL,GE 71B)
	(CHEN,D 67B) (CHEN,D 68A) (CHEN,D 68B)
	(LEUNG,KM 79)
Bernstein, H.L.	(CARLSON,CD 66)
Binns, B.W.	(PALM,CS 79)
Bismuth, G.	(MICHERON,F 72)
Blom, Gerard M.	(LOU,DY 81)
Blom, G.M.	(BLOM,GM 79)
Bloom, A.L.	(BLOOM,AL 66)
Blue, M.D.	(CHEN,D 65)
Bobrinev, V.I.	(MIKAELIANE,AL 70)
Bogels, P.W.	(BOGELS,PW 76)
Bolwijn, P.T.	(SCHOOT,CJ 73)
Bongers, P.F.	(ROBERTSON,JM 75)
Bonner, W.A.	(WARNER,AW 72) (WEAVER,SE 80)
Booth, B.L.	(BOOTH,BL 72)
Boothby, O.L.	(WILLIAMS,HJ 57A)
Bordogna, Joseph	(BORDOGNA,J 72)
Borel, J.	(LABRUNIE,G 74)
Borrelli, Nicholas F.	(BORRELLI,NF 72) (BORRELLI,NF 79)
	(BORRELLI,NF 80)
Bosch, M.A.	(BOSCH,MA 82)
Boschetti, P.L.	(MINNAJA,N 73)
Bosomworth, D.R.	(BOSOMWORTH,DR 68)
Botez, Dan	(BOTEZ,D 78)
Boudreaux, N.A.	(WATKINS,JW 81)
Bousky, Samuel	(BOUSKY,S 71) (BOUSKY,S 76)
Bouwhuis, G	(BOUWHUIS,G 78) (BRAAT,JJ 78A) (BRAAT,JJ 78B)
Bowers, Dan M.	(BOWERS,DM 65)
Boyd, G.D.	(ASHKIN,A 66)
Braat, J.J.M.	(BOUWHUIS,G 78) (BRAAT,JJ 78A) (BRAAT,JJ 78B)
Brandt, Gerald B.	(BRANDT,GB 68)
Bricot, C.	(BRICOT,C 76)
Broadbent, Kent D.	(BROADBENT,KD 74)
Brody, H.	(BRODY,H 81)
Bròjdo, S.	(ANDERSON,LK 67)
Brouha, M.	(BROUHA,M 75)
Brout, Robert	(BROUT,R 65)
Brown, B.R.	(BROWN,BR 72) (BROWN,BR 74) (SHELTON,CF 74)

3.1 AUTHOR INDEX

3.1 AUTHOR INDEX

Brown, C.J.	(BROWN,CJ 68)
Bulthuis, Kees	(BULTHUIS,K 79) (HEEMSKERK,JP 79)
Burckhardt, C.B.	(BURCKHARDT,CB 70)
Burke, W.J.	(BURKE,WJ 78)
Burn, Robert A.	(WIEDER,H 71B) (WIEDER,H 73B) (WIEDER,H 73C)
Burns, Leslie L.	(BURNS,LL 79) (BURNS,LL 80)
Buschow, K.H.J.	(BROUHA,M 75)
Butter, C.	(LEE,TC 79C)
Buzawa, M.J.	(HOPKINS,RE 76)
Calomeris, Peter J.	(WARNAR,RB 79)
Cammack, D.A.	(ASBECK,PM 79)
Carasso, Marino G.	(BULTHUIS,K 79)
Carcey, Jacques	(COEURE,P 71)
Carlson, C.D.	(CARLSON,CD 66)
Carnal, Edward, Jr.	(AHRENKIEL,RK 74)
Carre, Bernard	(LANGLET,R 73)
Carroll, C.B.	(FIRESTER,AH 78A) (FIRESTER,AH 78B)
Casasent, David	(CASASENT,D 72) (CASASENT,D 79)
Cashman, Michael W.	(CASHMAN,MW 73)
Castledine, J.G.	(BEESLEY,MJ 70)
Cathey, W.T.	(CATHEY,WT 74)
Challeton, D.	(DAVAL,J 75)
Chan, Albert Y.	(KENNEY,G 76) (KENNEY,G 77A) (KENNEY,G 77B)
	(KENNEY,G 77C) (KENNEY,G 79)
Chance, D.A.	(CHANCE,DA 79)
Chandross, E.A.	(TOMLINSON,WJ 70) (TOMLINSON,WJ 72)
Chang, B.J.	(CHANG,BJ 80)
Chang, I.C.	(KATZKA,P 79)
Chang, J.T.	(CHANG,JT 65)
Chastang, J.-C.A.	(CHANCE,DA 79)
Chaudhari, P.	(CHAUDHARI,P 73) (VONGUTFELD,RJ 72)
Chen, C.H.	(CHEN,CH 80)
Chen, Che-Tsung	(CHEN,CT 79A) (CHEN,CT 79B) (CHEN,CT 80)
Chen, D.	(MINNAJA,N 73) (SCHULDT,S 71) (TUFTE,ON 73A)
	(TUFTE,ON 73B)
Chen, Di	(AAGARD,RL 68) (AAGARD,RL 72) (AAGARD,RL 73A)
	(BERNAL,GE 70) (BERNAL,GE 71B) (CHEN,D 64)
	(CHEN,D 65) (CHEN,D 66) (CHEN,D 67A)
	(CHEN,D 67B) (CHEN,D 68A) (CHEN,D 68B)
	(CHEN,D 70A) (CHEN,D 70B) (CHEN,D 71)
	(CHEN,D 73) (CHEN,D 74) (CHEN,D 75)
	(HASKAL,HM 77) (LEE,TC 71)
Chen, F.S.	(CHEN,FS 68) (CHEN,FS 69)
Chen, M.	(CHEN,M 81)
Chen, Tu	(CHEN,T 74)
Chen, Shih L.	(BORRELLI,NF 72)
Cheng, Charles, C.K.	(CHENG,CC 79)
Cheng, David	(CHENG,D 81)
Chi, Chao S.	(CHI,CS 82)
Chida, Kazunori	(CHIDA,K 77)

3.1 AUTHOR INDEX

3.1 AUTHOR INDEX

Chinone, Naoki	(NAKADA,O 74)
Chow, Kungta K.	(CHOW,KK 68)
Clark, M.G.	(CLARK,MG 73)
Clemens, Jon K.	(CLEMENS,JK 82)
Clover, Richmond B., Jr.	(CLOVER,RB 71)
Coburn, Theodore J.	(AHRENKIEL,RK 73) (AHRENKIEL,RK 74)
	(AHRENKIEL,RK 75)
Coeure, Philippe	(COEURE,P 71)
Cohen, M.S.	(COHEN,MS 80)
Colburn, W.S.	(COLBURN,WS 71) (COLBURN,WS 74)
Collier, Robert J.	(COLLIER,RJ 68)
Comstock, Lawrence	(CHOW,KK 68) (COMSTOCK,RL 70A) (COMSTOCK,RL 70B)
Congleton, D.B.	(CONGLETON,DB 77)
Connell, Edward	(HEFFNER,P 79)
Connell, G.A. Neville	(MANSURIPUR,M 82)
Conroy, J.J.	(CONROY,JJ 79)
Corsover, S.L.	(CORSOVER,SL 81)
Cosentino, L.S.	(COSENTINO,LS 73) (STEWART,WC 70) (STEWART,WC 73)
Craighead, H.G.	(CRAIGHEAD,HG 82)
Crawford, V.S.	(CHANCE,DA 79)
Credelle, T.L.	(CREDELLE,TL 72)
Crow, J.D.	(CROW,JD 79) (WANG,S 71)
Crow, Thomas G.	(THORNTON,JR 69)
Culver, W.H.	(BASOV,NG 72)
Cummins, S.E.	(CUMMINS,SE 67)
Cuomo, J.J.	(CHAUDHARI,P 73)
Dalisa, A.L.	(DALISA,AL 70)
Daneu, V.	(DANEU,V 66)
Daniele, J.J.	(ASBECK,PM 79)
D'Asaro, L.A.	(MILLER,RC 79)
d'Auria, L.	(DAURIA,L 73) (DAURIA,L 74) (SPITZ,E 72)
Daval, J.	(DAVAL,J 75)
Davidian, Winston	(SKURNICK,E 79)
DeBazelaire, E.	(CASASENT,D 79)
DeBitetto, D.J.	(DALISA,AL 70)
DeBouard, D.	(DEBOUARD,D 68)
DeHaan, M.R.	(DEHAAN,MR 77)
Dekker, P.	(DEKKER,P 74) (DEKKER,P 76)
Dennison, R.L.	(STREHLOW,WH 74)
Denton, Richard T.	(DENTON,RT 68) (DENTON,RT 72)
DeVelis, J.B.	(DEVELIS,JB 74)
DeWette, F.W.	(NIJBOER,BR 57)
Diamond, A.S.	(CONGLETON,DB 77)
Dickey, B.	(TREVES,D 69)
Dickinson, G.	(PALERMO,P 77)
Dickson, L.D.	(DICKSON,LD 70)
Diermann, J.	(BOUSKY,S 71)
Dillon, J.F.	(CHANG,JT 65) (DILLON,JF 59) (DILLON,JF 63)
	(DILLON,JF 70)
DiMaria, D.J.	(HARTSTEIN,A 80)

3.1 AUTHOR INDEX

3.1 AUTHOR INDEX

Dimigen, Heinz	(KRUMME,JP 73A)
DiSalvo, F.J.	(CLARK,MG 73)
DiStefano, T.H.	(AHN,KY 82) (HERD,SR 82B)
Dittmer, G.	(DITTMER,G 77)
Dixon, R.W.	(DIXON,RW 67) (DIXON,RW 70)
Dong, D.W.	(HARTSTEIN,A 80)
Doyle, William D.	(DOYLE,WD 70)
Drake, M.D.	(DRAKE,MD 74)
Drexler, J.	(DREXLER,J 81)
Duardo, J.A.	(DUARDO,JA 80)
Duncan, R.C., Jr.	(DUNCAN,RC 70)
Dziedzic, J.M.	(ASHKIN,A 66)
Economy, N.A.	(EVTIHIEV,NN 76)
Eden, Dayton D.	(EDEN,DD 81)
Egashira, Kazumichi	(CHIDA,K 77) (EGASHIRA,K 74) (YOSHII,S 74)
Eleccion, Marce	(ELECCION,M 72)
Elser, W.	(PASKO,JG 79)
Emmel, Peter M.	(EMMEL,PM 80)
Engebretsen, J.E.	(ANDRESEN,AF 72)
Eschenfelder, A.H.	(ESCHENFELDER,AH 70)
Esho, Sotaro	(ONO,Y 72)
Ettenberg, M.	(KRESSEL,H 74B)
Evtihiev, N.N.	(EVTIHIEV,NN 76)
Eward, Ronald S.	(EWARD,RS 75)
Fan, G.	(FAN,G 70)
Fan, G.J.	(FAN,GJ 71) (MEE,CD 67) (WIEDER,H 71B)
Fan, G.Y.	(FAN,GY 67) (FAN,GY 68)
Faughnan, B.W.	(DUNCAN,RC 70) (FAUGHNAN,BW 69)
Feichtner, J.D.	(CONROY,JJ 79)
Feinleib, J.	(FEINLEIB,J 72)
Feldman, Albert	(FELDMAN,A 79)
Feldman, M.	(MILLER,RC 79)
Feldtkeller, Ernst	(FELDTKELLER,E 72)
Ferrand, B.	(DAVAL,J 75)
Ferre', Jacques	(FERRE,J 71)
Files, V.	(FILES,V 71)
Findlay, David	(FINDLAY,D 70)
Firester, A.H.	(FIRESTER,AH 78A) (FIRESTER,AH 78B)
	(STEWART,WC 72) (WITTKE,JP 76)
Fischer, P.	(ANDRESEN,AF 67)
Fisher, Mahlon B.	(MELCHIOR,H 70)
Fishlock, David	(FISHLOCK,D 69)
Fisk, Miles B.	(BOWERS,DM 65)
Flannery, William E.	(DOYLE,WD 70)
Fleming, D.L.	(TOROK,EJ 78)
Flint, Graham W.	(THORNTON,JR 69)
Flippen, R.B.	(FLIPPEN,RB 73)
Flory, R.E.	(HANNAN,WJ 73)
Fork, R.L.	(TOMLINSON,WJ 70) (TOMLINSON,WJ 72)

3.1 AUTHOR INDEX

3.1 AUTHOR INDEX

Forshaw, M.R.B.	(FORSHAW,MR 74)
Foster, F.G.	(WILLIAMS,HJ 51) (WILLIAMS,HJ 57B)
Fountain, William D.	(THORNTON,JR 69)
Fowler, Charles A., Jr.	(FOWLER,CA 52) (FOWLER,CA 55) (FOWLER,CA 56A)
	(FOWLER,CA 56B)
Fowler, V.J.	(FOWLER,VJ 66)
Fox, E.C.	(STEWART,WC 72)
Friesem, A.A.	(FRIESEM,AA 70)
Fraser, D.B.	(CHEN,FS 68)
Freiser, M.J.	(SUITS,JC 66)
Frost, W.T.	(FROST,WT 74)
Fryer, Edward	(FOWLER,CA 52) (FOWLER,CA 55) (FOWLER,CA 56A)
	(FOWLER,CA 56B)
Fujiwara, Tatsuo	(FUJIWARA,T 72) (JUDY,JH 71)
Gabor, Dennis	(GABOR,D 48) (GABOR,D 71)
Gallaher, L.E.	(SMITS,FM 67)
Gambino, R.J.	(CHAUDHARI,P 73)
Garmire, E.	(GARMIRE,E 75)
Gay, Jean-Claude	(COEURE,P 71)
Gaylord, T.K.	(WEAVER,JE 81)
Geller, Sidney B.	(GELLER,SB 74)
Gerboc, J.	(WASHKO,S 76)
Gerritsen, G.	(HEEMSKERK,JP 79)
Gerritsen, H.J.	(BOSOMWORTH,DR 68)
Gevnet, J.	(DAVAL,J75)
Gianola, U.F.	(CHANG,JT 65)
Gibson, J.J.	(FIRESTER,AH 78B)
Giebler, M.	(KENNEY,G 77A) (KENNEY,G 77B)
Glass, A.M.	(CLARK,MG 73) (VON DER LINDE,D 74)
Goldberg, Gerald K.	(DOYLE,WD 70)
Goldberg, Mark W.	(GOLDBERG,MW 79)
Goldberg, Norman	(GOLDBERG,N 67)
Goldstein, Charles M.	(GOLDSTEIN,CM 82)
Gondo, Y.	(CHEN,D 64) (CHEN,D 65)
Goodenough, J.B.	(GOODENOUGH,JB 61)
Goodman, Joseph W.	(MANSURIPUR,M 82)
Goodwin, Deryck W.	(FINDLAY,D 70)
Gorog, I.	(FIRESTER,AH 78A) (FIRESTER,AH 78B) (GOROG,I 78A)
	(GOROG,I 78B) (WITTKE,JP 76)
Gottlieb, M.	(CONROY,JJ 79)
Gould, H.L.B.	(GOULD,HL 57)
Goutman, M.	(KENNEY,G 76)
Graf, P.	(GRAF,P 72)
Gray, Edward E.	(GRAY,EE 72)
Greenebaum, Michael	(SKURNICK,E 79)
Greiner, J.H.	(FAN,G 70) (FAN,GY 67) (FAN,GY 68)
Griffith, R.L.	(GRIFFITH,RL 69)
Guerin, Jean-Michel	(GUERIN,JM 79)
Guisinger, J.E.	(LEWICKI,GW 70) (LEWICKI,GW 73)
Gunning, W.J.	(GUNNING,WJ 79)

3.1 AUTHOR INDEX

3.1 AUTHOR INDEX

Guntherodt, G.	(GUNTHERODT,G 70)
Gyorgy, E.M.	(DILLON,JF 70)
Haas, C.W.	(FLIPPEN,RB 73)
Hackwood, S.	(BOSCH,MA 82)
Hagopian, J.J.	(FROST,WT 74)
Haines, K.A.	(COLBURN,WS 71)
Halg, W.	(ANDRESEN,AF 67)
Hannan, W.J.	(HANNAN,WJ 73)
Hansen, H.	(SEYBOLT,AU 56)
Hansen, P.	(KRUMME,JP 73B)
Harms, H.	(UNGER,WK 72B)
Harnack, P.	(DALISA,AL 70)
Harper, R.	(KENNEY,G 77A)
Hartfield, Edward D.	(IWASA,S 74)
Hartstein, A.	(HARTSTEIN,A 80)
Hashiguchi, M.	(MCFARLAND,K 68)
Haskal, Haim M.	(HASKAL,HM 70) (HASKAL,HM 71A) (HASKAL,HM 71B)
	(HASKAL,HM 77)
Haudek, H.	(HAUDEK,H 71) (UNGER,WK 72B)
Hecht, Jeff	(HECHT,J 82)
Heemskerk, Jacques P.J.	(BULTHUIS,K 79) (HEEMSKERK,JP 78) (HEEMSKERK,JP 79)
Heffner, Paul	(HEFFNER,P 79)
Heikes, R.R.	(HEIKES,RR 55)
Heilmeier, George H.	(HEILMEIER,GH 68)
Heller, M.E.	(FIRESTER,AH 78A)
Henderson, D.M.	(HENDERSON,DM 79)
Herd, S.R.	(AHN,KY 82) (HERD,SR 82A) (HERD,SR 82B)
Herriott, D.R.	(JAVAN,A 61)
Herzog, Donald G.	(HERZOG,DG 79)
Hill, B.	(HILL,B 72) (HILL,B 73)
Hoagland, Albert S.	(HOAGLAND,AS 72) (HOAGLAND,AS 79)
Honda, Shigeo	(HONDA,S 73)
Honebrink, Roger W.	(AAGARD,RL 68) (JOHNSON,LH 78)
Hong, Y.M.	(DEVELIS,JB 74)
Hopkins, H.H.	(HOPKINS,HH 53) (HOPKINS,HH 66) (HOPKINS,HH 67)
Hopkins, R.E.	(HOPKINS,RE 76)
Hopper, M.A.	(LAW,KY 80)
Horigome, S.	(TERAO,M 79)
Horner, Joseph L.	(HORNER,JL 80)
Horstmann, R.E.	(CHANCE,DA 79)
Hou, S.L.	(HOU,SL 71)
Howard, R.E.	(CRAIGHEAD,HG 82)
Howe, D.G.	(HOWE,DG 81) (WROBEL,JJ 82)
Hrbek, George W.	(HRBEK,GW 74)
Hug, W.F.	(DUARDO,JA 80)
Huhn, D.	(HUHN,D 70)
Huignard, J.P.	(DAURIA,L 73) (DAURIA,L 74) (SPITZ,E 72)
Hung, R.Y.	(LYNCH,RT 79)
Hunt, R.	(KENNEY,G 76)
Hunt, R.P.	(HUNT,RP 69) (TREVES,D 69)

3.1 AUTHOR INDEX

3.1 AUTHOR INDEX

Huth, B.G.	(HUTH,BG 74)
Imamura, N.	(MIMURA,Y 76)
Ishida, A.	(TSUKAMOTO,H 74)
Ishii, A.	(TSUKAMOTO,H 74)
Ishii, Osamu	(KOKOBU,A 72)
Ito, Ryoichi	(NAKADA,O 74)
Ito, Takeshi	(TANAKA,M 72)
Iwasa, Sato	(IWASA,S 74) (NISENSEN,P 72)
Iwasaki, Shun-Ichi	(OUCHI,K 72)
Jacobs, B.A.J.	(JACOBS,BA 78) (KIVITS,P 81)
Jamberdino, Albert A.	(JAMBERDINO,AA 81A) (JAMBERDINO,AA 81B)
	(JAMBERDINO,AA 81C)
Janai, M.	(JANAI,M 82)
Javan, A.	(JAVAN,A 61)
Jedeloo, P.W.	(DEKKER,P 74)
Jenney, J.A.	(JENNEY,JA 70)
Jipson, V.B.	(JIPSON,VB 81)
Johannes, R.	(JOHANNES,R 70)
Johansen, T.R.	(TOROK,EJ 78)
Johnson, Clayton	(JOHNSON,C 75)
Johnson, G.E.	(LAW,KY 80)
Johnson, L.H.	(JOHNSON,LH 78)
Johnson, R.H.	(ROBERTS,HN 74)
Johnson, Richard V.	(JOHNSON,RV 79)
Jones, C.R.	(JIPSON,VB 81)
Jones, Keith	(JONES,K 79)
Judy, Jack H.	(FUJIWARA,T 72) (JUDY,JH 71)
Kabler, M.N.	(SCHNEIDER,I 70)
Kaczorowski, Edward M.	(KACZOROWSKI,EM 77)
Kajiura, M.	(TOGAMI,Y 82)
Kamimura, H.	(DILLON,JF 63)
Kaminow, Ivan P.	(KAMINOW,IP 66) (KAMINOW,IP 68)
	(KAMINOW,IP 71) (TOMLINSON,WJ 70)
Kang, K.S.	(BOSCH,MA 82)
Kataoka, K.	(TSUNODA,Y 76)
Katsui, Akinora	(CHIDA,K 77) (KATSUI,A 76)
Katzka, P.	(KATZKA,P 79)
Kelley, E.M.	(WILLIAMS,HJ 57B)
Keizer, E.O.	(KEIZER,EO 78)
Kempter, K.	(RULL,H 76)
Keneman, Scott A.	(BORDOGNA,J 72)
Kenney, George	(KENNEY,G 76) (KENNEY,G 77A) (KENNEY,G 77B)
	(KENNEY,G 77C) (KENNEY,G 79) (LOU,DY 81)
Kenville, Richard F.	(KENVILLE,RF 78) (KENVILLE,RF 81)
Kerby, H.R.	(KUEHLER,JD 66)
Kerr, J. Richard	(KERR,JR 66)
Kertzig, A.J.	(SHERWOOD,RC 71)
Kestigian, M.	(THAXTER,JB 74)
Kiemle, H.	(KIEMLE,H 72) (KIEMLE,H 74)

3.1 AUTHOR INDEX

3.1 AUTHOR INDEX

Kim, Dae M.	(CHEN,CT 79A) (CHEN,CT 79B) (CHEN,CT 80) (KIM,DM 77)
King, Gilbert W.	(KING,GW 65A) (KING,GW 65B)
Kinsel, Tracy S.	(DENTON,RT 68)
Kirton, J.	(KIRTON,J 74)
Kiss, Zolton J.	(FAUGHNAN,BW 69)
Kittel, Charles	(KITTEL,C 46)
Kivits, Peter J.	(BULTHUIS,K 79) (KIVITS,P 81)
Kleuters, Wilhelm J.	(BULTHUIS,K 79) (HEEMSKERK,JP 79)
Klopfer, A.	(DITTMER,G 77)
Klose, P.H.	(OVSHINSKY,SR 72)
Kock, Winston E.	(GABOR,D 71)
Kohler, Thomas R.	(KENNEY,G 79)
Knight, Gordon R.	(KNIGHT,GR 75)
Knudson, C.I.	(LIU,TS 71)
Kobayashi, T.	(MIMURA,Y 76) (TOGAMI,Y 82)
Kogelnik, Herwig	(KOGELNIK,H 66) (KOGELNIK,H 69)
Kokubu, Akio	(KOKOBU,A 72)
Korpel, A.	(KORPEL,A 78) (PALERMO,P 77) (WHITMAN,RL 69)
Kramer, C.J.	(KRAMER,CJ 79)
Krawczak, J.A.	(TOROK,EJ 78)
Krebs, A.R.	(EVTIHIEV,NN 76)
Kressel, H.	(KRESSEL,H 74A) (KRESSEL,H 74B)
Krumme, Jens-Peter	(KRUMME,JP 73A) (KRUMME, 73B) (KRUMME,JP 75)
Kubo, Takahiro	(YAMADA,K 82)
Kuehler, J.D.	(KUEHLER,JD 66)
Kurtz, Robert L.	(KURTZ,RL 75)
Kyser, D.F.	(SUITS,JC 71)
Labrunie, G.	(LABRUNIE,G 74)
Lacklison, David E.	(LACKLISON,DE 73) (LACKLISON,DE 75) (SCOTT,GB 76)
Ladany, I.	(KRESSEL,H 74B)
LaMacchia, J.T.	(ANDERSON,LK 67) (CHEN,FS 68)
Lamb, W.E.	(LAMB,WE 64)
Lamola, A.A.	(TOMLINSON,WJ 72)
Land, C.E.	(LAND,CE 69) (LAND,CE 78)
Lang, M.	(GRAF,P 72)
Langdon, R.M.	(LANGDON,RM 69)
Langlet, Regis	(LANGLET,R 72) (LANGLET,R 73)
Larsen, P.K.	(ROBERTSON,JM 75)
Laser Focus	(LASERF 74)
Laub, L.J.	(LAUB,LJ 76)
Lauer, J.P.	(SUTHERLIN,KK 74)
Lavenberg, S.S.	(WIEDER,H 71B)
Law, K.Y.	(LAW,KY 80)
Lebreton, G.	(CASASENT,D 79)
Leclert, A.	(DAVAL,J 75)
Lee, J.N.	(LEE,JN 79)
Lee, Kenneth	(LEE,K 71) (LEE,K 73A) (LEE,K 73B) (SUITS,JC 71)
Lee, T.C.	(AAGARD,RL 72) (LEE,TC 68) (LEE,TC 71) (LEE,TC 72)
	(LEE,TC 79A) (LEE,TC 79B) (LEE,TC 79C) (ZOOK,JD 72)
Lee, Wai-Hon	(LEE,WH 72)

3.1 AUTHOR INDEX

3.1 AUTHOR INDEX

Lehereau, J.C.	(BRICOT,C 76)
Leith, Emmett N.	(LEITH,EN 62) (LEITH,EN 67)
Leonard, William B.	(CHOW,KK 68)
Leung, K.M.	(LEUNG,KM 79)
Levinstein, J.J.	(ASHKIN,A 66)
Lewicki, G.W.	(LEWICKI,GW 69) (LEWICKI,GW 70) (LEWICKI,GW 73)
Li, T.	(KOGELNIK,H 66)
Liao, P.F.	(CRAIGHEAD,HG 82)
Lindquist, J.	(LEE,TC 79B)
Lin, L.H.	(LIN,LH 69) (LIN,LH 70) (LIN,LH 71)
Lipp, James	(LIPP,J 71)
Lissberger, P.H.	(COMSTOCK,RL 70A)
Liu, T.S.	(AAGARD,RL 73A) (CHEN,D 70A) (LIU,TS 71)
Lo, D.S.	(JOHNSON,LH 78) (LO,DS 74)
Lockwood, H.F.	(KRESSEL,H 74B)
Lohman, R.D.	(LOHMAN,RD 71) (STEWART,WC 73)
Lotspeich, J.F.	(HENDERSON,DM 79)
Lou, D.	(ASBECK,PM 79) (KENNEY,G 76) (KENNEY,G 77A)
	(KENNEY,G 77B) (KENNEY,G 77C) (KENNEY,G 79)
	(LOU,DY 81) (LOU,DY 82)
Loutfy, R.O.	(LAW,KY 80)
Lucero, J.A.	(DUARDO,JA 80)
Ludman, Jacques E.	(HORNER,JL 80)
Lurie, M.	(BARTOLINI,RA 78) (HANNAN,WJ 73)
Lussow, R.O.	(CHANCE,DA 79)
Luu,T.	(CASASENT,D 79)
Lynch, R.T., Jr.	(LYNCH,RT 79)
Ma, J.T.	(BROWN,CJ 68)
MacDonald, R.E.	(MACDONALD,RE 69)
Maiman, T.H.	(MAIMAN,TH 60)
Makarov, N.I.	(RYKALIN,NN 67)
Mansuripur, Masud	(MANSURIPUR,M 82)
Marchant, Alan B.	(MARCHANT,AB 82) (WROBEL,JJ 82)
Marechal, A.	(MARECHAL,A 47)
Marinace, J.C.	(MARINACE,JC 70)
Marrello, V.	(CHEN,M 81)
Marrone, M.	(SCHNEIDER,I 70)
Martienssen, W.	(HUHN,D 70)
Matick, Richard E.	(MATICK,RE 72)
Matsumura, Masaru	(MATSUMURA,M 74)
Matsushita, S.	(MATSUSHITA,S 75) (SUNAGO,K 76)
Maydan, Dan	(MAYDAN,D 70A) (MAYDAN,D 70B) (MAYDAN,D 71)
Mayer, Ludwig	(MAYER,L 55) (MAYER,L 57) (MAYER,L 58A)
	(MAYER,L 58B) (MAYER,L 58C) (MAYER,L 60A)
	(MAYER,L 60B)
Mayeux, C.	(MICHERON,F 74A)
Mazzeo, N.J.	(AHN,KY 82) (HERD,SR 82B)
McCamy, C.S.	(MCCAMY,CS 65)
McCoy, D.S.	(KEIZER,EO 78) (MCCOY,DS 78)
McFarland, K.	(MCFARLAND,K 68)

3.1 AUTHOR INDEX

3.1 AUTHOR INDEX

McGuire, T.R.	(MCGUIRE,TR 71) (SUITS,JC 68)
McLeod, Jonah	(MCLEOD,J 81A) (MCLEOD,J 81B)
McFarlane, Robert	(KENNEY,G 76) (KENNEY,G 77A) (KENNEY,G 77B)
	(KENNEY,G 77C) (KENNEY,G 79) (VOLKER,S 79)
McMurtry, B.J.	(ANDERSON,LK 66)
Mee, C.D.	(MEE,CD 67)
Megla, G.K.	(MEGLA,GK 66)
Mehta, R.R.	(MEHTA,RR 71)
Meier, R.W.	(URBACH,JC 66)
Meiklejohn, W.H.	(BERKOWITZ,AE 71) (BERKOWITZ,AE 75)
Melchior, Hans	(MELCHIOR,H 70) (MELCHIOR,H 72)
Mennie, Don	(MENNIE,D 79)
Menyuk, N.	(GOODENOUGH,JB 61)
Menzel, R.W.	(MENZEL,RW 81)
Mercer, C.C.	(PALM,CS 79)
Meyer, H.	(MEYER,H 72)
Mezrich, R.S.	(LOHMAN,RD 71) (MEZRICH,RS 69)
	(MEZRICH,RS 70A) (MEZRICH,RS 70B) (STEWART,WC 73)
Micheron, F.	(MICHIRON,F 72) (MICHIRON,F 74A) (MICHIRON,F 74B)
Middlehoek, S.	(DEKKER,P 74) (MIDDLEHOEK,S 70)
Mikaeliane, A.L.	(MIKAELIANE,AL 70)
Milch, A.	(KENNEY,G 76) (KENNEY,G 77A) (KENNEY,G 77B)
	(KENNEY,G 77C)
Miller, R.C.	(MILLER,RC 79)
Mimura, Y.	(MIMURA,Y 76)
Minna, N.	(MINNAJA,N 73)
Mitsuhashi, Y.	(MITSUHASHI,Y 76)
Monerie, M.	(DAVAL,J 75)
Moore, Eugene B.	(COMSTOCK,RL 70B)
Morikawa, T.	(MITSUHASHI,Y 76)
Moruzzi, V.L.	(MCGUIRE,TR 71)
Moser, F.	(JANAI,M 82)
Mroczkowski, Stanley S.	(CLOVER,RB 71)
Murphy, James A.	(BORRELLI,NF 72)
Myers, W.C.	(CARLSON,CD 66)
Nadan, Joseph S.	(KENNEY,G 79)
Nagao, Morimasa	(ONO,Y 72)
Nagle, E.M.	(STEWART,WC 73)
Nakada, Osamu	(NAKADA,O 74)
Nakamura, J.K.	(NAKAMURA,JK 68)
Nakamura, Satoshi	(NAKADA,O 74)
Nakashima,	(NAKADA,O 74)
Naruse, Yosuke	(NARUSE,Y 78)
Nassau, K.	(ASHKIN,A 66)
Natu, S.	(CASASANT,D 79)
Neale, R.G.	(NEALE,RG 73)
Neary, Dennis R.	(NEARY,DR 82)
Nelson, G.L.	(TOROK,EJ 78)
Nelson, R.H.	(NELSON,RH 74)
Nelson, Thomas J.	(NELSON,TJ 68)

3.1 AUTHOR INDEX

3.1 AUTHOR INDEX

Nepela, D.A.	(COMSTOCK,RL 70B)
Nesbitt, E.A.	(SHERWOOD,RC 71)
Neugebauer, C.A.	(NEUGEBAUER,CA 59)
Nijboer, B.R.A.	(NIJBOER,BR 57)
Nisenson, Peter	(NISENSEN,P 72)
Nishiguchi, Katsumi	(TSUJIYAMA,B 72)
Nishimura, Yasuro	(TANAKA,M 72)
Noguchi, Masaru	(NOGUCHI,M 82)
Ohkoshi, Akio	(NARUSE,Y 78)
Ohta, Y.	(OHTA,Y 78)
Ojima, M.	(TERAO,M 79)
Olenik, R.W.	(SUTHERLIN,KK 74)
Olijhoek, J.F.	(OLIJHOEK,JF 80)
Oliver, D.S.	(FEINLEIB,J 72) (HOU,SL 71)
Olson, B.L.	(MCGUIRE,TR 71)
Ono, Yuzo	(ONO,Y 72)
Ophey, W.G.	(HEEMSKERK,JP 79)
Orehotsky, J.	(WASHKO,S 76)
Otten, T.H.	(WATKINS,JW 81)
Otto, Gary N.	(AAGARD,RL 68) (BERNAL,GE 71B) (CHEN,D 73)
Ouchi, Kazuhiro	(OUCHI,K 72)
Ovshinsky, S.R.	(OVSHINSKY,SR 72)
Owechko, Y.	(OWECHKO,Y 79)
Owen, Robert B.	(KURTZ,RL 75)
Packard, J.R.	(STREHLOW,WH 74)
Page, John L.	(LACKLISON,DE 73) (LACKLISON,DE 75)
Palermo, P.	(PALERMO,P 77)
Palm, C.S.	(PALM,CS 79)
Paparoditis, C.	(FERRE,J 71)
Pasko, J.G.	(PASKO,JG 79)
Patela, Arvind M.	(PATELA,AM 80)
Patlach, A.M.	(PATLACH,AM 72)
Pearson, R.F.	(LACKLISON,DE 75)
Peek, Th. H.	(OLIJHOEK,JF 80)
Pennington, K.S.	(PENNINGTON,KS 71)
Pepperl, R.	(PEPPERL,R 77)
Peterson, G.E.	(CLARK,MG 73)
Petrich, G.F.	(MCGUIRE,TR 71)
Peuzin, J.C.	(DAVAL,J 75)
Phillips, W.	(AMODEI,JJ 72) (BURKE,WJ 78) (DUNCAN,RC 70)
Phipps, P.B.P.	(SUITS,JC 71)
Pierson, Paul B.	(PIERSON,PB 79)
Pinnow, Douglas A.	(PINNOW,DA 70)
Pivot, Jean-Paul	(LANGLET,R 73)
Pizzo, Ronald J.	(PIZZO,RJ 80)
Platt, John R.	(PLATT,JR 61)
Ponjee, J.J.	(SCHOOT,CJ 73)
Pryde, C.A.	(TOMLINSON,WJ 72)
Puech, C.	(BRICOT,C 76)

3.1 AUTHOR INDEX

3.1 AUTHOR INDEX

Rabson, T.A.	(KIM,DM 77)
Rahlff, M.	(MEYER,H 72)
Rajchman, Jan A.	(RAJCHMAN,JA 70A) (RAJCHMAN,JA 70B)
	(RAJCHMAN,JA 72)
Ralph, H.I.	(LACKLISON,DE 73)
Ralston, Lynda M.	(RALSTON,LM 81) (REDDERSEN,BR 80A)
	(WEAVER,SE 80)
Rancourt, James D.	(RANCOURT,JD 81)
Ratajczak, H.	(RATAJCZAK,H 70)
Rath, Rainer	(UNGER,WK 71C)
Ready, J.F.	(CHEN,D 67B) (CHEN,D 68A) (CHEN,D 68B)
Rebholz, J.	(LEE,TC 79B)
Recicar, Steve A.	(WARNAR,RB 79)
Reddersen, Brad R.	(REDDERSEN,BR 80A) (REDDERSEN,BR 80B)
Refsnes, J.	(ANDRESEN,AF 72)
Remeika, J.P.	(DILLON,JF 63) (DILLON,JF 70)
Reno, C.W.	(AMMON,GJ 81B)
Reynolds, G.O.	(DEVELIS,JB 74)
Reynolds, J.A.	(ANDERSON,HR 71)
Reynolds, J.L.	(LIPP,J 71)
Riekmann, D.	(MEYER,H 72)
Roach, W.R.	(FIRESTER,AH 78B)
Robert, J.	(LABRUNIE,G 74)
Roberts, B.W.	(ROBERTS,BW 54) (ROBERTS,BW 56)
	(SEYBOLT,AU 56)
Roberts, H.N.	(ROBERTS,HN 72) (ROBERTS,HN 74)
Robertson, J.M.	(ROBERTSON,JM 75)
Rodgers, K.F.	(VONDERLINDE,D 74)
Rolph, Sarah	(ROLPH,S 80)
Rosen, A.N.	(HASKAL,HM 71A)
Rosenberg, W.J.	(TITLE,AM 79)
Rosenkrantz, L. Jay	(ROSENKRANTZ,LJ 79)
Ross, D.L.	(ROSS,DL 78)
Ross, R.M.	(FROST,WT 74)
Rouchon, J.M.	(MICHIRON,F 74B)
Rull, H.	(RULL,H 75) (RULL,H 76)
Russell, J.P.	(FIRESTER,AH 78A) (FIRESTER,AH 78B)
Russell, J.T.	(RUSSELL,JT 76)
Ryan, R.J.	(HANNAN,WJ 73)
Rykalin, N.N.	(RYKALIN,NN 67)
Sacchi, C.A.	(DANEU,V 66)
Sakaguchi, M.	(OHTA,Y 78)
Sakuri, K.	(MITSUHASHI,Y 76)
Sakurai, Y.	(MATSUSHITA,S 75) (SUNAGO,K 76)
Salansky, N.M.	(SALANSKY,NM 74)
Salathe, R.	(VOUMARD,C 77)
Sander, I.	(PEPPERL,R 77)
Sanders, Lester S.	(SANDERS,LS 82)
Sarginson, R.W.	(KIRTON,J 74)
Sato, K.	(TOGAMI,Y 82)

3.1 AUTHOR INDEX

3.1 AUTHOR INDEX

Sawatzky, Eric	(SAWATZKY,E 71A) (SAWATZKY,E 71B) (SAWATZKY,E 71C)
Schafer, M.W.	(SUITS,JC 68)
Schlafer, J.	(FOWLER,VJ 66)
Schmidt, K.P.	(HILL,B 73) (MEYER,H 72)
Schmidt, U.	(SCHMIDT,U 69)
Schmidt, U.J.	(MEYER,H 72)
Schmit, Francis M.	(AAGARD,RL 68) (AAGARD,RL 73A) (CHEN,D 73)
Schmitt, Hans Jurgen	(KRUMME,JP 75)
Schneider, I.	(SCHNEIDER,I 70)
Schneider, J.	(STOFFEL,AM 70)
Schoenes, J.	(GUNTHERODT,G 70)
Schoot, C.J.	(SCHOOT,CJ 73)
Schroder, J.	(DITTMER,G 77)
Schuldt, S.	(SCHULDT,S 71)
Schwarz, S.E.	(NAKAMURA,JK 68)
Scott, George B.	(LACKLISON,DE 73) (LACKLISON,DE 75) (SCOTT,GB 76)
Sczaniecki, Z.	(RATAJCZAK,H 70)
Seko, A.	(MITSUHASHI,Y 76)
Seybolt, A.U.	(SEYBOLT,AU 56)
Shafer, M.W.	(AHN,KY 70A) (AHN,KY 71)
Shah, B.	(BASOV,NG 72)
Shah, Manhar L.	(WANG,S 71)
Shah, Rajiv R.	(KIM,DM 77)
Shahbender, Rabah	(SHAHBENDER,R 74)
Shankoff, T.A.	(SHANKOFF,TA 68)
Sharp, J.H.	(LAW,KY 80)
Shay, J.L.	(BOSCH,MA 82)
Shelton, Carl F.	(SHELTON,CF 73) (SHELTON,CF 74)
Sheridon, N.K.	(SHERIDON,NK 72)
Sherwood, R.C.	(SHERWOOD,RC 71) (WILLIAMS,HJ 57A) (WILLIAMS,HJ 57B) (WILLIAMS,HJ 58)
Shibata, Kenzo	(SHIBATA,K 72)
Shigematsu, K.	(TERAO,M 79)
Shimada, J.	(MITSUHASHI,Y 76)
Shinohara, Takeshi	(SHIBATA,K 72)
Shumate, Paul W., Jr.	(SHUMATE,PW 71)
Skurnick, Eugene	(SKURNICK,E 79)
Slezak, C.	(DAURIA,L 74)
Small, M.B.	(LYNCH,RT 79)
Smith, A.W.	(SMITH,AW 73)
Smith, D.O.	(SMITH,DO 67)
Smith, Kevin	(SMITH,K 80)
Smith, M.R.	(CONGLETON,DB 77)
Smith, Peter W.	(SMITH,PW 70)
Smith, R.G.	(ASHKIN,A 66)
Smith, T.W.	(SMITH,TW 81)
Smits, F.M.	(SMITS,FM 67)
Sorokin, P.P.	(SOROKIN,PP 79)
Spitz, E.	(DAURIA,L 73) (DAURIA,L 74) (SPITZ,E 72)

3.1 AUTHOR INDEX

3.1 AUTHOR INDEX

Spong, F.W. (BARTOLINI,RA 78) (BARTOLINI,RA 79)
 Staebler, D.L. (BELL,AE 78) (BELL,AE 79B) (CREDELLE,TL 72)
 Stark, H. (AMODEI,JJ 72) (AMODEI,JJ 71) (BURKE,WJ 78)
 Stanton, D. (STARK,H 71)
 Stein, M. (KENNEY,G 76)
 Stephens, A.W. (AISENBERG,S 81)
 Stephens, R.R. (AMODEI,JJ 71)
 Stephenson, Jack (HENDERSON,DM 79)
 Stevens, John R. (CASASANT,D 72)
 Stewart, W.C. (FOWLER,CA 56B)
 (COSENTINO,LS 73) (FIRESTER,AH 78A)
 (LOHMAN,RD 71) (STEWART,WC 70) (STEWART,WC 72)
 (STEWART,WC 73)
 Stoffel, A.M. (STOFFEL,AM 70)
 Stoll, E. (ANDRESEN,AF 67)
 Stolz, M. (UNGER,WK 71A)
 Stone, E. (CARLSON,CD 66)
 Strand, David (STRAND,D 80) (STRAND,D 81)
 Street, G. Bryan (STREET,GB 72)
 Street, Jules (STREET,J 80)
 Strehlow, W.H. (STREHLOW,WH 74)
 Stroke, George W. (GABOR,D 71)
 Strzelczyk, M. (KENNEY,G 76)
 Stutius, W.E. (CHEN,T 74)
 Suits, James C. (LEE,K 71) (LEE,K 73A) (SUITS,JC 66)
 (SUITS,JC 68) (SUITS,JC 71) (SUITS,JC 72)
 (TU,KN 72)
 Sumi, M. (TSUKAMOTO,H 74)
 Sunago, K. (MATSUSHITA,S 75) (SUNAGO,K 76)
 Suryanarayanan, R. (FERRE,J 71)
 Sutherlin, K.K. (SUTHERLIN,KK 74)
 Suzuki, takeo (SUZUKI,T 70)
 Svelto, O. (DANEU,V 66)
 Sweeney, J.E. (CRAIGHEAD,HG 82)
 Silfvast, W.T. (TOMLINSON,WJ 70)

Tai, K.L. (CHEN,CH 80)
 Takeda, Y. (TAKEDA,Y 74) (TSUNODA,Y 73) (TSUNODA,Y 74)
 (TSUNODA,Y 76)
 Tamura, P. (LEE,TC 79B)
 Tanaka, Masao (TANAKA,M 72)
 Tanguay, A.R., Jr. (OWECHKO,Y 79)
 Taniguchi, Y. (TERAO,M 79)
 Tatsuno, K. (TSUNODA,Y 76)
 Tennant, D.M. (CRAIGHEAD,HG 82)
 Teranishi, T. (TOGAMI,Y 82)
 Terao, M. (TERAO,M 79)
 Thatcher, P.P. (LAND,CE 69)
 Thaxter, J.B. (THAXTER,JB 69) (THAXTER,JB 74)
 Thomas, C.H. (CORSOVER,SL 81)
 Thornton, J. Ronald (THORNTON,JR 69)

3.1 AUTHOR INDEX

3.1 AUTHOR INDEX

Thust, W.	(SCHMIDT,U 69)
Title, A.M.	(TITLE,AM 79)
Tittel, F.K.	(KIM,DM 77)
Togami, Yuji	(TOGAMI,Y 78) (TOGAMI,Y 82)
Tolksdorf, W.	(TOLKSDORF,W 75)
Tomita, W.K.	(CARLSON,CD 66)
Tomlinson, W.J.	(TOMLINSON,WJ 70) (TOMLINSON,WJ 72)
Tompkins, E.N.	(COLBURN,WS 74)
Torok, E.J.	(TOROK,EJ 78)
Tracy, J.	(PASKO,JG 79)
Trevelyan, B.	(TREVELYAN,B 69A) (TREVELYAN,B 69B)
Treves, D.	(TREVES,D 67) (TREVES,D 69)
Trotier, J.C.	(MICHIRON,F 74A)
Tsang, J.C.	(HARTSTEIN,A 80)
Tsujiyama, Bunjiro	(CHIDA,K 77) (TSUJIYAMA,B 72)
Tsukamoto, H.	(TSUKAMOTO,H 74)
Tsunoda, Y.	(TSUNODA,Y 73) (TSUNODA,Y 74) (TSUNODA,Y 76)
Tu, K.N.	(AHN,KY 82) (HERD,SR 82B) (TU,KN 72)
Tufte, O.N.	(TUFTE,ON 73A) (TUFTE,ON 73B)
Turner, Edward H.	(KAMINOW,IP 66) (KAMINOW,IP 71)
Uchida, Naoya	(TSUKAMOTO,H 74) (UCHIDA,N 70)
Uglov, A.A.	(RYKALIN,NN 67)
Ulmer, David E.	(ULMER,DE 79)
Unger, Willibald K.	(HAUDEK,H 71) (UNGER,WK 70) (UNGER,WK 71A) (UNGER,WK 71B) (UNGER,WK 71C) (UNGER,WK 71D) (UNGER,WK 72A) (UNGER,WK 72B)
Upatnieks, Juris	(LEITH,EN 62) (LEITH,EN 67)
Urbach, J.C.	(URBACH,JC 66)
van Dam, H.T.	(SCHOOT,CJ 73)
Vander Lugt, A.	(NELSON,RH 74) (VANDERLUGT,A 73)
van Doorn, R.A.	(SCHOOT,CJ 73)
Velzel, C.H.F.	(DEHAAN,MR 77) (VELZEL,CH 78)
Vergnolle, M.	(MICHIRON,F 74B)
Vigliotti, D.R.	(HERD,SR 82A)
Vincett, P.S.	(LAW,KY 80)
Vogenthaler, R.	(JOHANNES,R 70)
Volker, S.	(VOLKER,S 79)
von der Linde, D.	(CHEN,CT 79A) (CHEN,CT 80) (VONDERLINDE,D 74)
von Gutfeld, R.J.	(HERD,SR 82A) (VONGUTFELD,RJ 72)
Voos, Henry	(VOOS,H 80)
Voumard, C.	(VOUMARD,C 77)
Wachter, P.	(GUNTHERODT,G 70)
Wagner, John G.	(KENNEY,G 76) (KENNEY,G 77A) (KENNEY,G 77B) (KENNEY,G 77C) (KENNEY,G 79)
Walker, J.L.	(FRIESEM,AA 70)
Walker, R.A.	(RUSSELL,JT 76)
Walter, G.O.	(WALTER,GO 82)

3.1 AUTHOR INDEX

Walters, W.	(AAGARD, RL 71)
Wang, Shyh	(WANG, S 71)
Waring, R.K., Jr.	(WARING, RK 71)
Warnar, Robert B.J.	(WARNAR, RB 79)
Warner, A.W.	(WARNER, AW 72)
Washko, S.	(WASHKO, S 76)
Watanabe, Hiroshi	(SHIBATA, K 72)
Watanabe, Isao	(YAMADA, K 82)
Watkins, J.W.	(ROBERTS, HN 74) (WATKINS, JW 81)
Watson, H.A.	(MILLER, RC 79)
Watson, W.	(PALERMO, P 77)
Weakliem, H.A.	(BARTOLINI, RA 76)
Weaver, J.E.	(WEAVER, JE 81)
Weaver, S.E.	(PALM, CS 79) (WEAVER, SE 80)
Weber, H.	(VOUMARD, C 77)
Weitzman, Cay	(WEITZMAN, C 70)
Wendt, F.S.	(STEWART, WC 73)
Wenny, D.H.	(GOULD, HL 57)
Wentworth, Chandler	(CLOVER, RB 71)
Werlich, H.	(WIEDER, H 71A)
Wernick, J.H.	(SHERWOOD, RC 71)
Wesdrop, C.A.	(OLIJHOEK, JF 80)
Wheeler, J.P.	(BERG, AD 76)
White, D.L.	(WARNER, AW 72)
White, Robert M.	(WHITE, RM 80)
Whitman, R.L.	(WHITMAN, RL 69)
Wieder, H.	(WIEDER, H 71A) (WIEDER, H 71B) (WIEDER, H 73A)
	(WIEDER, H 73B) (WIEDER, H 73C)
Willens, R.H.	(MILLER, RC 79)
Williams, B.F.	(BARTOLINI, RA 76)
Williams, H.J.	(WILLIAMS, HJ 51) (WILLIAMS, HJ 57A)
	(WILLIAMS, HJ 57B) (WILLIAMS, HJ 58)
Winters, H.F.	(SUITS, JC 71)
Wittke, J.P.	(WITTKE, JP 76)
Wohl, R.J.	(FROST, WT 74)
Wold, A.	(GOODENOUGH, JB 61)
Wolfe, R.	(SHERWOOD, RC 71)
Wolfgang, E.	(UNGER, WK 71B) (UNGER, WK 72A)
Wood, E.A.	(WILLIAMS, HJ 51)
Wrobel, J.J.	(HOWE, DG 81) (WROBEL, JJ 82)
Wu, Che-Kuang	(WU, CK 79)
Wyant, J.C.	(LEUNG, KM 79)
Yamada, Koichi	(YAMADA, K 82)
Yamada, T.	(EGASHIRA, T 74)
Yang, J. Leon	(ROSENKRANTZ, LJ 79)
Yeh, Pochi	(GUNNING, WJ 79) (YEH, P 79)
Yokoyama, K.	(JUDY, JH 71)
Yonezawa, S.	(TERAO, M 79)
Yoshii, Shizuka	(TSUJIYAMA, B 72) (YOSHII, S 74)

3.1 AUTHOR INDEX

3.1 AUTHOR INDEX

Young, C. Gilbert
Young, Peter L.
Yurcisin, P.

(YOUNG,CG 69)
(BORRELLI,NF 79) (BORRELLI,NF 80)
(SEYBOLT,AU 56)

Zaky, Safwat G.
Zalm, P.
Zamjatina, N.A.
Zanoni, Louis A.
Zech, R.G.
Zernike, Fritz

(ZAKY,SG 72)
(KIVITS,P 81)
(EVTIHIEV,NN 76)
(HEILMEIER,GH 68)
(NELSON,RH 74)
(KENNEY,G 76) (KENNEY,G 77A) (KENNEY,G 77B)
(KENNEY,G 77C) (KENNEY,G 79) (ZERNIKE,F 78)
(CHEN,D 75) (LEE,TC 68) (ZOOK,JD 72)
(ZOOK,JD 74)
(DALISA,AL 70)

Zook, J. David

Zwicker, W.K.

3.1 AUTHOR INDEX

3.2 CORPORATE AUTHOR INDEX

A.A. Baikov Institute of Metallurgy
(RYKALIN, NN 67)

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(SALANSKY, NM 74)

Advanced Technology Publications, Inc., Littleton, Mass. 01460
(BRODY, H 82)

American Optical Central Research Laboratory, Southbridge, Mass. 01550
(YOUNG, CG 69)

Ampex Corporation, Redwood City, Calif. 94063
(BOUSKY, S 71) (BOUSKY, S 76) (HUNT, RP 69)
(TREVES, D 67) (TREVES, D 69)

Applied Science Laboratories, Waltham, Mass. 02154
(AISENBERG, S 81)

A.S. Popov Society of Radio Engineering and Telecommunications, Moscow,
USSR
(MIKAELIANE, AL 70)

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(RUSSEL, JT 76)

Bell Telephone Laboratories, Holmdel, New Jersey 07733
(BOSCH, MA 82) (CRAIGHEAD, HG 82) (KAMINOW, IP 66)
(KAMINOW, IP 68) (KAMINOW, IP 71) (TOMLINSON, IP 70)
(TOMLINSON, IP 72)

Bell Telephone Laboratories, Inc., Murray Hill, New Jersey 07974
(ANDERSON, LK 66) (ANDERSON, LK 67) (ANDERSON, LK 68)
(ANDERSON, LK 71B) (ASHKIN, A 66) (BURCKHARDT, CB 70)
(CHANG, JT 65) (CHEN, CH 80) (CHEN, FS 68)
(CHEN, FS 69) (CLARK, MG 73) (COLLIER, RJ 68)
(DENTON, RT 68) (DENTON, RT 72) (DILLON, JF 59)
(DILLON, JF 63) (DILLON, JF 70) (DIXON, RW 67)
(DIXON, RW 70) (GOULD, HL 57) (JAVAN, A 61)
(KOGELNIK, H 66) (KOGELNIK, H 69) (LIN, LH 69)
(LIN, LH 70) (LIN, LH 71) (MAYDAN, D 70A)
(MAYDAN, D 70B) (MAYDAN, D 71) (MELCHIOR, H 70)
(MELCHIOR, H 72) (MILLER, RC 79) (PINNOW, DA 70)
(SHANKOFF, TA 68) (SHERWOOD, RC 71) (SHUMATE, PW 71)
(SMITS, FM 67) (VONDERLINDE, D 74) (WARNER, AW 72)
(WILLIAMS, HJ 51) (WILLIAMS, HJ 57A) (WILLIAMS, HJ 57B)
(WILLIAMS, HJ 58)

3.2 CORPORATE AUTHOR INDEX

3.2 CORPORATE AUTHOR INDEX

Bell Northern Research, Bramalea, Ontario, Canada
(ZAKY,SG 72)

British Thomson-Houston Co., Ltd., Rugby, England
(GABOR,D 48)

Cahners Publishing Company, Boston, Mass. 02116
(Jones, K 81)

Carnegie-Mellon University, Pittsburgh, Pa. 15213
(CASASENT,D 72) (CASASENT,D 79)

CBS Laboratories, Stamford, Conn.
(GABOR,D 71)

Centre de Recherche de la Compagnie Generale d'Electricite,
Marcoussis, France
(DEBOUARD,D 68)

Coherent, Incorporated, Danbury, Conn. 06810
(PIZZO,RJ 80)

Coherent Radiation, Palo Alto, Calif. 94304
(BERG,AD 76)

Corning Glass Works, Corning, New York 14830
(BORRELLI,NF 72) (BORRELLI,NF 79) (BORRELLI,NF 80)
(WU,CK 79)

Corning Glass Works, Raleigh, N.C.
(MEGLA,GK 66)

Cyclotomics, Inc., Berkeley, Calif. 94704
(BERLEKAMP,ER 80)

Delegation Generale a la Recherche Scientifique et Technique
(DAVAL,J 75)

Delft University of Technology, Delft, The Netherlands
(DEKKER,P 74)

Department of Defense, Fort George G. Meade, Maryland
(GOLDBERG,MW 79)

Drexler Technology Corporation, Mountain View Calif. 94043
(DREXLER,J 81)

Eastman Kodak Company, Rochester, New York 14650
(AHRENKIEL,RK 73) (AHRENKIEL,RK 74) (AHRENKIEL,RK 75)
(HOWE,DG 81) (MARCHANT,AB 82) (WROBEL,JJ 82)

3.2 CORPORATE AUTHOR INDEX

3.2 CORPORATE AUTHOR INDEX

E.I. duPont deNemours and Company, Inc., Wilmington, Del. 19898
 (BOOTH,BL 72) (FLIPPEN,RB 73) (WARING,RK 71)

Electrotechnical Laboratory, Tokyo, Japan
 (KOKUBU,A 72) (MITSUHASHI,Y 76)

EMI Electronics, Ltd., Middlesex, UK
 (FORSHAW,MR 74)

Energy Conversion Devices, Inc., Troy, Michigan
 (NEALE,RG 73) (OVSHINSKY,SR 72) (STRAND,D 80)
 (STRAND,D 81)

Equipe de Recherche, Paris, France
 (FERRE,J 71)

Fighting Vehicles Research & Development Establishment, Chertsey, Surrey, UK
 (TREVELYAN,B 69A) (TREVELYAN,B 69B)

Fuji Photo Film Co., Ltd., Japan
 (NOGUCHI,M 82)

Fujitsu Laboratories, Kawasaki, Japan
 (TANAKA,M 72)

General Electric Research Laboratory, Schenectady, New York
 (BEAN,CP 55) (BERKOWITZ,AE 71) (BERKOWITZ,AE 75)
 (NEUGEBAUER,CA 59) (ROBERTS,BW 54) (ROBERTS,BW 56)
 (SEYBOLT,AU 56)

General Mills, Mechanical Division, Minneapolis, Minnesota
 (MAYER,L 57) (MAYER,L 58A) (MAYER,L 58B)
 (MAYER,L 58C) (MAYER,L 60A) (MAYER,L 60B)

General Telephone and Electronics Laboratories, Bayside, New York
 (FOWLER,VJ 66)

Georgia Institute of Technology, Atlanta, Ga. 30332
 (WEAVER,JE 81)

Harris Corporation, Melbourne, Florida 32901
 (BARDOS,A 74) (DRAKE,MD 74) (NELSON,RH 74)
 (PALM,CS 79) (RALSTON,LM 81) (REDDERSON,BR 80A)
 (REDDERSON,BR 80B) (ROBERTS,HN 74) (SANDERS,LS 82)
 (WATKINS,JW 81) (WEAVER,SE 80)

Harris Electro-Optics Center, Ann Arbor, Michigan 48106
 (COLBURN,WS 74) (VANDERLUGT,A 73)

3.2 CORPORATE AUTHOR INDEX

3.2 CORPORATE AUTHOR INDEX

Harry Diamond Laboratories, Adelphi, Maryland 20783
(LEE,JN 79)

Hatfield Polytechnic National Reprographic Centre for Documentation,
Hertfordshire, England
(BARRETT,R 81) (BARRETT,R 82)

Hayden Publishing Company, Inc., Rochelle Park, New Jersey 07662
(MCLEOD,J 81A)

Hiroshima University, Hiroshima, Japan
(HONDAS,S 73)

Hitachi Ltd., Central Research Laboratory, Tokyo, Japan
(MATSUMURA,M 74) (NAKADA,O 74) (TAKEDA,Y 74)
(TERAO,M 79) (TSUNODA,Y73) (TSUNODA,Y 74)
(TSUNODA,Y 76)

Holotron Corporation, Wilmington, Delaware 19898
(COLBURN,WS 71)

Honeywell Corporate Research Center, Bloomington, Minnesota 55420
(AAGARD,RL 68) (AAGARD,RL 71) (AAGARD,RL 72)
(AAGARD,RL 73A) (AAGARD,RL 73B) (BERNAL,GE 70)
(BERNAL,GE 71A) (BERNAL,GE 71B) (CHEN,D 64)
(CHEN,D 65) (CHEN,D 66) (CHEN,D 67A)
(CHEN,D 67B) (CHEN,D 68A) (CHEN,D 68B)
(CHEN,D 70A) (CHEN,D 70B) (CHEN,D 71)
(CHEN,D 73) (CHEN,D 74) (CHEN,D 75)
(HASKAL,HM 77) (LEE,TC 79A) (LEE,TC 79B)
(LEE,TC 79C) (LEUNG,KM 79) (TUFTE,ON 73A)
(TUFTE,ON 73B) (ZOOK,JD 72) (ZOOK,JD 74)

Honeywell, Inc., Corporate Research Center, Hopkins, Minnesota 55343
(LEE,TC 68) (LEE,TC 71) (LEE,TC 72)
(LIU,TS 71) (SCHULDT,S 71)

Honeywell, Inc., Electronic Data Processing Division,
Waltham, Mass.
(HASKAL,HM 70) (HASKAL,HM 71A) (HASKAL,HM 71B)

Honeywell Information Systems, Italia, Pregnana Milanese, Italy
(MINNAJA,N 73)

Hughes Research Laboratories, Malibu, Calif.
(HENDERSON,DM 79) (JENNY,JA 70) (MAIMAN,TH 60)

IBM Advanced Systems Development Division Laboratory,
Los Gatos, Calif.
(BROWN,CJ 68)

3.2 CORPORATE AUTHOR INDEX

3.2 CORPORATE AUTHOR INDEX

IBM Deutschland, Sindelfingen, Germany
(STOFFEL,AM 70)

IBM General Systems Division, Rochester, Minnesota 55901
(DICKSON,LD 70)

IBM Research Laboratory, San Jose, Calif. 95193

(BROWN,BR 72)	(BROWN,BR 74)	(CHEN,M 81)
(ESCHENFELDER,AH 70)	(FAN,G 70)	(FAN,GJ 71)
(FROST,WT 74)	(GRIFFITH,RL 69)	(HOAGLAND,AS 72)
(HOAGLAND,AS 79)	(HUTH,BG 74)	(KUEHLER,JD 66)
(LEE,K 71)	(LEE,K 73A)	(LEE,K 73B)
(MACDONALD,RE 69)	(MEE,CD 67)	(PATEL,AM 80)
(PATLACH,AM 72)	(SAWATZKY,E 71A)	(SAWATZKY,E 71B)
(SAWATZKY,E 71C)	(SHELTON,CF 73)	(SHELTON,CF 74)
(STREET,GB 72)	(SUITS,JC 71)	(SUITS,JC 72)
(VOLKER,S 79)	(WIEDER,H 71A)	(WIEDER,H 71B)
(WIEDER,H 73A)	(WIEDER,H 73B)	(WIEDER,H 73C)

IBM Systems Development Division Laboratory, Poughkeepsie, New York
(ANDERSON,HR 71) (BECK,JW 70) (COMSTOCK,RL 70A)
(COMSTOCK,RL 70B) (LIPP,JA 71)

IBM Thomas J. Watson Research Center, Yorktown Heights, New York 10598

(AHN,KY 68)	(AHN,KY 70A)	(AHN,KY 70B)
(AHN,KY 71)	(AHN,KY 82)	(ALMASI,GS 71)
(BOWERS,DM 65)	(CHANCE,DA 79)	(CHAUDHARI,P 73)
(COHEN,MS 80)	(CROW,JD 79)	(DEKKER,P 76)
(FAN,GY 67)	(FAN,GY 68)	(HARTSTEIN,A 80)
(HERD,SR 82A)	(HERD,SR 82B)	(JIPSON,VB 81)
(LYNCH,RJ 79)	(MARINACE,JC 70)	(MATICK,RE 72)
(MCGUIRE,TR 71)	(MEHTA,RR 71)	(PENNINGTON,KS 71)
(SMITH,AW 73)	(SOROKIN,PP 79)	(SUITS,JC 66)
(SUITS,JC 68)	(TU,KN 72)	(VONGUTFELD,RJ 72)

IBM Zurich Research Laboratory, Switzerland
(MIDDELHOEK,S 70)

IEEE, New York, New York
(ELECCION,M 72) (MENNIE,D 79)

Imperial College, London
(HOPKINS,HH 53) (HOPKINS,HH 66) (HOPKINS,HH 67)

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3.2 CORPORATE AUTHOR INDEX

3.2 CORPORATE AUTHOR INDEX

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 (ANDRESEN,AF 67) (ANDRESEN,AF 72)

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 (FEINLEIB,J 72) (HOU,SL 71) (IWASA,S 74)
 (KATZKA,P 79) (KING,GW 65A) (KING,GW 65B)
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3.2 CORPORATE AUTHOR INDEX

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(THORNTON, JR 69)

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(KITTEL, C 46)

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(GOODENOUGH, JB 61) (SMITH, DO 67)

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McGraw-Hill, Inc., New York, N.Y.
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(WARNAR, RB 79)

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(CARLSON, CO 66)

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(SUZUKI, T 70) (TOGAMI, Y 78) (TOGAMI, Y 82)

3.2 CORPORATE AUTHOR INDEX

3.2 CORPORATE AUTHOR INDEX

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(OHTA,Y 78) (ONO,Y 72)

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Communication Lab, Tokai, Ibaraki, Japan
(CHIDA,K 77) (EGASHIRA,E 74) (KATSUI,A 76)
(YOSHII,S 74)

N.V. Philips Gloeilampenfabrieken, Eindhoven, The Netherlands
(BOGELS,PW 76)

Omex, Research and Development Division, Santa Clara, Calif. 95051
(BURNS,LL 79) (BURNS,LL 80)

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(ALLEN,TH 81) (ASH,GS 80) (RANCOURT,JD 81)

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(SUTHERLIN,KK 74)

Optical Institute, Paris, France
(MARECHAL,A 47)

Optical Publishing Co., Inc., Pittsfield, Mass 01201
(MCLEOD,J 81B)

Perkin-Elmer Corporation, Norwalk, Conn. 06857
(ROSENKRANTZ,LJ 79)

Philips Forschungslaboratorium, Hamburg GmbH, Hamburg, Germany
(HILL,B 72) (HILL,B 73) (KRUMME,JP 73A)
(KRUMME,JP 73B) (KRUMME,JP 75) (MEYER,H 72)
(PEPPERL,R 77) (TOLKSDORF,W 75)

Philips Laboratories, Briarcliff Manor, New York
(ASBECK,PM 79) (BLOM,GM 79) (DALISA,AL 70)
(KENNEY,G 76) (KENNEY,G 77A) (KENNEY,G 77B)
(KENNEY,G 77C) (KENNEY,G 79) (LOU,DY 81)
(LOU,DY 82) (ZERNIKE,F 78)

Philips Research Laboratories, Eindhoven, The Netherlands
(BOUWHUIS,G 78) (BRAAT,JJ 78A) (BRAAT,JJ 78B)
(BROUHA,M 75) (BULTHUIS,K 79) (DEHAAN,MR 77)
(DITTMER,G 77) (HEEMSKERK,JP 78) (HEEMSKERK,JP 79)
(JACOBS,BA 78) (KIVITS,P 81) (OLIJHOEK,JF 80)
(ROBERTSON,JM 75) (SCHOOT,CJ 73) (VELZEL,CH 78)

3.2 CORPORATE AUTHOR INDEX

3.2 CORPORATE AUTHOR INDEX

Philips Zentrallaboratorium, Hamburg, West Germany
(SCHMIDT,U 69)

P.N. Lebedev Physical Institute, Academy of Sciences of the USSR,
Moscow, USSR
(BASOV,NG 72)

Polish Academy of Sciences, Institute of Physics, Poznan
(RATAJCZAK,H 70)

Pomona College, Claremont, California
(FOWLER,CA 52) (FOWLER,CA 55) (FOWLER,CA 56A)
(FOWLER,CA 56B)

PRC Image Data Systems, McLean, Virginia
(WALTER,GO 82)

Precision Instrument Company, Santa Clara, California
(BECKER,CH 66) (GRAY,EE 72) (KACZOROWSKI,EM 77)
(MCFARLAND,K 68)

Queen's University, Belfast, Northern Ireland
(FINDLAY,D 70)

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(FRIESEM,AA 70) (LEE,WH 72)

Radiation Incorporated, Melbourne, Florida 32901
(ROBERTS,HN 72)

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(AMMON,GJ 78) (AMMON,GJ 79) (AMMON,GJ 80)
(AMMON,GJ 81A) (AMMON,GJ 81B) (CORSOVER,SL 81)
(HERZOG,DG 79) (KENVILLE,RF 78) (KENVILLE,RF 81)
(PIERSON,PB 79)

RCA Laboratories, Princeton, New Jersey 08540
(AMODEI,DL 71) (AMODEI,DL 72) (BARTOLINI,RA 74)
(BARTOLINI,RA 76) (BARTOLINI,RA 78) (BARTOLINI,RA 79)
(BARTOLINI,RA 81A) (BARTOLINI,RA 81B) (BELL,AE 78)
(BELL,AE 79A) (BELL,AE 79B) (BELL,AE 82)
(BORDOGNA,J 72) (BOSOMWORTH,DR 68) (BOTEZ,D 78)
(BURKE,WJ 78) (CLEMENS,JK 82) (CLOVER,RB 71)
(COSENTINO,LS 73) (CREDELLE,TL 72) (DUNCAN,RC 70)
(FAUGHNAN,BW 69) (FIRESTER,AH 78A) (FIRESTER,AH 78B)
(GOROG,I 78A) (GOROG,I 78B) (HANNAN,WJ 73)
(HEILMEIER,GH 68) (KEIZER,EO 78) (KRESSEL,H 74A)
(KRESSEL,H 74B) (LOHMAN,RD 71) (MCCOY,DS 78)
(MEZRICH,RS 69) (MEZRICH,RS 70A) (MEZRICH,RS 70B)
(NELSON,TJ 68) (RAJCHMAN,JA 70A) (RAJCHMAN,JA 70B)
(RAJCHMAN,JA 72) (ROSS,DL 78) (SHAHBENDER,R 74)
(STEWART,WC 70) (STEWART,WC 72) (STEWART,WC 73)
(WITTKE,JP 76)

3.2 CORPORATE AUTHOR INDEX

3.2 CORPORATE AUTHOR INDEX

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 (CHEN,CT 79A) (CHEN,CT 79B) (KIM,DM 77)

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 (VOOS,H 80)

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 (FELDTKELLER,E 72) (HAUDEK,H 71) (UNGER,WK 70)
 (UNGER,WK 71A) (UNGER,WK 71B) (UNGER,WK 71C)
 (UNGER,WK 71D) (UNGER,WK 72A) (UNGER,WK 72B)

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 (GRAF,P 72) (KIEMLE,H 72) (KIEMLE,H 74)
 (RULL,H 75) (RULL,H 76)

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 (CONGLETON,DB 77)

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 (NARUSE,Y 78)

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 (CHI,CS 82) (THAXTER,JB 69) (THAXTER,JB 74)

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 (JOHNSON,LH 78) (LO,DS 74) (TOROK,EJ 78)

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 (BLOOM,AL 66)

Spin Physics, Inc.
 (NEARY,DR 82)

3.2 CORPORATE AUTHOR INDEX

3.2 CORPORATE AUTHOR INDEX

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(GARMIRE,E 75)

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(STREET,J 80)

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(DEVELIS,JB 74)

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(CASHMAN,MW 73) (ROLPH,S 80)

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(CHEN,CT 80)

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(DAURIA,L 73)	(DAURIA,L 74)	(LANGLET,R 72)
(LANGLET,R 73)	(MICHIRON,F 72)	(MICHIRON,F 74A)
(MICHIRON,F 74B)	(SPITZ,E 72)	

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3.2 CORPORATE AUTHOR INDEX

3.2 CORPORATE AUTHOR INDEX

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(CATHEY,WT 74)

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(JOHANNES,R 70)

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3.2 CORPORATE AUTHOR INDEX

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(CHENG,CC 79)

(SHERIDON,NK 72)

(FILES,V 71)

(SMITH,TW 81)

(KRAMER,CJ 79)

(URBACH,JC 66)

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(JOHNSON,RV 79)

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(CHENG,D 81)

(MANSURIPUR,M 82)

(CHENG,T 74)

(WHITE,RM 80)

(KNIGHT,GR 75)

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(HRBEK,G 74)

(WHITMAN,RL 69)

(LAUB,LJ 76)

(PALERMO,P 77)

3.3 TITLE INDEX

- Ablative Optical Recording Using Organic Dye-in-Polymer Films. (LAW,KY 80)
- The Acoustic Properties of Proustite. (TREVELYAN,B 69B)
- Acousto-Optic and Electro-Optic Modulator Applications. (PIZZO,RJ 80)
- Acousto-Optic Deflector Performance at 10.6 μ m. (SKURNICK,E 79)
- Acousto-Optic Laser Recording. (BADEMIAN,L 81)
- Acousto-Optical Pattern Display Using Pulse-Modulated Ultrasound. (UCHIDA,N 70)
- Acousto-Optic Light Deflectors Using Optical Activity in Paratellurite. (WARNER,AW 72)
- Acoustooptic Interactions and Devices. (DIXON,RW 70)
- Acoustooptical Pulse Modulators. (MAYDAN,D 70A)
- Acousto-Photoreflective Storage at 1060 nm. (LEE,JN 79)
- Advanced Optical Storage Techniques for Computers. (AAGARD,RL 72)
- Advances in Computer Mass Storage Technology. (CHI,CS 82)
- Advances in Optical Storage--An Alternate Technology? (SHELTON,CF 74)
- Ambiguity Processing by Joint Fourier Transform Holography. (LEE,TC 79B)
- Amorphous Metallic Films for Magneto-Optic Applications. (CHAUDHARI,P 73)
- Amorphous, GdCo Disk for Thermomagnetic Recording. (TOGAMI,Y 82)
- Annealing Study of EuO Films Doped with Iron and Europium. (SUITS,JC 71)
- Antireflection Structures for Optical Recording. (BELL,AE 78)
- The Application of Amorphous Materials to Computer Memories. (NEALE,RG 73)
- Application of Holographic Optical Techniques to Bulk Memory. (ANDERSON,LK 71)

3.3 TITLE INDEX

Applications of Lasers to Computers.	(BASOV,NG 72)
Archival Data Storage.	(GELLER,SB 74)
Archival Optical Disc Data Storage.	(AMMON,GJ 81A)
Archival Optical Disk Data Storage.	(AMMON,GJ 80)
Automated Thermoplastic Holographic Camera Development.	(LEE,TC 79A)
Bistable Optical Systems Based on a Pockels Cell.	(FELDMAN,A 79)
Bit Oriented Optical Storage with Thin Tellurium Films.	(LOU,DY 81)
Calculations of Stable Domain Radii Produced by Thermomagnetic Writing.	(HUTH,BG 74)
Characteristics of a Propagating Gaussian Beam.	(DICKSON,LD 70)
Characteristics of GaAs Laser Arrays Designed for Beam Adressable Memories.	(WIEDER,H 71A)
Characteristics of Relief Phase Holograms Recorded in Photoresists.	(BARTOLINI,RA 74)
Characteristics of Scanning Laser and Electron Beams in Bulk Data Storage.	(BOUSKY,S 71)
Characterization of Optical Disks.	(LOU,DY 82)
Classification of Holograms.	(CATHEY,WT 74)
Coatings for Video Disks.	(ROSS,DL 78)
Co-Ferrite-New Magneto optic Recording Material.	(EVTIHIEV,NN 76)
A Comparison of Plastic Versus Metal Coatings for Real Time Laser Recording.	(CONGLETON,DB 77)
Computer Modelling Study of Ablative Optical Recording.	(COHEN,MS 80)
Computer Sciences and Technology: Computer Peripheral Memory System Forecast.	(WARNAR,RB 79)
Considerations on Holographic Memories in the Gigabyte Region.	(KIEMLE,H 74)
Consumer Electronics: Personal and Plentiful.	(MENNIE,D 79)

3.3 TITLE INDEX

Continuous Operation over 2500 h of Double Heterostructure Laser Diodes with Output Powers More than 80 mW.	(NAKADA,O 74)
Contribution to the Bi-Mn System.	(SEYBOLT,AU 56)
Contributions of IBM to Laser Science--1960 to the Present.	(SOROKIN,PP 79)
Coupled Wave Theory for Thick Hologram Gratings.	(KOGELNIK,H 69)
CrO ₂ -Based Thermomagnetic Information Storage and Retrieval Systems.	(WARING,RK 71)
Curie-Point Switching in MnBi Films.	(LEWICKI,GW 69)
Curie-Point Writing of Magnetic Holograms on MnBi.	(MEZRICH,RS 69)
Curie-Point Writing on Magnetic Film.	(MAYER,L 58B)
CW Semiconductor Injection Lasers in Information Handling Systems.	(WITTKE,JP 76)
Data Recovery in a Photo-Digital Storage System.	(GRIFFITH,RL 69)
Demodulation and Photodetection Techniques.	(MELCHIOR,H 72)
Description of a Dry Film Tactical Laser Beam Recorder.	(HERZOG,DG 79)
Design and Performance of a 20-stage Digital Light Beam Deflector.	(MEYER,H 72)
Design and Production of Tellurium Optical Data Disks.	(RANCOURT,JD 81)
Design Considerations for a Flexible High-Resolution Film Recording System.	(PIERSON,PB 79)
Design Considerations for a Magneto-Optic Cryogenic Film Memory.	(PATLACH,AM 72)
Design Considerations for a Photooptical Storage Device.	(KING,GW 65B)
Design Considerations for a Semipermanent Optical Memory.	(SMITS,FM 67)
Design of a Large Read-Only Holographic Memory.	(LANGDON,RM 69)
Design Relationships for Holographic Memories.	(VANDERLUGT,A 73)

3.3 TITLE INDEX

3.3 TITLE INDEX

- Development of an Optical Disc Recorder; Quarterly Technical Report. July 1, 1976 to September 30, 1976. (KENNEY,G 76)
- Development of an Optical Disc Recorder; Quarterly Technical Report. October 1, 1976 to December 31, 1976. (KENNEY,G 77A)
- Development of an Optical Disc Recorder; Quarterly Technical Report. January 1, 1977 to March 31, 1977. (KENNEY,G 77B)
- Development of an Optical Disc Recorder; Quarterly Technical Report. April 1, 1977 to June 30, 1977. (KENNEY,G 77C)
- Developments in Optical Disk Technology and the Implications for Information Storage and Retrieval. (BARRETT,R 82)
- Dichroic Absorption of M Centers as a Basis for Optical Information Storage. (SCHNEIDER,I 70)
- Dichromated Gelatin Holograms and Their Applications. (CHANG,BJ 80)
- Diffraction Efficiency of Magnetic Hologram. (TANAKA,M 72)
- Digital Optical Data Storage and Retrieval. (REDDERSEN,BR 80A)
- Digital Spatial Modulators. (TAKEDA,Y 74)
- Direct Comparison of Thermal and Magnetic Profiles in "Curie-Point" Writing on MnGaGe Films. (WIEDER,H 73C)
- Direct Observation of Domain-Wall Movements in MnBi Films. (CHEN,D 67A)
- Discharge Current Noise in He-Ne Laser and Its Suppression. (SUZUKI,T 70)
- The Disk Revolution. (ROLPH,S 80)
- Disk-Storage Technology. (WHITE,RM 80)
- Document Storage: A Billion-Dollar Prize. (SMITH,K 80)
- Drexon(T.M.) Optical Memory Media for Laser Recording and Archival Data Storage. (DREXLER,J 81)
- Dye-Sensitized High-Efficiency Thick Dielectric Diffraction Gratings. (FILES,V 71)
- Dynamic Observation of Thermomagnetic Writing on MnBi Films. (ONO,Y 72)

3.3 TITLE INDEX

3.3 TITLE INDEX

- Dynamic Response of Faraday Rotation. (ZAKY,SG 72)
- Dynamic Scattering: A New Electrooptic Effect in Certain Classes of Nematic Liquid Crystals. (HEILMEIER,GH 68)
- Dynamics of Thermomagnetic Writing on MnBi Thin Films. (BERNAL,GE 71B)
- Effect of Film-Grain Noise on the Performance of Holographic Memory. (LEE,WH 72)
- Effect of Internal Demagnetizing Fields on the Thermomagnetic Writing Process in MnAlGe Films. (WIEDER,H 73B)
- The Effect of Overcoats on the Ablative Writing Characteristics of Tellurium Films. (CHEN,M 81)
- The Effect of the Demagnetizing Field on Curie-Point Writing in Magneto-optic Thin Films of MnBi. (BERNAL,GE 70)
- Effects of Charge Dynamics and Device Parameters on the Resolution of Electrooptic Spatial Light Modulators. (OWECHKO,Y 79)
- Efficient Hologram Recording in LiNbO₃:Fe Using Optical Pulses. (CHEN,CT 79)
- Efficient Pulsed Photorefractive Process in LiNbO₃:Fe for Optical Storage and Deflection. (CHEN,C 79)
- Efficient Pulsed Photorefractive Process in LiNbO₃:Fe for Optical Storage and Deflection. (CHEN,CT 80)
- Efficient Use of Laser Power in Heat-Mode Recording. (NOGUCHI,M 82)
- Electrical Control in Photoferroelectric Materials for Optical Storage. (MICHIRON,F 74A)
- Electrical Control of Fixation and Erasure of Holographic Patterns in Ferroelectric Materials. (MICHIRON,F 72)
- Electrical Control of Holographic Storage in Strontium-Barium Niobate. (THAXTER,JB 69)
- Electrochromism, A Possible Change of Color Producible in Dyes by an Electric Field. (PLATT,JR 61)
- Electronic Structure and Optical Index Damage of Iron-Doped Lithium Niobate. (CLARK,MG 73)

3.3 TITLE INDEX

Electron Mirror Microscopy of Magnetic Domains.	(MAYER,L 57)
Electron Mirror Microscopy of Patterns Recorded on Magnetic Tape.	(MAYER,L 58A)
Electrooptical Processing of Phase-Array Antenna Data.	(CASASENT,D 72)
The Electro-Optic Effect in Proustite.	(TREVELYAN,B 69A)
Electrooptic Light Modulators.	(KAMINOW,IP 66)
Electro-Optic Tunable Filter Structures.	(YEH,P 79)
Epitaxial Growth of EuS Films and Magnetooptical Properties.	(TU,KN 72)
Epitaxially Grown Bi-Substituted Iron Garnet Films for Magneto-Optic Devices.	(ROBERTSON,JM 75)
Erasable Optical Disk Materials Evaluation.	(RALSTON,LM 81)
Error Management Techniques for Optical Disk Systems.	(CORSOVER,SL 81)
Error Recovery Scheme for the IBM 3850 Mass Storage System.	(PATELA,AM 80)
Evaluation Experiments on Holographic Storage of Binary Data in Electro-Optic Crystals.	(WEAVER,JE 81)
The Evolution of the RCA "SelectaVision VideoDisc System--A Historical Perspective."	(KEIZER,EO 78)
Experimental Evaluation of an MnBi Optical Memory System.	(AAGARD,RL 71)
Experimental Holographic Read-Write Memory Using 3-D Storage.	(DAURIA,L 74)
An Experimental Optical Videodisc Playback System.	(HRBEK,GW 74)
An Experimental Read-Write Holographic Memory.	(STEWART,WC 73)
Experimental Studies of Magnetooptical Kerr Readout SNR.	(FUJIWARA,T 72)
Experiments on Curie-Temperature Writing in $\text{Mn}_{0.8}\text{Ti}_{0.2}\text{Bi}$ Films.	(UNGER,WK 72B)
Extra-paraxial Theory of Spatial Coherence.	(HOPKINS,HH 67)

3.3 TITLE INDEX

3.3 TITLE INDEX

- The Family of Lasers: A Survey. (ELECCION,M 72)
- Fast Modulator for Extraction of Internal Laser Power. (MAYDAN,D 70B)
- Feasibility Study of a Large Capacity Magnetic-Film Optical Memory. (DEBOUARD,D 68)
- Ferrimagnetic Garnet Films for Magneto optic Information Storage. (KRUMME,JP 75)
- Ferroelectric Ceramic Electrooptic Materials and Devices. (LAND,CE 69)
- Ferroelectric/Photoconductor Memory Device. (MEHTA,RR 71)
- Fifteen years of Laser Recording--Where We've Been and Where We're Going. (KENVILLE,RF 81)
- Flexible High-Resolution Film Recorder Systems. (HEFFNER,P 79)
- Flux Reversal in Single-Crystal MnBi Films. (CHEN,D 66)
- The FM Laser and Optical Communication Systems. (KERR,JR 66)
- Focus Error Detection in Optical Data Storage Systems. (JOHNSON,RV 79)
- (GaAl)As Laser Requirements for Local Attached Data Link Applications. (CROW,JD 79)
- GaAs/(GaAl)As Laser Technology. (LYNCH,RT 79)
- Gallium Arsenide and (AlGa)As Devices Prepared by Liquid-Phase Epitaxy. (KRESSEL,H 74A)
- A Gallium-Arsenide Laser Facsimile Printer. (MILLER,RC 79)
- Garnets with High Magneto optic Figures of Merit in the Visible Region. (LACKLISON,DE 73)
- Gas Lasers. (BLOOM,AL 66)
- Geometrical Aspects of Consistent Holographic Memory Design. (GRAF,P 72)
- Geometrical Interpretation of Gaussian Beam Optics. (ZOOK,JD 72)
- Glass Lasers. (YOUNG,CG 69)
- Growth and Properties of Garnet Films for Storage Application. (TOLKSDORF,W 75)

3.3 TITLE INDEX

Growth of MnBi Films on Mica.	(UNGER,WK 71A)
Guidelines for the Selection of Acoustooptic Materials.	(PINNOW,DA 70)
A Guide to the Laser.	(FISHLOCK,D 69)
Hall and Faraday effects in Oriented MnBi Films.	(CHEN,D 65)
Heating of a Two-Layer Plate in Laser-Beam Welding.	(RYKALIN,NN 67)
Helium-Neon Laser: Thermal High-Resolution Recording.	(CARLSON,CD 66)
HeNe Parallel Plate Laser Development.	(CHANCE,DA 79)
Heterogeneous Reactions and Chemical Transport of Tungsten with Oxygen, Flourine, and Flourides of Several Metalloids.	(DITTMER,G 77)
Heterojunction Laser Diodes for Room Temperature Operation.	(KRESSEL,H 74B)
High-Capacity High-Speed Recording.	(JAMBERDINO,AA 81B)
A High Capacity Holographic Storage System.	(LIPP,J 71)
A High-Capacity, Semipermanent Optical Memory.	(ANDERSON,LK 67)
High-Density Beam-Addressable Recording Using Thermomagnetic Transfer.	(FROST,WT 74)
High Density Direct Read after Write (DRAW) Recording.	(PEPPERL,R 77)
High-Density Image-Storage Holograms by a Random Phase Sampling Method.	(TSUNODA,Y 74)
High-Density Image-Storage Holograms by a Random Phase Shifter Method.	(TSUNODA,Y 73)
A High-Density Magneto-Optic Memory.	(GOLDBERG,N 67)
High-Density Optical Recording with (Ga,Al) As DH Lasers.	(ASBECK,PM 79)
High-Performance Te Trilayer for Optical Recording. Recording.	(BELL,AE 79A)
High-Resolution Studies of Magnetic Domains in MnBi Films.	(UNGER,WK 71B)

3.3 TITLE INDEX

High-Sensitivity Silicide Films for Optical Recording.	(AHN,KY 82)
High-Speed Archival Optical Mass-Memory Design.	(REDDERSEN,BR 80B)
High Speed Holographic Digital Recorder.	(ROBERTS,HN 74)
High Speed Laser Recording on the ITEK PROM.	(IWASA,S 74)
High-Speed Photodetectors.	(ANDERSON,LK 66)
High Speed Recording on MnBi Thin Films Deposited on Discs.	(LANGLET,R 73)
High Throughput Landsat Imagery Film Recorder.	(ULMER,DE 79)
Hologram Formation in Hardened Dichromated Gelatin Films.	(LIN,LH 69)
Holograms for Information Storage.	(COLLIER,RJ 68)
Holographic Data Storage and Retrieval.	(NELSON,RH 74)
Holographic Data Store.	(STREHLOW,WH 74)
Holographic Information Retrieval System.	(TSUKAMOTO,H 74)
Holographic Information Storage.	(KIEMLE,H 72)
Holographic Information Storage in Potassium Bromide.	(HUHN,D 70)
Holographic Mass Memory's Promise: Megabits Accessible in Microseconds.	(LOHMAN,RD 71)
Holographic Memories.	(KNIGHT,GR 75)
Holographic Memory Devices.	(MIKAELIANE,AL 70)
Holographic Optical Element (HOE) for Demultiplexing in Fiber Optic Systems.	(HORNER,JL 80)
Holographic Optical Memory--An Optical Read-Write Mass Memory.	(RAJCHMAN,JA 70B)
Holographic Optical Memory for Bulk Data Storage.	(ANDERSON,LK 68)
Holographic Parameters and Recording Materials.	(PENNINGTON,KS 71)
Holographic Read-Write Memory and Capacity Enhancement by 3-D Storage.	(DAURIA,L 73)
Holographic Recording Materials--A Review.	(KURTZ,RL 75)

3.3 TITLE INDEX

- Holographic Recording with Photopolymers. (JENNEY,JA 70)
- Holographic Storage in Doped Barium Sodium Niobate ($\text{Ba}_2\text{NaNb}_5\text{O}_{15}$). (AMODEI,JJ 71)
- Holographic Storage in Lithium Niobate. (CHEN,FS 68)
- Holographic Techniques for Recording of Electrical Signals on Moving Storage Media. (RULL,H 75)
- Holographic Video Disk: An Alternative Approach to Optical Video Disks. (TSUNODA,Y 76)
- Holography. (GABOR,D 71)
- Holoscan: A Commercial Holographic ROM. (SUTHERLIN,KK 74)
- Hot pressed CoCr_2S_4 : A Magneto-Optical Memory Material. (AHRENKIEL,RK 73)
- Hysteresis Loops of Mixtures of Ferromagnetic Micropowders. (BEAN,CP 55)
- IBM 3850-Mass Storage System. (JOHNSON,C 75)
- Identification and Measurement of Phases in MnBi Thin Films Using an X-Ray Diffractometric Technique. (LIU,TS 71)
- Image Resolution of a Holographic System; Final Report. October 1,1979 to July 30, 1980. (MENZEL,RW 81)
- Imaging Devices Using the Charge-Coupled Concept. (BARBE,DF 75)
- Imaging in Amorphous Films by Structural Alteration. (OVSHINSKY,SR 72)
- Implications of Holography for Information Systems. (VOOS,H 80)
- Improved Electrooptic Materials and Fixing Techniques for Holographic Recording. (AMODEI,JJ 72)
- Improved Thermoplastic-Photoconductor Devices for Holographic Recording. (COLBURN,WS 74)
- Improvement of the Acoustooptic Modulator for Wideband Laser Recording Systems. (OHTA,Y 78)
- Increase of Curie Temperature in EuO Films by Fe Doping. (AHN,KY 70B)

3.3 TITLE INDEX

Infrared Dyes for Optical Storage.	(JIPSON,VB 81)
Inorganic Photochromic and Cathodochromic Recording Materials.	(DUNCAN,RC 70)
InSitu Holographic Testing of Lenses with an Automatic Holocamera.	(LEUNG,KM 79)
Intermodulation and Moire Effects in Optical Video Recording.	(DEHAAN,MR 77)
Investigations of Holes Machined by Laser Beam on Al and Cr Thin Films.	(YAMADA,K 82)
Ion-Beam Etching of Groove Patterns into Garnet Films.	(KRUMME,JP 73A)
Kerr-Effect Enhancement and Improvement of Readout Characteristics in MnBi Film Memory.	(EGASHIRA,K 74)
Kerr Effects in Thin EuO Films on Mirror Substrates.	(AHN,KY 68)
Large Archival Mass Memory System Using Optical Diskettes.	(WATKINS,JW 81)
Large Magnetic Kerr Rotation in BiMn Alloy.	(ROBERTS,BW 54)
Laser Beam Reading of Video Records.	(VELZEL,CH 78)
Laser Beam Recording of Video Master Disks.	(JACOBS,BA 78)
Laser-Beam Recording on a Magnetic Film.	(TREVES,D 69)
Laser Beams and Resonators.	(KOGELNIK,H 66)
Laser Beam Writing, Erasing, and Reading on Manganese Bismuth Films.	(CHEN,D 68A)
Laser-Induced Local Heating of Multilayers.	(MANSURIPUR,M 82)
Laser Marking of Thin Organic Films.	(WROBEL,JJ 82)
Laser Mass Memory System.	(GRAY,EE 72)
Laser Memories for Image Storage.	(BURNS,LL 80)
Laser Noise in Writing Applications.	(BERG,AD 76)
Laser Recording and Data Handling.	(JAMBERDINO,AA 81A)

3.3 TITLE INDEX

- Laser Recording on MnBi Films. (LEWICKI,GW 73)
- Laser Recording Unit for High Density Permanent Digital Data Storage. (MCFARLAND,K 68)
- Laser Scanning Reader for Automated Data Entry Operation. (CHENG,CC 79)
- Lasers Store a Wealth of Data. (HECHT,J 82)
- Laser Writing and Erasing on Chalcogenide Films. (VONGUTFELD,RJ 72)
- Laser Writing on Silicon-Metal Bilayers for Optical Storage. (HERD,SR 82B)
- Lattice Constants and Phase Transitions in Oriented MnBi Films. (HAUDEK,H 71)
- Light Beam Deflection with Electrooptic Prisms. (LEE,TC 68)
- Light Beam Deflector Performance: A Comparative Analysis. (ZOOK,JD 74)
- Light-Emitting Diode (LED) Arrays for Optical Recorders. (ROSENKRANTZ,LJ 79)
- Linear Electrooptical Materials. (KAMINOW,IP 71)
- Liquid Crystal Infrared Modulation. (PASKO,JG 79)
- Low Birefringent Orthoferrites for Optical Devices. (CLOVER,RB 71)
- A Low Cost Prerecorded Television System Using Holographic Storage. (HANNAN,WJ 73)
- Low-Temperature Beam-Addressable Memory. (FAN,GY 68)
- Low-Temperature Optical Beam-Addressable Memory. (FAN,GY 67)
- Low-Temperature Storage Using GaAs Lasers and EuO as Storage Medium. (FAN,G 70)
- The Magnetic and Crystallographic Properties of MnBi Studied by Neutron Diffraction. (ANDRESEN,AF 67)
- Magnetic and Crystallographic Properties of SmCo Base Ternary Alloys. (WASHKO,S 76)
- Magnetic and Magneto-Optical Properties of Fe-Doped EuO Films. (MCGUIRE,TR 71)

3.3 TITLE INDEX

Magnetic and Magneto-optical Properties of Sputtered Fe_5Si_3 Films.	(SAWATZKY,E 71B)
Magnetic and Magneto-optic Properties of Ferromagnetic MnCuBi Thin Films.	(KATSUI,A 76)
Magnetic and Optical Properties of Thin Films in the System $1-x \text{Fe}_3\text{O}_4 \cdot x \text{Fe}_8/304$.	(BORRELLI,NF 72)
Magnetic Anisotropy Energy in Nickel Arsenide Type Crystals.	(ADACHI,K 61)
Magnetic Circular Dichroism of EuO Films.	(FERRE,J 71)
Magnetic Domains in Evaporated Thin Films of Nickel-Iron.	(FOWLER,CA 56B)
Magnetic Domains in Thin Films by the Faraday Effect.	(FOWLER,CA 56A)
Magnetic Domains in Thin Films of Nickel-Iron.	(FOWLER,CA 55)
Magnetic Domains on Silicon Iron by the Longitudinal Kerr Effect.	(FOWLER,CA 52)
Magnetic Field Effect in Thermomagnetic Recording.	(MINNAJA,N 73)
Magnetic Films and Optics in Computer Memories.	(SMITH,DO 67)
Magnetic Holography.	(MEZRICH,RS 70B)
Magnetic Materials for Optical Recording.	(CHEN,D 74)
Magnetic Properties and Curie Point Writing in Amorphous Metallic Films.	(MIMURA,Y 76)
Magnetic Properties of a New Ferromagnetic Compound MnGaGe .	(SHIBATA,K 72)
Magnetic Properties of Mn_5Ge_3 Thin Films.	(RATAJCZAK,H 70)
Magnetic Properties of Tb-Substituted GdIG Films Chemically Deposited on YAG Substrates.	(COMSTOCK,RL 71B)
Magnetic Properties of Thin Films in the Mn-Ga-Ge System.	(LEE,K 73A)
Magnetic Thin Films for Optical Storage.	(LEE,K 73B)
Magnetic Transformation in MnBi .	(HEIKES,RR 55)
Magnetic Writing on Thin Films of MnBi .	(WILLIAMS,HJ 57B)

3.3 TITLE INDEX

- Magnetic Writing with an Electron Beam. (MAYER,L 58C)
- Magneto-optical Beam Addressable Storage Using MnGaGe and GdCo. (SHELTON,CF 73)
- Magneto-optical Memory Experiments on a Rotating Mn-Cu-Bi Disk Medium. (CHIDA,K 77)
- Magneto-optical Properties of Cobalt Substituted RbNiF₃. (SUITS,JC 68)
- Magneto-optical Properties of Ferrimagnetic CoCr₂S₄ in the Near Infrared. (AHRENKIEL,RK 74)
- Magneto-Optical Properties of Materials Containing Divalent Europium. (SUITS,JC 66)
- Magneto-Optical Properties of Sputtered Mn₅Ge₃ Films. (SAWATZKY,E 71A)
- Magneto-Optical Recording. (MACDONALD,RE 69)
- Magneto-Optical Studies of Chromium TriBromide. (DILLON,JF 63)
- Magneto-Optical Variable Memory Based Upon the Properties of a Transparent Ferrimagnetic Garnet at Its Compensation Temperature. (CHANG,JT 65)
- Magneto-Optic Bubble Domain Devices. (ALMASI,GS 71)
- Magneto-optic Color Effects in Bismuth Garnet Domains. (TOROK,EJ 78)
- Magneto-Optic Detection of High-Density Recordings. (TREVES,D 67)
- Magneto-optic Disk Utilizing MnBi Thin Films. (TSUJIYAMA,B 72)
- Magneto-Optic Display. (LACKLISON,DE 75)
- Magneto-Optic Insulators Utilizing the Optical Activity of Co⁺⁺(Td). (AHRENKIEL,RK 75)
- Magneto-optic Kerr Effect of Electroless-Plated CO-P Films. (JUDY,JH 71)
- Magneto-optic-Measurement Techniques for Magnetic-Bubble Materials. (SHUMATE,PW 71)
- Magneto-optic Properties and Applications of Bismuth Substituted Iron Garnets. (SCOTT,GB 76)
- Magneto-Optic Properties of CrTe Films prepared by Sequential Evaporation. (COMSTOCK,RL 70A)

3.3 TITLE INDEX

3.3 TITLE INDEX

Magneto-Optic Properties of MnAs Films.	(STOFFEL,AM 70)
Magneto-Optic Properties of Quenched Thin Films of MnBi and Optical Memory Experiments.	(CHEN,D 70A)
Magneto-optics, Lasers, and Memory Systems.	(HUNT,RP 69)
Magneto-optic Storage.	(FAN,GJ 71)
Magneto-optic Studies of Thin GdIG Sections.	(CHOW,KK 68)
Magnetostriction and Magnetic Anisotropy of MnBi.	(WILLIAMS,HJ 57A)
Manganese Bismuth and other Magnetic Materials for Beam Addressable Memories.	(DEKKER,P 76)
Mass Storage--Past, Present and Future.	(HOAGLAND,AS 72)
Mastering for Philips Optical Disk Systems.	(OLIJHOEK,JF 80)
Materials for Optical Storage: A State-of-the-Art Survey.	(BRODY,H 82)
Measurements of the Electrooptic Effect in CdS, ZnTe, and GaAs at 10.6 Microns.	(KAMINOW,IP 68)
Mechanical Integrator for Studying the Distribution of Light in the Optical Image.	(MARECHAL,A 47)
Mechanism of Curie-Point Writing in Thin Films of Manganese Bismuth.	(BERNAL,GE 71A)
Media for High Density Optical Recording.	(BARTOLINI,RA 81A)
Media for High-Density Optical Recording.	(BARTOLINI,RA 81B)
A Membrane Page Composer.	(COSENTINO,LS 73)
Method of Characterizing Hologram-Recording Materials.	(LIN,LH 71)
Microcomputer-Controlled Tunable Acousto-Optic Filter.	(CONROY,JJ 79)
Micromachining and Image Recording on Thin Films by Laser Beams.	(MAYDAN,D 71)
Minimization of Wobble Effects in Holographic Scanners.	(KRAMER,CJ 79)
MnAlGe Films for Magneto-Optic Applications.	(SHERWOOD,RC 71)
MnBi Films as Potential Storage Media in Holographic Optical Memories.	(LEE,TC 72)

3.3 TITLE INDEX

MnBi Films for Magneto optic Recording.	(CHEN,D 73)
MnBi Films: High-Temperature Phase Properties and Curie-Point Writing Characteristics.	(CHEN,D 70B)
MnBi Thin Films: Physical Properties and Memory Applications.	(CHEN,D 68B)
Mode-Locking of Lasers.	(SMITH,PW 70)
Modulation Techniques.	(DENTON,RT 72)
Molecular Engineering in the Development of Materials for Thermoplastic Recording.	(ANDERSON,HR 71)
Motion Pictures of Magnetic Writing on Thin Films of MnBi.	(WILLIAMS,HJ 58)
Multiphoton Photorefractive Processes for Optical Storage in Lithium Niobate.	(VONDERLINDE,D 74)
Multiple-Cavity Infrared Electro-Optic Tunable Filter.	(GUNNING,WJ 79)
Narrow-Curie Point Switching Transfer Characteristics in Mn-Bi Films.	(LEWICKI,GW 70)
Nematic Liquid Crystal 1024 Bits Page Composer.	(LABRUNIE,G 74)
The Neodymium in YAG Laser.	(FINDLAY,D 70)
Neutron Diffraction Investigations on Quenched MnBi and MnBi _{0.9} Sb _{0.1} .	(ANDRESEN,AF 72)
Neutron Diffraction Study of the Structures and Magnetic Properties of Manganese Bismuthide.	(ROBERTS,BW 56)
New Birefringence Theory and Uses of The Photo-DKDP Spatial Light Modulator in Optical Data Processing.	(CASASENT,D 79)
New Electrochromic Memory Display.	(SCHOOT,CJ 73)
New Magneto-Optic Memory Concept Based on Compensation Wall Domains.	(KRUMME,JP 73B)
A New Microscopic Principle.	(GABOR,D 48)
A New Optically Read Ferroelectric Memory.	(CUMMINS,SE 67)
A New Optical Videodisc System with One Hour Playing Time.	(NARUSE,Y 78)

3.3 TITLE INDEX

New Page Composer for Holographic Data Storage.	(HILL,B 73)
New Recording Thin Film for Optical Video Disk.	(TERAO,M 79)
A New Rectangular Loop Magnetic Material.	(GOULD,HL 57)
New Thin Film Optical Recording Medium.	(BORRELLI,NF 79)
9Cl-Single Transverse and Longitudinal Mode Q-Switched Ruby Laser.	(DANEU,V 66)
Noise Considerations of Optical Beam Recording.	(BECK,JW 70)
Noise in a Video Disk System: Experiments with (AlGa)As Laser.	(HEEMSKERK,JP 78)
Noncollinear Acousto-Optic Filter for the Ultraviolet.	(KATZKA,P 79)
Nonplaner Domain Walls in Ferroelastic $Gd_2(MoO_4)_3$ and $Pb_3(PO_4)_2$.	(FLIPPEN,RB 73)
Novel Magneto-Optic Systems.	(SHAHBENDER,R 74)
Novel Materials for Improved Optical Disk Lifetime.	(AISENBERG,S 81)
Nucleation Experiments on Thin Magnetic MnBi Films.	(MAYER,L 60B)
Observation of Amorphous Silicon Regions in Silicon- Rich Silicon Dioxide Films.	(HARTSTEIN,A 80)
Observation of Magnetic Domains by the Kerr Effect.	(WILLIAMS,HJ 51)
Observations of Repeated Curie-Point Writing Effects on MnBi Films.	(AAGARD,RL 73A)
Observations on MnBi Films during Heat Treatment.	(MAYER,L 60A)
One-Dimensional GaAs Laser Arrays for CW Operation.	(MARINACE,JC 70)
On Electron Mirror Microscopy.	(MAYER,L 55)
On the Calculation of Lattice Sums.	(NIJBOER,BR 57)
On the Diffraction Theory of Optical Images.	(HOPKINS,HH 53)
On the Information in a Microphotograph.	(MCCAMY,CS 65)
Optical Absorptions and Rotations in the Ferrimagnetic Garnets.	(DILLON,JF 59)

3.3 TITLE INDEX

- Optical and EPR Studies of Photochromic SrTiO_3 Doped with Fe/Mo and Ni/Mo. (FAUGHNAN,BW 69)
- Optical and Magnetic Digital Recording--A Comparative Review. (BOUSKY,S 76)
- Optical Constants of the EuO Chalcogenides Above and Below the Magnetic Ordering Temperatures. (GUNTHERODT,G 70)
- Optical Data Storage. (HASKAL,HM 77)
- Optical Data Storage Potential of Six Materials. (BROWN,BR 74)
- Optical Digital Recording. (RUSSELL,JT 76)
- Optical Disk: Part of Tomorrow's Media Picture. (NEARY,DR 82)
- Optical Disk Readout: A Model for Coherent Scanning. (MARCHANDT,AB 82)
- An Optical Disk Replaces 25 Mag Tapes. (KENNEY,G 79)
- Optical Disks Loom as Replacements for Tape. (MCLEOD,J 81A)
- Optical Disk Storage Technology--New Materials, New Methods. (MCLEOD,J 81B)
- Optical Disk Systems Emerge. (BARTOLINI, RA 78)
- Optical Disk Technology and Information. (GOLDSTEIN,CM 82)
- Optical Information Storage and Spatial Light Modulation in PLZT Ceramics. (LAND,CE 78)
- Optically Induced Change of Refractive Indices in LiNbO_3 and LiTaO_3 . (CHEN,FS 69)
- Optically-Induced Refractive Index Inhomogeneities in LiNbO_3 and LiTaO_3 . (ASHKIN,A 66)
- Optical Mass Memory Experiments on Thin Films of MnBi. (AAGARD,RL 68)
- Optical Mass Storage. (KACZOROWSKI,EM 77)
- Optical Memories are Alive and Well and Growing. (EWARD,RS 75)
- Optical Memories: Controlling the Beam. (TUFTE,ON 73B)
- Optical Properties and Applications of Photochromic Glass. (MEGLA,GK 66)

3.3 TITLE INDEX

Optical Properties of Tellurium Films Used for Data Recording.	(ASH,GS 80)
Optical Properties of Tellurium Films Used for Data Recording.	(ALLEN,TH 81)
Optical Readout of the RCA VideoDisc.	(FIRESTER,AH 78A)
Optical Readout of Videodisc.	(BRICOT,C 76)
Optical Recording in Amorphous Silicon Films.	(JANAI,M 82)
Optical Recording of Digital Data in PLZT Ceramics.	(MICHIRON,F 74B)
Optical Recording Structures for Use with GaAs Diode Lasers.	(BARTOLINI,RA 79)
Optical Recording Techniques for the RCA VideoDisc.	(FIRESTER,AH 78B)
Optical Recording with Amorphous Materials.	(STRAND,D 80)
Optical Recording with Amorphous Materials.	(STRAND,D 81)
Optical Recording with Diode Lasers.	(HEEMSKERK,JP 79)
Optical Recording With The Encapsulated Titanium Trilayer.	(BELL,AE 79B)
Optical Storage of Digital Information.	(SPITZ,E 72)
Optical Storage in VO ₂ Films.	(SMITH,AW 73)
Optical Techniques Developed for the RCA VideoDisc.	(GOROG,I 78A)
Optical Techniques for Data Storage.	(TUFTE,ON 73A)
Optical Technologies for Future Computer System Design.	(WEITZMAN,C 70)
Optical Video Disc for Digital Mass Memory Applications.	(KENVILLE,RF 78)
Optical Video Disks with Undulating Tracks.	(BRAAT,JJ 78B)
Optical Writing on Blue, Sputtered Iridium Oxide Films.	(BOSCH,MA 82)
Optics for a Read-Write Holographic Memory.	(STEWART,WC 70)
Optics for Laser Scanning.	(HOPKINS,RE 76)

3.3 TITLE INDEX

- Optics for Multibeam Optical Disk Systems. (AMMON,GJ 81B)
- Optics of Reflective Video Disc Players. (LAUB,LJ 76)
- An Overview of Optical Data Storage Technology. (CHEN,D 75)
- Overview of Requirements for Optical Storage Media. (JAMBERDINO,AA 81C)
- Performance of a Prototype Optical Disk Recorder. (ZERNIKE,F 78)
- Phase Holograms in Dichromated Gelatin. (SHANKOFF,TA 68)
- The Phase Transformation and Physical Properties of the $MnBi$ and $Mn_{1.08}Bi$ Compounds. (CHEN,T 74)
- Photoanodic Engraving of Holograms on Silicon. (DALISA,AL 70)
- Photochemical Hole Burning in Free-Base Porphyrin and Chlorin in n-Alkane Matrices. (VOLKER,S 79)
- Photochromic Salicylideneaniline as Storage Medium for Interferometry and High Speed Recording. (LO,DS 74)
- Photodetectors for Optical Communication Systems. (MELCHIOR,H 70)
- Photodichroic Silicate Glass Surface. (WU,CK 79)
- A Photo-Digital Mass Storage System. (KUEHLER,JD 66)
- Photoelastic Properties of Selected Materials and Their Relevance for Applications to Acoustic Light Modulators and Scanners. (DIXON,RW 67)
- Photoinduced Refractive Index Increase in Poly(Methylmethacrylate) and its Applications. (TOMLINSON,WJ 70)
- Photoinduced Uniaxial Magnetic Anisotropy and Optical Dichromism in Silicon-Doped Yttrium Iron Garnet ($YIG(Si)$). (DILLON,JF 70)
- Photooptical Storage and Processing of Information. (KING,GW 65A)
- Photorefractive Materials for Optical Storage and Display. (KIM,DM 77)
- PLZT Matrix-Type Block Data Composers. (DRAKE,MD 74)
- Pockels Readout Optical Memory Using $Bi_{12}SiO_{20}$. (HOU,SL 71)

3.3 TITLE INDEX

3.3 TITLE INDEX

Polarization and Efficiency in Magnetic Holography.	(HASKAL, HM 70)
Polarization Induced Noise in Acousto-Optic (AO) Modulation of Internal Mirror He-Ne Laser Beams.	(DUARDO, JA 80)
Polymer Material for Holography.	(BOOTH, BL 72)
Population Inversion and Continuous Optical Maser Oscillation in a Gas Discharge Containing a He-Ne Mixture.	(JAVAN, A 61)
Position Sensing in Video Disk Readout.	(BRAAT, JJ 78A)
Power and Focusing Considerations for Recording with a Laser Beam in the TEM ₀₀ Mode.	(HASKAL, HM 71A)
Power, Size, and Depth of Focus in Thermomagnetic Writing.	(HASKAL, HM 71B)
Preheat-Aided Laser Recording.	(GOLDBERG, MW 79)
Preparation and Properties of EuS Films and of Fe Doping.	(AHN, KY 71)
Preparation and Stability of MnBi Thin Films.	(CHEN, D 71)
Preparation and Thermomagnetic Properties of Ti-Doped MnBi Thin Films.	(YOSHII, S 74)
Preparation of Doped EuO Films on Rotating Disks.	(LEE, K 71)
Probing of Acoustic Surface Perturbations by Coherent Light.	(WHITMAN, RL 69)
Programmable Electro-Optic Tunable Filters.	(HENDERSON, DM 79)
Projection Masking, Thin Photoresist Layers and Interference Effects.	(MIDDELHOEK, S 70)
Promise of Magneto-Optic Storage Systems Compared to Conventional Magnetic Technology.	(ESCHENFELDER, AH 70)
Promise of Optical Memories.	(RAJCHMAN, JA 70A)
Promise of Optical Memories.	(RAJCHMAN, JA 72)
Properties of Multiple Longitudinal Kerr Magneto-optic Reflections.	(KOKOBU, A 72)
Properties of Neodymium Laser Materials.	(THORNTON, JR 69)

3.3 TITLE INDEX

- Properties of 1.152 μm of Garnet Films on GdGaG. (DAVAL,J 75)
- A Proposed Beam-Addressible Memory. (MEE,CD 67)
- Prospects for the Optical Disk in the Office of the Future. (BARRETT,R 82B)
- Pulse Codes in Serial Data Communications. (SANDERS,LS 82)
- Random Phase Data Masks: Fabrication Tolerances and Advantages of Four Phase Level Masks. (STEWART,WC 72)
- The RCA "SelectaVision" VideoDisc System. (MCCOY,DS 78)
- Readout Performance Analysis of a Cryogenic Magneto-Optical Data Storage System. (BROWN,BR 72)
- Read-Write-Erasable Thin Film Optical Recording Medium. (BORRELLI,NF 80)
- A Read/Write Optical Memory. (CASHMAN,MW 73)
- Real Time Optical Processing with $\text{Bi}_{12}\text{SiO}_{20}$ PROM. (NISENSEN,P 72)
- Recent Advances in Holography. (LEITH,EN 67)
- Reconstructed Wavefronts and Communication Theory. (LEITH,EN 62)
- Reconstruction Effects in Magnetic Holography. (MEZRICH,RS 70A)
- Recording and Readout Testing of Optical Recording Materials. (CHENG,D 81)
- Recording Mechanisms in Antireflection Trilayer Structures. (BELL,AE 82)
- Recording of One-Dimensional Holograms in MnBi Films. (RULL,H 76)
- Recyclable Holographic Storage Media. (BORDOGNA,J 72)
- Relationship Between Crystal Symmetry Magnetic Properties of Ionic Compounds Containing Mn^{3+} . (GOODENOUGH,JB 61)
- Relationships Between Stoichiometry and Properties of EuO Films. (AHN,KY 70A)
- Resonance Amplifier Model Describing Diode Lasers Coupled to Short External Resonators. (VOUMARD,C 77)

3.3 TITLE INDEX

3.3 TITLE INDEX

- Reusable Optical Image Storage and Processing Device. (FEINLEIB,J 72)
- Reversible Photodimerization: A New Type of Photochromism. (TOMLINSON,WJ 72)
- Review and Analysis of Optical Recording Media. (BARTOLINI,RA 76)
- Review of Current Proposed Technologies for Mass Storage Systems. (MATICK,RE 72)
- Review of Noise Reduction Techniques in Coherent Optical Processing Systems. (DEVELIS,JB 74)
- A Review of Some Recent Work in Magneto-optical Recording. (SUITS,JC 72)
- A Review of the MCA Disco-Vision System. (BROADBENT,KD 74)
- The Role of Polymers in Optical Recording Media. (SMITH,TW 81)
- Rotating-Memory Devices Move to Optical Reading. (JONES,K 81)
- The Ruticon Family of Erasable Image Recording Devices. (SHERIDON,NK 72)
- Saturation Magnetization of Nickel Films of Thickness Less Than 100Å. (NEUGEBAUER,CA 59)
- Self-Coupled Optical Pickup. (MITSUHASHI,Y 76)
- Semiconductor Components for Monolithic Applications. (GARMIRE,E 75)
- Signal-to-Noise Ratio for Magneto-optic Readout from MnBi Films. (AAGARD,RL 73B)
- Simplified Diffraction Theory of the Video Disk. (KORPEL,A 78)
- Single-Mode CW Operation of "Double Dovetail" Constricted DH (AlGa)As Diode Lasers. (BOTEZ,D 78)
- Single Te Films and Te Trilayers for Optical Recording. (BLOM,GM 79)
- Slidestore-A Laser Mass Memory for Image Storage. (BURNS,LL 79)
- Solvent-Coated Organic Materials for High-Density Optical Recording. (HOWE,DG 81)
- Some Aspects of a Large Capacity Holographic Memory. (HILL,B 72)

3.3 TITLE INDEX

Some Film-Noise Measurements by Diffraction of Coherent Light.	(STARK,H 71)
Some Magneto-optical and HF Properties of Magnetic Films.	(SALANSKY,NM 74)
Some New Display Techniques--A Critical Survey.	(KIRTON,J 74)
Sound Diffraction and the Optimizing of Acousto-Optic Modulator Efficiency.	(GUERIN,JM 79)
Spatial Modulation in Thin CdS Films.	(JOHANNES,R 70)
Speckle Noise Reduction by Random Phase Shifters.	(MATSUMURA,M 74)
The Stability of EuO Films Doped with Iron and Europium.	(STREET,GB 72)
Stability of Small Bits Written in Amorphous GdCo Thin Films.	(TOGAMI,Y 78)
Statistical Mechanics of Ferromagnetism.	(BROUT,R 65)
Stimulated Optical Radiation in Ruby.	(MAIMAN,TH 60)
Storage Technology: Capabilities and Limitations.	(HOAGLAND,AS 79)
Strain-Biased PLZT Input Devices (Page Composers) for Holographic Memories and Optical Data Processing.	(ROBERTS,HN 72)
Stress Corrosion in Permanent Magnets Composed of Anisotropic Powdered Manganese Bismuthide.	(ADAMS,E 56)
Structural Changes in Se-Te Bilayers by Laser Writing.	(HERD,SR 82A)
Structural, Magnetic, and Magneto-Optic Properties of Ti-Substituted MnBi Films.	(UNGER,WK 72A)
The Structural Stability and Magneto-optical Properties of the NiAs Phase of the Manganese-Antimony System.	(SAWATZKY,E 71C)
Studies of Magneto-optic Effects for Thin-Film Optical-Waveguide Applications.	(WANG,S 71)
A Study of Thermomagnetic Remanence Writing on EuO.	(WIEDER,H 71B)
Suitability of MnBi and $Mn_{1-x}Ti_xBi$ Films for Magneto-optic Memories.	(FELDTKELLER,E 72)

3.3 TITLE INDEX

Summary Abstract: Research on Materials for Optical Storage.	(KIVITS,P 81)
Superresolution in Optical Data Storage.	(WIEDER,H 73A)
A Survey of Laser Beam Techniques.	(FOWLER,VJ 66)
Switching Speed of GdIG Crystals near the Compensation Temperature.	(NELSON,TJ 68)
Synchronous Detection vs Pulse Counting for Sensitive Photomultiplier Detection Systems.	(NAKAMURA,JK 68)
System Coding Parameters, Mechanics and Electro-Mechanics of the Reflective Video Disc Player.	(BOGELS,PW 76)
System Design Considerations for Laser Scanning.	(EMMEL,PM 80)
Techniques and Applications of Holography.	(BRANDT,GB 68)
The Technology of Error Correcting Codes.	(BERLEKAMP,ER 80)
Temperature Dependence of Magnetic Properties of Oriented MnBi Films.	(UNGER,WK 71D)
Temperature Dependence of the Coercive Force of MnBi Films.	(DEKKER,P 74)
Temperature Dependence of the Magneto-Optic Effect and Resonance Phenomena in Oriented MnBi Films.	(CHEN,D 64)
Ten Billion Bits on a Disk.	(BULTHUIS,K 79)
A 10-Stage Digital Light Beam Deflector.	(SCHMIDT,U 69)
Terminals for a High-Speed Optical Pulse Code Modulation Communication System.	(DENTON,RT 68)
Textured Germanium Optical Storage Medium.	(CRAIGHEAD,HG 82)
Theory of an Optical Maser.	(LAMB,WE 64)
Theory of the Structure of Ferromagnetic Domains in Films and Small Particles.	(KITTEL,C 46)
Thermomagnetic Behavior of Hard Magnetic Films.	(OUCHI,K 72)
Thermomagnetic History Effects in LaCo ₅ ,ThCo ₅ and Related Compounds.	(BROUHA,M 75)

3.3 TITLE INDEX

3.3 TITLE INDEX

Thermomagnetic Properties of Fine-Grain Polycrystalline GdIG.	(COEURE,P 71)
Thermomagnetic Recording Materials.	(BERKOWITZ,AE 71)
Thermomagnetic Recording: Physics and Materials.	(BERKOWITZ,AE 75)
Thermomagnetic Writing in Gd-Co Sputtered Films.	(MATSHUSHITA,S 75)
Thermomagnetic Writing in GdIG.	(DOYLE,WD 70)
Thermomagnetic Writing in Homogeneous MnBi Films.	(UNGER,WK 71C)
Thermomagnetic Writing in Tb-Fe Films.	(SUNAGO,K 76)
Thermomagnetic Writing on Thin MnBi Films.	(LANGLET,R 72)
Thermoplastic Media for Holographic Recording.	(CREDELLE,TL 72)
Thermoplastic Recording.	(JOHNSON,LH 78)
Thermoplastic Spatial Light Modulator.	(LEE,TC 79C)
Thermoplastic Xerographic Holography.	(URBACH,JC 66)
Thick Absorption Recording Media in Holography.	(FRIESEM,AA 70)
Thick Holograms: A Survey.	(FORSHAW,MR 74)
Thick Holograms in Photochromic Materials.	(BOSOMWORTH,DR 68)
Thin Films of MnBi for Beam Alterable Optical Memory Applications.	(CHEN,D 67B)
Time-Optimal Control of a Moving-Coil Linear Actuator.	(BROWN,CJ 68)
Transparent Electrophotographic Film Evaluations for High Performance Data Recording.	(WEAVER,SE 80)
Transparent Electrophotographic Film for High-Resolution Holographic Recorders.	(PALM,CS 79)
Tunable Birefringent Networks.	(TITLE,AM 79)
Ummagnetisierung Orientierter MnBi-Schichten.	(UNGER,WK 70)
Unicon Computer Mass Memory System.	(BECKER,CH 66)

3.3 TITLE INDEX

Unique Properties of SBN and Their Use in a Layered Optical Memory.	(THAXTER,JB 74)
Use of a Random Phase Mask for the Recording of Fourier Transfer Holograms of Data Masks.	(BURCKHARDT,CB 70)
The Use of Diffraction-Based Criteria of Image Quality in Automatic Optical Design.	(HOPKINS,HH 66)
The Use of Photoresist as a Holographic Recording Medium.	(BEESLEY,MJ 70)
Vanadium Dioxide Storage Material.	(EDEN,DD 81)
Video Disc for the Storage of Office Documents and Engineering Graphics.	(WALTER,GO 82)
Video Disc Mastering and Replication.	(PALERMO,P 77)
VideoDisc Optics.	(GOROG,I 78B)
Video Disc Systems Come of Age.	(STREET,J 80)
Videodisk: A Status Report.	(LASERF 74)
Video Disk Player Optics.	(BOUWHUIS,G 78)
Video Disks: Three Choices.	(CLEMENS,JK 82)
Volume Hologram Formation in Photopolymer Materials.	(COLBURN,WS 71)
Volume Phase Holographic Storage in Ferroelectric Crystals.	(BURKE,WJ 78)
Wall Propagation by Thermomagnetic Writing in MnBi Single Crystal Films.	(HONDA,S 73)
Wall Stability of Cylindrical (Bubble) Domains in Thin Films and Platelets.	(SCHULDT,S 71)
Whisker Growth Induced by Ag Photodoping in Glassy $\text{Ge}_x\text{Se}_{1-x}$ Films.	(CHEN,CH 80)
Wideband Holographic Recorder.	(BARDOS,A 74)
Wideband Optical Disc Archival Data Storage.	(AMMON,GJ 78)
Wideband Optical Disc Data Recorder Systems.	(AMMON,GJ 79)

3.3 TITLE INDEX

The World's Fair Machine Translator.

(BOWERS,DM 65)

Write-Read-Erase in situ Optical Memory Using
Thermoplastic Holograms.

(LIN,LH 70)

Writing Characteristics of MnBi Films for
Holographic Recording.

(LEE,TC 71)

3.4 PATENT NUMBER INDEX

PATENT NUMBER: REFERENCE:

2,544,659	(USP DREYER,JF 51)
3,019,336	(USP JOHNS,DH 62)
3,110,824	(USP FLANAGAN,WC 63)
3,147,169	(USP ALBERTSON,CP 64)
3,226,696	(USP DOVE,JF 65)
3,287,563	(USP CLUNIS,K 66)
3,406,405	(USP SOMERS,LE 68)
3,416,150	(USP LINDBERG,CA 68)
3,423,524	(USP BRADFORD,RS 69)
3,427,628	(USP CLUNIS,K 69)
3,430,966	(USP GREGG,DP 67)
3,442,570	(USP PICKER,A 69)
3,474,457	(USP BECKER,CH 69)
3,475,242	(USP RADIMER,KJ 69)
3,476,578	(USP BRINCKMAN,EM 69)
3,503,817	(USP RADIMER,KJ 70)
3,529,301	(USP HIRUTA,K 70)
3,530,258	(USP GREGG,DP 70)
3,534,166	(USP KORPEL,A 70)
3,535,182	(USP MEIER-MALETZ,M 70)
3,560,206	(USP JVIRBLIS,AE 71)
3,560,994	(USP WOLFF,K 71)
3,567,855	(USP HAMISCH,H 71)
3,593,327	(USP SHILL,KE 71)
3,597,044	(USP CASTELLANO,JA 71)
3,650,603	(USP HEILMEIER,GH 72)
3,651,281	(USP BECKER,CH 72A)
3,654,401	(USP DICKOPP,G 72)
3,655,438	(USP SYERLING,HF 72)
3,656,909	(USP DIXON,GD 72)
3,660,777	(USP ERICKSON,AM 72)
3,665,483	(USP BECKER,CH 72B)
3,669,673	(USP IH,CC 72)
3,688,025	(USP WHITTEMORE,MJ 72)
3,698,893	(USP HEURTLEY,JC 72)
3,703,331	(USP GOLDMACHER,JE 72)
3,705,758	(USP HASKAL,H 72)
3,715,212	(USP ROSS,DL 73)
3,716,844	(USP BRODSKY,MH 73)
3,719,565	(USP HERRMANN,G 73)
3,720,784	(USP MAYDAN,D 73)
3,737,877	(USP FEINLEIB,J 73)
3,740,761	(USP FECHTER,HG 73A)
3,747,117	(USP FECHTER,HG 73B)
3,764,311	(USP BEAN,LF 73)
3,774,172	(USP SILVERMAN,D 73)

3.4 PATENT NUMBER INDEX

3.4 PATENT NUMBER INDEX

3,806,230	(USP HAAS,WE 74A)
3,816,774	(USP OHNUKI,K 74)
3,829,662	(USP FURAHASHI,A 74)
3,838,401	(USP GRAF,P 74)
3,842,275	(USP HAAS,WE 74B)
3,846,836	(USP MASSE,PR 74)
3,854,015	(USP JANNSEN,PJ 74)
3,860,766	(USP MORI,M 75)
3,890,643	(USP DALZIEL,WL 75)
3,897,997	(USP KALT,CG 75)
3,908,076	(USP BROADBENT,KD 75)
3,909,608	(USP LEMERER,JP 75)
3,911,211	(USP RENNICK,JL 75)
3,911,444	(USP LOU,DY 75)
3,913,076	(USP LEHUREAU,JC 75)
3,919,562	(USP WHITMAN,RL 75)
3,931,459	(USP KORPEL,A 76)
3,931,460	(USP WATSON,WH 76)
3,931,640	(USP TAKAHARA,I 76)
3,938,810	(USP PRADERVAND,M 76)
3,940,793	(USP BLEIMAN,LW 76)
3,944,727	(USP ELLIOTT,JE 76)
3,962,720	(USP BRAAT,JJ 76)
3,971,874	(USP OHTA,T 76)
3,973,273	(USP LISSNER,RW 76)
3,978,247	(USP BRAUDY,RS 76)
3,983,317	(USP GLORIOSO,CA 76)
3,993,863	(USP LEEDOM,MA 76)
4,000,492	(USP WILLENS,RH 76)
4,019,155	(USP GOROG,I 77)
4,023,185	(USP BLOOM,A 77A)
4,032,470	(USP BLOOM,A 77B)
4,032,691	(USP KIDO,K 77)
4,040,107	(USP BRYER,PS 77)
4,041,530	(USP KRAMER,P 77)
4,051,528	(USP TAKEDA,Y 77)
4,060,248	(USP LAKERVELD,HG 77)
4,063,287	(USP VANROSMALLEN,GE 77)
4,065,786	(USP WILBER,CS 77)
4,069,487	(USP KASAI,M 78)
4,073,567	(USP LAKERVELD,HG 78)
4,073,964	(USP HERRMANN,G 78)
4,074,312	(USP VANROSMALLEN,GE 78)
4,084,185	(USP DELANG,H 78)
4,090,218	(USP VANBUUL,MC 78)
4,094,010	(USP PEPPERL,R 78)
4,094,013	(USP HILL,B 78)
4,097,895	(USP SPONG,FW 78)
4,101,027	(USP KOHL,L 78A)
4,101,907	(USP BELL,AE 78)

3.4 PATENT NUMBER INDEX

3.4 PATENT NUMBER INDEX

4,120,567	(USP GOODMAN,LA 78)
4,127,882	(USP KOHL,L 78B)
4,130,898	(USP URBACH,JC 78)
4,131,199	(USP HATCHETT,MR 78)
4,135,206	(USP KLEUTERS,WJ 79)
4,135,207	(USP GREVE,PF 79)
4,137,077	(USP CREDELLE,TL 79)
4,141,627	(USP BLOOM,A 79)
4,141,780	(USP KLEINKNECHT,HP 79)
4,142,163	(USP PHILIPS,W 79)
4,160,270	(USP GOLDSCHMIDT,AM 79)
4,165,155	(USP GORDON,JG 79)
4,179,708	(USP SHENG,P 79)
4,195,312	(USP BELL,AE 80A)
4,195,313	(USP BELL,AE 80B)
4,202,928	(USP STAEBLER,DL 80)
4,216,501	(USP BELL,AE 80C)
4,218,689	(USP BLOOM,AE 80A)
4,219,826	(USP BLOOM,A 80B)
4,219,848	(USP SPONG,FW 80)
4,233,626	(USP BELL,AE 80D)
4,234,245	(USP TODA,M 80)
4,241,355	(USP BLOOM,A 80C)
4,242,689	(USP BLOOM,A 80D)
4,269,917	(USP DREXLER,J 81A)
4,272,574	(USP LIPPITS,GJ 81)
4,273,342	(USP GILSON,AP 81)
4,278,756	(USP BOULDIN,EW 81A)
4,278,758	(USP DREXLER,J 81B)
4,279,989	(USP DREXLER,J 81C)
4,284,716	(USP DREXLER,J 81D)
4,298,684	(USP BOULDIN,EW 81B)
4,300,143	(USP BELL,AE 81)
4,304,848	(USP BOULDIN,EW 81C)
4,312,938	(USP DREXLER,J 82A)
4,314,260	(USP DREXLER,J 82B)
4,319,252	(USP DREXLER,J 82C)
4,321,102	(USP DREXLER,J 82D)

3.5 INVENTOR INDEX

3.5 INVENTOR INDEX

3.5 INVENTOR INDEX

Adams, James E., Jr.	(USP HAAS,WE 74B)	
Albertson, Charles P.	(USP ALBERTSON,CP 64)	
Bartolini, Robert Alfred	(USP BELL,AE 78)	(USP BELL,AE 80A)
	(USP BELL,AE 80B)	(USP BELL,AE 81)
	(USP BLOOM,A 77A)	(USP BLOOM,A 80A)
	(USP BLOOM,A 80D)	
Bean, Lloyd F.	(USP BEAN,LF 73)	
Becker, Carl H.	(USP BECKER,CH 69)	(USP BECKER,CH 72A)
	(USP BECKER,CH 72B)	
Bell, Alan Edward	(USP BELL,AE 78)	(USP BELL,AE 80A)
	(USP BELL,AE 80B)	(USP BELL,AE 80C)
	(USP BELL,AE 80D)	(USP BELL,AE 81)
	(USP BLOOM,A 77A)	
Betsch, Helmut	(USP DICKOPP,G 72)	
Bierhoff, Martinus P.M.	(USP KLEUTERS,WJ 79)	
Bleazey, John Clifford	(USP LEEDOM,MA 76)	
Bleiman, Lewis W.	(USP BLEIMAN,LW 76)	
Bloom, Allen	(USP BELL,AE 78)	(USP BELL,AE 81)
	(USP BLOOM,A 77A)	(USP BLOOM,A 77B)
	(USP BLOOM,A 79)	(USP BLOOM,A 80A)
	(USP BLOOM,A 80B)	(USP BLOOM,A 80C)
	(USP BLOOM,A 80D)	
Bradford, Robert S.	(USP BRADFORD,RS 69)	
Braudy, Robert Stewart	(USP BRAUDY,RS 76)	
Bricot, Claude	(USP LEHUREAU,JC 75)	
Brinckman, Eric Maria	(USP BRINCKMAN,EM 69)	
Broadbent, Kent D.	(USP BROADBENT,KD 75)	
Brodsky, M	(USP BRODSKY,MH 73)	
Bryer, Philip Stuart	(USP BRYER,PS 77)	
Burke, William J.	(USP BELL,AE 81)	(USP BLOOM,A 80B)
	(USP BLOOM,A 80C)	
Castellano, Joseph A.	(USP CASTELLANO,JA 71)	
Cheng, David	(USP URBACH,JC 78)	
Cohen, Melvin Irwin	(USP MAYDAN,D 73)	
Clunis, Kenneth	(USP CLUNIS,K 66)	(USP CLUNIS,K 69)
Compaan, Klaas	(USP KRAMER,P 77)	
Credelle, Thomas L.	(USP CREDELLE,TL 79)	
Dalziel, Warren L.	(USP DALZIEL,WL 75)	
Dell, Harold R.	(USP BECKER,CH 72B)	
Dickopp, Gerhard	(USP DICKOPP,G 72)	
Dixon, George D.	(USP DIXON,GD 72)	
Dove, John F.	(USP DOVE,JF 65)	
Dreyer, John F.	(USP DREYER,JF 51)	
Elliot, James E.	(USP ELLIOT,JE 76)	
Erickson, Allen M.	(USP ERICKSON,AM 72)	

3.5 INVENTOR INDEX

3.5 INVENTOR INDEX

Fechter, Henry G.	(USP FECHTER,HG 73A) (USP FECHTER,HG 73B)
Feinleib, Julious	(USP FEINLEIB,J 73)
Firester, Arthur H.	(USP SHENG,P 79)
Flanagan, William C.	(USP FLANAGAN,WC 63)
Flannery, John B., Jr.	(USP HAAS,WE 74B)
Forsthuber, Robert Franz Karl	(USP KRAMER,P 77)
Furahashi, Akira	(USP FURAHASHI,A 74)
Gilson, Alan P.	(USP GILSON,AP 81)
Glorioso, Charles A.	(USP GLORIOSO,CA 76)
Goldmacher, Joel E.	(USP GOLDMACHER,JE 72) (USP HEILMEIER,GH 72)
Goldschmidt, Arthur M.	(USP GOLDSCHMIDT,AM 79)
Goodman, Lawrence Alan	(USP GOODMAN,LA 78)
Gordon, Joseph G., II	(USP GORDON,JG 79)
Gorog, Istvan	(USP GOROG,I 77)
Graf, Peter	(USP GRAF,P 74)
Gregg, David Paul	(USP GREGG,DP 67) (USP GREGG,DP 70)
Haas, Werner E.L.	(USP HAAS,WE 74A) (USP HAAS,WE 74B)
Hamisch, Hansjoachim	(USP HAMISCH,H 71) (USP WOLFF,K 71)
Hannan, William J.	(USP CREDELLE,TL 79)
Haskal, Haim	(USP HASKAL,H 72)
Hatchett, Michael R.	(USP HATCHETT,MR 78)
Hedlund, Lee V.	(USP GOLDSCHMIDT,AM 79)
Heilmeier, George H.	(USP GOLDMACHER,JE 72) (USP HEILMEIER,GH 72)
Herrmann, Gunther	(USP HERRMANN,G 73) (USP HERRMANN,G 78)
Heurtley, John C.	(USP HEURTLEY,JC 72)
Hill, Bernhard	(USP HILL,B 78)
Hiruta, Katsuya	(USP HIRUTA,K 70)
Honjo, Satoru	(USP KIDO,K 77)
Hung, Ling Kong	(USP BLOOM,A 77B)
Ih, Charles Chung Sen	(USP IH,CC 72)
Iremink, Kornelis A.	(USP KLEUTERS,WJ 79)
Ito, Hiroshi	(USP KASAI,M 78)
Janssen, Peter Johannes Michael	(USP JANSSEN,PJ 74)
Johns, Don H.	(USP JOHNS,DH 62)
Jvirblis, Alex E.	(USP JVIRBLIS,AE 71)
Johnson, Keith O.	(USP GREGG,DP 70)
Kalt, Charles G.	(USP KALT,CG 75)
Kane, James	(USP KLEINKNECHT,HP 79)
Kasai, Masanao	(USP KASAI,M 78)
Kerwin, Eugene	(USP MAYDAN,D 73)
Kido, Keishiro	(USP KIDO,K 77)
Kleinknecht, Hans P.	(USP KLEINKNECHT,HP 79)
Kleuters, Wilhelm J.	(USP KLEUTERS,WJ 79)
Kohl, Lambert	(USP KOHL,L 78A) (USP KOHL,L 78B)
Knox, Joseph Dale	(USP GOROG,I 77)
Korpel, Adrianus	(USP KORPEL,A 70) (USP KORPEL,A 76)

3.5 INVENTOR INDEX

3.5 INVENTOR INDEX

Kramer, Pieter	(USP KRAMER,P 77)
Kruger, Johann	(USP HILL,B 78)
Lacotte, Jean Pierre	(USP LEMERER,JP 75)
Le Carvenee, Francois	(USP LEMERER,JP 75)
Leedom, Marvin Allan	(USP LEEDOM,MA 76)
Lehureau, Jean Claude	(USP LEHUREAU,JC 75)
Le Merer, Jean Pierre	(USP LEMERER,JP 75)
Levine, Aaron William	(USP GOODMAN,LA 78)
Lindberg, Charles A. Jr.	(USP LINDBERG,CA 68)
Lissner, Rudolf W.	(USP LISSNER,RW 76)
Lou, David Yuan Kong	(USP LOU,DY 75)
Lurie, Michael J.	(USP IH,CC 72)
Mallisin, Roland	(USP LEMERER,JP 75)
Masse, Phillip R.	(USP MASSE,PR 74)
Matsuno, Hiroshi	(USP KASAI,M 78)
Maydan, Dan	(USP MAYDAN,D 73)
McFarland, Keith E.	(USP BECKER,CH 72B)
Meier-Maletz, Max	(USP MEIER-MALETZ,M 70)
Meyerhofer, Dietrich	(USP GOODMAN,LA 78)
Miyajinia, Shin	(USP OHNUKI,K 74)
Miyauchi, Toshimitsu	(USP TAKEDA,Y 77)
Mori, Masafumi	(USP MORI,M 75)
Mulvaney, Richard B.	(USP LISSNER,RW 76)
Nakamura, Hishashi	(USP TAKEDA,Y 77)
Ohnuki, Katuhiro	(USP OHNUKI,K 74)
Ohta, Takeo	(USP OHTA,T 76)
Oihawa, Youko	(USP KASAI,M 78)
Osaka, Susumu	(USP TODA,M 80)
Pendy, William J.	(USP MASSE,PR 74)
Pepperl, Rudiger	(USP HILL,B 78)
Phillips, William	(USP PHILLIPS,W 79)
Picker, Amos	(USP PICKER,A 69)
Pradervand, Michel	(USP PRADERVAND,M 76)
Puech, Claude	(USP LEMERER,JP 75)
Radimer, Kenneth J.	(USP RADIMER,KJ 69) (USP RADIMER,KJ 70)
Rennick, John L.	(USP RENNICK,JL 75)
Rigbey, Leonard J.	(USP HATCHETT,MR 78)
Roess, Dieter	(USP GRAF,P 74)
Ross, Daniel Louis	(USP BLOOM,A 80B) (USP ROSS,DL 73)
Sato, Kazuhiro	(USP OHNUKI,K 74)
Sato, Masamichi	(USP KIDO,K 77)
Scala, Luciano C.	(USP DIXON,GD 72)
Schneider, Richard	(USP KOHL,L 78A) (USP KOHL,L 78B)
Schuller, Eduard	(USP DICKOPP,G 72)

3.5 INVENTOR INDEX

3.5 INVENTOR INDEX

Sheng, Ping	(USP SHENG,P 79)
Shill, Karl E.	(USP SHILL,KE 71)
Silverman, Daniel	(USP SILVERMAN,D 73)
Sincerbox, Glenn T.	(USP GORDON,JG 79)
Siryj, Bohdan W.	(USP GILSON,AP 81)
Somers, Lewis E.	(USP SOMERS,LE 68)
Spong, Fred William	(USP CREDELLE,TL 79) (USP SPONG,FW 78)
	(USP SPONG,FW 80)
Staebler, David L.	(USP STAEBLER,DL 80)
Sterling, Henry Frank	(USP STERLING,HF 72)
Stewart, Wilber Clarence	(USP STEWART,WC 77)
Suyama, Hideo	(USP OHNUKI,K 74)
Takahara, Ichiro	(USP TAKAHARA,I 76)
Takeda, Yasutsugu	(USP TAKEDA,Y 77)
Takenaga, Mutsuo	(USP OHTA,T 76)
Tinet, Claude	(USP LEMERER,JP75)
Toda, Minoru	(USP TODA,M 80)
Tsukada, Toshihisa	(USP TAKEDA,Y 77)
Tsunoda, Yoshito	(USP TAKEDA,Y 77)
Uhl, Karl	(USP KOHL,L 78A) (USP KOHL,L 78B)
Urbach, John C.	(USP URBACH,JC 78)
van Rosmalen, Gerard E.	(USP KLEUTERS,WJ 79)
Watson, Hugh Alexander	(USP LOU,DY 75)
Watson, William H.	(USP WATSON,WH 76)
Wentink, William S.	(USP MASSE,PR 74)
Whitman, Robert L.	(USP WHITMAN,RL 75)
Whittemore, Maurice James, Jr.	(USP WHITTEMORE,MJ 72)
Willens, Ronald Howard	(USP LOU,DY 75) (USP WILLENS,RH 76)
Wolff, Karin	(USP WOLFF,K 71)
Wong, Herman	(USP BECKER,CH 72B)

3.6 PATENT ASSIGNEE INDEX

3.6 PATENT ASSIGNEE INDEX

3.6 PATENT ASSIGNEE INDEX

American Can Company
(USP JOHNS,DH 62)

BASF Aktiengesellschaft
(USP KOHL,L 78A) (USP KOHL,L 78B)

Becker, Carl H.
(USP BECKER,CH 72A)

Bell Telephone Laboratories, Incorporated
(USP LOU,DY 75) (USP MAYDAN,D 73) (USP WILLENS,RH 76)

Canon Kabushiki Kaisha
(USP FURAHASHI,A 74) (USP KASAI,M 78)

Chase Manhattan Capital Corporation
(USP BECKER,CH 72B)

Data Disc Incorporated
(USP LINDBERG,CA 68)

Dove, John F.
(USP DOVE,JF 65)

Drexler Technology Corporation
(USP BOULDIN,EW 81A) (USP BOULDIN,EW 81B) (USP BOULDIN,EW 81C)
(USP DREXLER,J 81A) (USP DREXLER,J 81B) (USP DREXLER,J 81C)
(USP DREXLER,J 81D) (USP DREXLER,J 82A) (USP DREXLER,J 82B)
(USP DREXLER,J 82C) (USP DREXLER,J 82D)

Dreyer Laboratories
(USP DREYER,JF 51)

Eastman Kodak Company
(USP FLANAGAN,WC 63)

Energy Conversion Devices
(USP FEINLEIB,J 73)

FMC Corporation
(USP RADIMER,KJ 69) (USP RADIMER,KJ 70)

Fuji Photo Film Co., Ltd.
(USP KIDO,K 77)

Gauss Electrophysics, Inc.
(USP GREGG,DP 67)

3.6 PATENT ASSIGNEE INDEX

3.6 PATENT ASSIGNEE INDEX

General Electric Company
(USP SOMERS,LE 68)

Gevaert-Agfa
(USP BRINCKMAN,EM 69)

Grumman Aircraft Engineering Corporation
(USP ALBERTSON,CP 64)

Hitachi, Ltd.
(USP TAKEDA,Y 77)

Honeywell Inc.
(USP HASKAL,H 72)

Hughes Aircraft Company
(USP PICKER,A 69)

International Business Machines Corporation
(USP BRODSKY,MH 73) (USP GORDON,JG 79) (USP HATCHETT,MR 78)
(USP LISSNER,RW 76) (USP MASSE,PR 74)

International Standard Electric Corporation
(USP STERLING,HF 72)

Intersound Limited
(USP MEIER-MALETZ,M 70)

Kalt, Charles G.
(USP KALT,CG 75)

Kollmorgen Technologies Corporation
(USP HERRMANN,G 78) (USP HERRMANN,G 73)

Matsushita Electric Industrial Co., Ltd.
(USP OHTA,T 76)

MCA Disco-Vision, Inc.
(USP BROADBENT,KD 75) (USP ELLIOTT,JE 76)

MCA Technology, Inc.
(USP GREGG,DP 70)

Minnesota Mining and Manufacturing Company
(USP BRADFORD,RS 69) (USP CLUNIS,K 66) (USP CLUNIS,K 69)

Nippon Electric Company, Limited
(USP HIRUTA,K 70)

Patent-Verwaltungs-G.m.b.H.
(USP DICKOPP,G 72)

3.6 PATENT ASSIGNEE INDEX

PerSci, Inc
(USP BRYER,PS 77)

Pertec Corporation
(USP BLEIMAN,LW 76)

Precision Instrument Company
(USP BECKER,CH 69)

RCA Corporation

(USP BELL,AE 78)	(USP BELL,AE 80A)	(USP BELL,AE 80B)
(USP BELL,AE 80C)	(USP BELL,AE 80D)	(USP BELL,AE 81)
(USP BLOOM,A 77A)	(USP BLOOM,A 77B)	(USP BLOOM,A 79)
(USP BLOOM,A 80A)	(USP BLOOM,A 80B)	(USP BLOOM,A 80C)
(USP BLOOM,A 80D)	(USP BRAUDY,RS 76)	(USP CASTELLANO,JA 71)
(USP CREDELLE,TL 79)	(USP GILSON,AP 81)	(USP GOLDMACHER,JE 72)
(USP GOODMAN,LA 78)	(USP GOLDSCHMIDT,AM 79)	(USP GOROG,I 77)
(USP HEILMEIER,GH 72)	(USP IH,CC 72)	(USP KLEINKNECHT,HP 79)
(USP LEEDOM,MA 76)	(USP PHILIPS,W 79)	(USP PRADERVAND,M 76)
(USP ROSS,DL 73)	(USP SHENG,P 79)	(USP SPONG,FW 78)
(USP SPONG,FW 80)	(USP STAEBLER,DL 80)	(USP TODA,M 80)
(USP WHITTEMORE,MJ 72)	(USP WILBER,CS 77)	

Robert Bosch GmbH
(USP HAMISCH,H 71) (USP WOLFF,K 71)

Sanyo Electric Company, Ltd.
(USP TAKAHARA,I 76)

Shugart Associates
(USP DALZIEL,WL 75)

Siemens Aktiengesellschaft
(USP GRAF,P 74)

Silverman, Daniel
(USP SILVERMAN,D 73)

Singer Company
(USP SHILL,KE 71)

Teletype Corporation
(USP FECHTER,HG 73A) (USP FECHTER,HG 73B) (USP GLORIOSO,CA 76)

Thomson-Brandt
(USP LEHEREAU,JC 75)

Thomson-CSF
(USP LEMERER,JP 75)

Tokyo Shibaura Electric Co., Ltd.
(USP MORI,M 75)

3.6 PATENT ASSIGNEE INDEX

3.6 PATENT ASSIGNEE INDEX

3.6 PATENT ASSIGNEE INDEX

United States of America
(USP ERICKSON,AM 72)

U.S. Philips Corporation
(USP BRAAT,JJ 76) (USP DELANG,H 78) (USP GREVE,PF 79)
(USP HILL,B 78) (USP JANSSEN,PJ 74) (USP KLEUTERS,WJ 79)
(USP KRAMER,P 77) (USP LAKERVELD,HG 77) (USP LAKERVELD,HG 78)
(USP LIPPITS,GJ 81) (USP PEPPERL,R 78) (USP VANBUUL,MC 78)
(USP VANROSMALLEN,GE 77) (USP VANROSMALLEN,GE 78)

Victor Company of Japan, Ltd.
(USP OHNUKI,K 74)

Westinghouse Electric Corporation
(USP DIXON,GD 72)

Xerox Corporation
(USP BEAN,LF 73) (USP HAAS,WE 74A) (USP HAAS,WE 74B)
(USP HEURTLEY,JC 72) (USP JVBIRBLIS,AE 71) (USP URBACH,JC 78)

Zenith Radio Corporation
(USP KORPEL,A 70) (USP KORPEL,A 76) (USP RENNICK,JL 75)
(USP WATSON,WH 76) (USP WHITMAN,RL 75)

4.0 CLASSIFICATION INDEX**4.1 ABLATION**

(ASBECK,PM 79)	(CHENG,D 81)	(COHEN,MS 80)
(GOLDBERG,MW 79)	(KENNEY,GC 76)	(KENNEY,GC 77A)
(KENNEY,GC 77B)	(KENNEY,GC 77C)	(LAW,KY 80)
(LOU,DY 81)	(MANSURIPUR,M 82)	(MAYDAN,D 71)
(NOGUCHI,M 82)	(PEPPERL,R 77)	(WROBEL,JJ 82)
(YAMADA,K 82)		

4.2 ACOUSTOOPTICS AND ELECTROOPTICS

(AMODEI,JJ 72)	(BADEMIAN,L 81)	(CASASENT,D 72)
(CONROY,JJ 79)	(DIXON,RW 70)	(DUARDO,JA 80)
(FEINLEIB,J 72)	(FELDMAN,A 79)	(GARMIRE,E 75)
(GUERIN,JM 79)	(GUNNING,WJ 79)	(HENDERSON,DM 79)
(HOU,SL 71)	(IWASA,S 74)	(KAMINOW,IP 66)
(KAMINOW,IP 68)	(KAMINOW,IP 71)	(KATZKA,P 79)
(LAND,CE 69)	(LEE,JN 69)	(LEE,TC 68)
(MAYDAN,D 70A)	(MAYDAN,D 70B)	(MEYER,H 72)
(NISENSEN,P 72)	(OHTA,Y 78)	(OWECHKO,Y 79)
(PINNOW,DA 70)	(PIZZO,RJ 80)	(SCHOOT,CJ 73)
(SKURNICK,E 79)	(SMITS,FM 67)	(TAKEDA,Y 74)
(TREVELYAN,B 69A)	(TREVELYAN,B 69B)	(UCHIDA,N 70)
(WARNER,AW 72)	(WEAVER,JE 81)	(WHITMAN,RL 69)
(YEH,P 79)		

4.3 ARCHIVAL

(AMMON,GJ 78)	(AMMON,GJ 80)	(AMMON,GJ 81A)
(BOSCH,MA 82)	(DREXLER,J 81)	(GELLER,SB 74)
(REDDERSON,BR 80B)		

4.4 CURIE-POINT RECORDING

(AAGARD,RL 68)	(AAGARD,RL 71)	(AAGARD,RL 72)
(AAGARD,RL 73A)	(BERNAL,GE 70)	(BERNAL,GE 71A)
(CHEN,D 68A)	(CHEN,D 70B)	(LEWICKI,GW 73)
(MAYER,L 58B)	(MAYER,L 58C)	(SCHULDT,S 71)
(WIEDER,H 73)		

4.5 DETECTORS AND DETECTION

(ANDERSON,LK 66)	(BECK,JW 70)	(CHENG,D 81)
(GARMIRE,E 75)	(HEEMSKERK,JP 78)	(MARCHANT,AB 82)
(MELCHIOR,H 70)	(MELCHIOR,H 72)	(NAKAMURA,JK 68)
(ZAKY,SG 72)		

4.6 DISK DRIVES AND SERVOSYSTEMS

(BOGELS,PW 76)	(BRAAT,JJ 78A)	(BRAAT,JJ 78B)
(BROWN,CJ 68)	(KENNEY,GC 76)	(KENNEY,GC 77A)
(KENNEY,GC 77B)	(KENNEY,GC 77C)	(KING,GW 65B)

4.7 ERROR DETECTION AND CORRECTION, CODING

(BERLEKAMP,ER 80)	(BOGELS,PW 76)	(CORSOVER,SL 81)
(GRIFFITH,RL 69)	(KENNEY,GC 76)	(KENNEY,GC 77A)
(KENNEY,GC 77B)	(KENNEY,GC 77C)	(PATEL,AM 80)
(SANDERS,LS 82)		

4.8 HOLOGRAPHY AND HOLOGRAPHIC RECORDING

(AMODEI,JJ 71)	(AMODEI,JJ 72)	(ANDERSON,LK 67)
(ANDERSON,LK 68)	(ANDERSON,LK 71)	(BARDOS,A 74)
(BARTOLINI,RA 74)	(BEESLEY,MJ 70)	(BOSOMWORTH,DR 68)
(BRANDT,GB 68)	(BURCKHARDT,CB 70)	(BURKE,WJ 78)
(CATHEY,WT 74)	(CHANG,BJ 80)	(CHEN,CT 79A)
(CHEN,CT 79B)	(CHEN,CT 80)	(CHEN,FS 68)
(COLLIER,RJ 68)	(COSENTINO,LS 73)	(CREDELLE,TL 72)
(DALISA,AL 70)	(DAURIA,L 73)	(DAURIA,L 74)
(DEVELIS,JB 74)	(DRAKE,MD 74)	(FORSHAW,MR 74)
(FRIESEM,AA 70)	(GABOR,D 71)	(GRAF,P 72)
(HANNAN,WJ 83)	(HASKAL,HM 70)	(HILL,B 72)
(HILL,B 73)	(HORNER,JL 80)	(HUHN,D 70)
(JENNEY,JA 70)	(KIEMLE,H 72)	(KIEMLE,H 74)
(KNIGHT,GR 75)	(KOGELNIK,H 69)	(KURTZ,RL 75)
(LABRUNIE,G 74)	(LANGDON,RM 69)	(LEE,TC 71)
(LEE,TC 72)	(LEE,TC 79A)	(LEE,TC 79B)
(LEE,WH 72)	(LEUNG,KM 79)	(LIN,LH 69)
(LIN,LH 70)	(LIPP,J 71)	(LOHMAN,RD 71)
(MATSUMURA,M 74)	(MENZEL,RW 81)	(MEZRICH,RS 69)
(MEZRICH,RS 70A)	(MEZRICH,RS 70B)	(MICHERON,F 72)
(MICHERON,F 74A)	(MIKAELIANE,AL 70)	(NELSON,RH 74)
(PENNINGTON,KS 71)	(RAJCHMAN,JA 70A)	(RAJCHMAN,JA 70B)
(RAJCHMAN,JA 72)	(REDDERSON,BR 80A)	(ROBERTS,HN 72)
(ROBERTS,HN 74)	(RULL,H 75)	(RULL,H 76)
(SHANKOFF,TA 68)	(SPITZ,E 72)	(STEWART,WC 70)
(STEWART,WC 72)	(STEWART,WC 73)	(STREHLOW,WH 74)

4.0 CLASSIFICATION INDEX

(SUTHERLIN, KK 74)
(TSUKAMOTO, H 74)
(TSUNODA, Y 76)

(TANAKA, M 72)
(TSUNODA, Y 73)
(URBACH, JC 66)

(THAXTER, JB 69)
(TSUNODA, Y 74)
(VANDERLUGT, A 73)

4.9 LASERS

(BASOV, NG 72)
(BOTEZ, D 78)
(CHANCE, DA 79)
(DICKSON, LD 70)
(FINDLAY, D 70)
(GARMIRE, E 75)
(KOGELNIK, H 66)
(LAMB, WE 64)
(MANSURIPUR, M 82)
(RYKALIN, NN 67)
(SUZUKI, T 70)
(VOUMARD, C 77)
(YOUNG, CG 69)

(BERG, AD 76)
(BOUSKY, S 71)
(CROW, JD 79)
(ELECCION, M 72)
(FISHLOCK, D 69)
(HECHT, J 72)
(KRESSEL, H 74A)
(LYNCH, RT 79)
(MARINACE, JC 70)
(SMITH, PW 70)
(THORTON, JR 69)
(WIEDER, H 71)

(BLOOM, AL 66)
(CARLSON, CD 66)
(DANEU, V 66)
(EMMEL, PM 80)
(FOWLER, VJ 66)
(JAVAN, A 61)
(KRESSEL, H 74B)
(MAIMAN, TH 60)
(NAKADA, O 74)
(SOROKIN, PP 79)
(TUFTE, ON 73B)
(WITTKE, JP 76)

4.10 MAGNETOOPTICS

(AAGARD, RL 68)
(AHN, KY 68)
(ALMASI, GS 71)
(BROWN, BR 72)
(CHEN, D 68A)
(DILLON, JF 63)
(FAN, GJ 71)
(FELDTKELLER, E 72)
(HUNT, RP 69)
(KRUMME, JP 73B)
(LACKLISON, DE 75)
(PATLACH, AM 72)
(SHAHBENDER, R 74)
(SUITS, JC 66)
(TREVES, D 67)
(TU, KN 72)

(AAGARD, RL 71)
(AHRENKIEL, RK 73)
(BECK, JW 70)
(CHANG, JT 76)
(CHIDA, K 77)
(ESCHENFELDER, AH 70)
(FAN, GY 67)
(FUJIWARA, T 72)
(JUDY, JH 71)
(KRUMME, JP 75)
(MACDONALD, RE 69)
(SALANSKY, NM 74)
(SHELTON, CF 73)
(SUITS, JC 68)
(TREVES, D 69)
(WANG, S 71)

(AAGARD, RL 73B)
(AHRENKIEL, RK 74)
(BERNAL, GE 70)
(CHAUDHARI, P 73)
(CHOW, KK 68)
(EVTIHIEV, NN 76)
(FAN, GY 68)
(GOLDBERG, N 67)
(KOKUBU, A 72)
(LACKLISON, DE 73)
(MCGUIRE, TR 71)
(SCHULDT, S 71)
(SMITH, DO 67)
(SUITS, JC 72)
(TSUJIYAMA, B 72)

4.11 MATERIALS AND PROPERTIES

(AAGARD, RL 72)
(AHN, KY 68)
(AHN, KY 71)
(AHRENKIEL, RK 75)
(ANDRESEN, AF 67)
(ASHKIN, A 66)
(BLOM, GM 79)

(ADACHI, K 61)
(AHN, KY 70A)
(AHRENKIEL, RK 73)
(AISENBERG, S 81)
(ANDRESEN, AF 72)
(BEAN, CP 55)
(BOOTH, BL 72)

(ADAMS, E 56)
(AHN, KY 70B)
(AHRENKIEL, RK 74)
(ALLEN, TH 81)
(ASH, GS 80)
(BELL, AE 82)
(BORDOGNA, J 72)

4.0 CLASSIFICATION INDEX

4.0 CLASSIFICATION INDEX

(BORRELLI,NF 72)	(BORRELLI,NF 80)	(BROUHA,M 75)
(CASASENT,D 79)	(CHAUDHARI,P 73)	(CHEN,CH 80)
(CHEN,D 65)	(CHEN,D 66)	(CHEN,D 67A)
(CHEN,D 67B)	(CHEN,D 68A)	(CHEN,D 68B)
(CHEN,D 70A)	(CHEN,D 70B)	(CHEN,FS 69)
(CHEN,T 74)	(CHENG,D 81)	(CHOW,KK 68)
(CLARK,MG 73)	(COLBURN,WS 71)	(COMSTOCK,RL 70A)
(COMSTOCK,RL 70B)	(CONGLETON,DB 77)	(DAVAL,J 75)
(DEKKER,P 76)	(DILLON,JF 59)	(DILLON,JF 63)
(DILLON,JF 70)	(DITTMER,G 77)	(DIXON,RW 67)
(DUNCAN,RC 70)	(EVTIHIEV,NN 76)	(FAN,G 70)
(FAUGHNAN,BW 69)	(FELDTKELLER,E 72)	(FERRE,J 71)
(FLIPPEN,RB 73)	(FOWLER,CA 52)	(FOWLER,CA 55)
(FOWLER,CA 56A)	(FOWLER,CA 56B)	(FUJIWARA,T 72)
(GOODENOUGH,JB 61)	(GOULD,HL 57)	(GUNTHERODT,G 70)
(HARTSTEIN,A 80)	(HEIKES,RR 55)	(HEILMEIER,GH 68)
(HERD,SR 82A)	(HERD,SR 82B)	(HOWE,DG 81)
(JIPSON,VB 81)	(JUDY,JH 71)	(KAMINOW,IP 68)
(KATSUI,A 76)	(KIM,DM 77)	(KRUMME,JP 73A)
(LACKLISON,DE 73)	(LAND,CE 69)	(LEE,K 71)
(LEE,K 73A)	(LEWICKI,GW 70)	(LIN,LH 71)
(LIU,TS 71)	(LO,DS 74)	(LOU,DY 81)
(MAYER,L 60A)	(MAYER,L 60B)	(MCGUIRE,TR 71)
(MEGLA,GK 76)	(MIMURA,Y 76)	(NEALE,RG 73)
(NELSON,TJ 68)	(NEUGEBAUER,CA 59)	(OUCHI,K 72)
(OVSHINSKY,SR 72)	(PALMCS 79)	(PLATT,JR 61)
(RALSTON,LM 81)	(RATAJCZAK,H 70)	(ROBERTS,BW 54)
(ROBERTS,BW 56)	(ROBERTSON,JM 75)	(SAWATZKY,E 71A)
(SAWATZKY,E 71B)	(SAWATZKY,E 71C)	(SCOTT,GB 76)
(SEYBOLT,AU 56)	(SHELTON,CF 73)	(SHERWOOD,RC 71)
(SHIBATA,K 72)	(SHUMATE,PW 71)	(STARK,H 71)
(STOFFEL,AM 70)	(STREET,GB 72)	(SUITS,JC 66)
(SUITS,JC 68)	(SUITS,JC 71)	(THAXTER,JB 74)
(THORTON,JR 69)	(TOGAMI,Y 78)	(TOGAMI,Y 82)
(TOLKSDORF,W 75)	(TOMLINSON,WJ 70)	(TOROK,EJ 78)
(TREVELYAN,B 69B)	(TU,KN 72)	(UNGER,WK 70)
(UNGER,WK 71A)	(UNGER,WK 71B)	(UNGER,WK 71C)
(UNGER,WK 72A)	(UNGER,WK 72B)	(VOLKER,S 79)
(VONDERLINDE,D 74)	(WANG,S 71)	(WASHCO,S 76)
(WEAVER,SE 80)	(WIEDER,H 73A)	(WIEDER,H 73B)
(WILLIAMS,HJ 51)	(WILLIAMS,HJ 57A)	(WILLIAMS,HJ 57B)
(WILLIAMS,HJ 58)	(WU,CK 79)	

4.12 MEDIA

(AHN,KY 82)	(AHRENKIEL,RK 73)	(AHRENKIEL,RK 74)
(AISENBERG,S 81)	(ALLEN,TH 81)	(AMODEI,JJ 72)
(ANDERSON,HR 71)	(ASH,GS 80)	(BARTOLINI,RA 76)
(BARTOLINI,RA 81A)	(BARTOLINI,RA 81B)	(BEESLEY,MJ 70)
(BELL,AE 78)	(BELL,AE 79A)	(BELL,AE 79B)

4.0 CLASSIFICATION INDEX

4.0 CLASSIFICATION INDEX

(BLOM,GM 79)	(BOOTH,BL 72)	(BORDOGNA,J 72)
(BORRELLI,NF 79)	(BORRELLI,NF 80)	(BOSCH,MA 82)
(BRODY,H 82)	(BROWN,BR 74)	(CHAUDHARI,P 73)
(CHEN,D 64)	(CHEN,D 68B)	(CHEN,D 70A)
(CHEN,D 71)	(CHEN,D 73)	(CHEN,D 74)
(CHEN,FS 68)	(CHEN,M 81)	(CHIDA,K 77)
(CHOW,KK 68)	(COEURE,P 71)	(COMSTOCK,RL 70A)
(COMSTOCK,RL 70B)	(CRAIGHEAD,HG 82)	(CREDELLE,TL 72)
(DEKKER,P 74)	(DREXLER,J 81)	(EDEN,DD 81)
(EGASHIRA,K 74)	(EVTIHIEV,NN 76)	(HARTSTEIN,A 80)
(HAUDEK,H 71)	(HERD,SR 82A)	(HERD,SR 82B)
(JIPSON,VB 81)	(KIVITS,P 81)	(LANGLET,R 73)
(LAW,KY 80)	(LEE,K 73B)	(LEWICKI,GW 69)
(LEWICKI,GW 70)	(MIMURA,Y 76)	(RANCOURT,JD 81)
(SMITH,AW 73)	(SMITH,TW 81)	(STRAND,D 80)
(SUNAGO,K 76)	(TERAO,M 79)	(TOGAMI,Y 78)
(TOGAMI,Y 82)	(VONGUTFELD,RJ 72)	

4.13 OPTICS

(AMMON,GJ 81B)	(BLOOM,AL 66)	(BOUHUIS,G 78)
(BRICOT,C 76)	(CHANCE,DA 79)	(CHEN,FS 69)
(CHENG,CC 79)	(CLOVER,RB 71)	(DENTON,RT 72)
(DICKSON,LD 70)	(ELECCION,M 72)	(FILES,V 71)
(FISHLOCK,D 69)	(FOWLER,VJ 66)	(GABOR,D 48)
(GABOR,D 71)	(GOROG,I 78A)	(GOROG,I 78B)
(HASKAL,HM 71A)	(HOPKINS,HH 53)	(HOPKINS,HH 66)
(HOPKINS,HH 67)	(HOPKINS,RE 76)	(HORNER,JL 80)
(JAVAN,A 61)	(JOHANNES,R 70)	(JOHNSON,RV 79)
(KOGELNIK,H 66)	(KOGELNIK,H 69)	(KORPEL,A 78)
(KRAMER,CJ 79)	(LAMB,WE 64)	(LAND,CE 69)
(LAUB,LJ 76)	(LEITH,EN 62)	(LEITH,EN 67)
(LEUNG,KM 79)	(LYNCH,RT 79)	(MARECHAL,A 47)
(MATSUMURA,M 74)	(MAYER,L 55)	(MAYER,L 57)
(MAYER,L 58A)	(MITSUHASHI,Y 76)	(PASKO,JG 79)
(ROSENKRANTZ,LJ 79)	(SCHMIDT,U 69)	(SCHNEIDER,I 70)
(SMITH,PW 70)	(TITLE,AM 79)	(TOMLINSON,WJ 70)
(TOMLINSON,WJ 72)	(TUFTE,ON 73B)	(VELZEL,CH 78)
(VOUMARD,C 77)	(ZOOK,JD 72)	(ZOOK,JD 74)

4.14 OVERVIEWS, REVIEWS, SURVEYS, AND GENERAL

(BARRETT,R 81)	(BARRETT,R 82)	(BARTOLINI,RA 78)
(BOUSKY,S 76)	(CHEN,D 75)	(CHI,CS 82)
(CLEMENS,JK 82)	(GOLDSTEIN,CM 82)	(HASKAL,HM 77)
(HOAGLAND,AS 72)	(HOAGLAND,AS 79)	(JAMBERDINO,AA 81A)
(JAMBERDINO,AA 81B)	(JAMBERDINO,AA 81C)	(JONES,K 81)
(KENVILLE,RF 81)	(KING,GW 65A)	(KIRTON,J 74)
(LAND,CE 78)	(LASERF 74)	(MATICK,RE 72)
(MCLEOD,J 81A)	(MCLEOD,J 81B)	(MENNIE,D 79)

4.0 CLASSIFICATION INDEX

4.0 CLASSIFICATION INDEX

(NEARY,DR 82)
(STREET,J 80)
(WALTER,GO 82)
(WHITE,RM 80)

(ROLPH,S 80)
(TUFTE,ON 73A)
(WARNAR,RB 79)
(ZERNIKE,F 78)

(SMITH,K 80)
(VOOS,H 80)
(WEITZMAN,C 70)

4.15 PHYSICS

(BROUT,R 65)
(SCHNEIDER,I 70)

(KITTEL,C 46)

(NIJBOER,BR 57)

4.16 RECORDING STRUCTURES

(BARTOLINI,RA 79)
(KENNEY,GC 77B)
(LOU,DY 82)
(SHERIDON,NK 72)

(KENNEY,GC 76)
(KENNEY,GC 77C)
(PALERMO,P 77)

(KENNEY,GC 77A)
(LOU,DY 81)
(RANCOURT,JD 81)

4.17 SYSTEM DESCRIPTIONS

(AMMON,GJ 79)
(BROADBENT,KD 74)
(BURNS,LL 80)
(FIRESTER,AH 78B)
(HERZOG,DG 79)
(KACZOROWSKI,EM 77)
(KENNEY,GC 77A)
(KENNEY,GC 79)
(MCCOY,DS 78)
(PIERSON,PB 79)
(ULMER,DE 79)

(BECKER,CH 66)
(BULTHUIS,K 79)
(CASHMAN,MW 73)
(GRAY,EE 72)
(HRBEK,GW 74)
(KEIZER,EO 78)
(KENNEY,GC 77B)
(KENVILLE,RF 78)
(MCFARLAND,K 68)
(REDDERSON,BR 80A)
(WATKINS,JW 81)

(BOWERS,DM 65)
(BURNS,LL 79)
(FIRESTER,AH 78A)
(HEFFNER,P 79)
(JOHNSON,C 75)
(KENNEY,GC 76)
(KENNEY,GC 77C)
(KUEHLER,JD 66)
(NARUSE,Y 78)
(RUSSELL,JT 76)

4.18 THERMOMAGNETIC RECORDING

(BERKOWITZ,AE 71)
(BROUHA,M 75)
(FROST,WT 74)
(HUTH,BG 74)
(MEE,CD 67)
(SHELTON,CF 74)
(WARING,RK 71)
(YOSHII,S 74)

(BERKOWITZ,AE 75)
(COURE,P 71)
(HASKAL,HM 71B)
(LANGLET,R 72)
(MINNAJA,N 73)
(SUNAGO,K 76)
(WIEDER,H 71B)

(BERNAL,GE 71B)
(DOYLE,WD 70)
(HONDA,S 73)
(MATSHUSHITA,S 75)
(ONO,Y 72)
(UNGER,WK 71C)
(WIEDER,H 73B)

4.19 THERMOPLASTIC RECORDING

(ANDERSON,HR 71)
(JOHNSON,LH 78)
(LIN,LH 70)

(COLBURN,WS 74)
(LEE,TC 79A)
(URBACH,JC 66)

(CREDELLE,TL 72)
(LEE,TC 79C)

5.0 CITATIONS

5.1 MEDIA ANNOTATIONS

- (AHN,KY 82) Ahn, K.Y., T.H. DiStefano, S.R. Herd, N.J. Mazzeo, and K.N. Tu. "High-Sensitivity Silicide Films for Optical Recording." Journal of Applied Physics. Vol. 53, No. 9, September 1982, pp. 6360-6364. 4 refs.

This recent paper gives the results of sensitivity experiments performed on a variety of substrates for bilayer and trilayer structures of silicide films. Techniques for reduction of laser writing power are tried and found to significantly reduce the power necessary for writing. Preparation of active films is discussed. Materials studied were: Rh, RhB, RhB-Si, and Al-SiO₂-Au-Si.

- (AHRENKIEL,RK 73) Ahrenkiel, R.K. and T.J. Coburn. "Hot-pressed CoCr₂S₄: A Magneto-Optical Memory Material." Applied Physics Letters. Vol. 22, No. 7, April 1, 1973, pp. 340-341. 7 refs.

This paper describes investigations of hot-pressed CoCr₂S₄ for desirable characteristics regarding its potential use as an optical storage medium. Measurements of physical properties related to the Kerr and Faraday effects are made and two figures-of-merit are defined. One of these figures-of-merit is for the readout by the Faraday effect and the other is for readout by the Kerr effect. No information regarding recording density, writing power required, or writing rates is presented. It is found that hot-pressed CoCr₂S₄ has several properties which are useful in a thermomagnetic recording scheme.

- (AHRENKIEL,RK 74) Ahrenkiel, Richard K., Theodore J. Coburn, and Edward Carnal, Jr. "Magneto-optical Properties of Ferrimagnetic CoCr₂S₄ in the Near Infrared." IEEE Transactions on Magnetics. Vol. MAG-10, No. 1, March 1974, pp. 2-7. 12 refs.

The properties of hot-pressed CoCr₂S₄ are investigated and reported more extensively than was done in a previous paper (AHRENKIEL,RK 73). Some attention is in this later paper to the use of CoCr₂S₄ as an optical memory material. It is mentioned that the large magnetooptic effects occur at wavelengths for which commercial lasers are not available (circa 1974) and that cryogenic atmospheres are necessary.

- (AISENBERG,S 81) Aisenberg, S., and M. Stein. "Novel Materials for Improved Optical Disk Lifetime." Beiser, Leo, ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Advances in Laser Scanning Technology; August 27-28, 1981; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 299: pp. 64-67. 6 refs.

While this article is not written about recording media per se, it is concerned with the protection of thin metallic films from oxygen and water vapor infiltration. A film of diamond-like carbon is deposited on the surface to be protected by using a plasma-ion beam deposition technique. The film provides hermetic protection due to the small interatomic spacing of carbon. Films about 800-1000 Angstroms (80-100 nm) thick are expected to act as a suitable oxygen barrier to prevent oxidation of protected surfaces. Some important characteristics of the protective film are: flexibility, good adhesion on many materials, good optical transmission and low absorption, and erosion resistance. The film is also an electrical insulator.

- (ALLEN,TH 81) Allen, Thomas H. and Gary S. Ash. "Optical Properties of Tellurium Films Used for Data Recording." Optical Engineering. Vol. 20, No. 3, May-June 1981, pp. 373-376. 13 refs.

"The complex optical index of refraction for evaporated films of tellurium has been measured using ellipsometry over the wavelength range 439 to 633 nm. Values of n and k as a function of thickness are presented. The transmittance and reflectance of single layers of tellurium, as well as multilayer structures to be used for optical data recording media, are shown as a function of wavelength. Oxide formation of the films has also been measured, and a model for the role of oxides in altering adhesion of the films is presented."

- (AMODEI,JJ 72) Amodei, J.J., W. Phillips, and D.L. Staebler. "Improved Electrooptic Materials and Fixing Techniques for Holographic Recording." Applied Optics. Vol. 11, No. 2, February 1972, pp. 390-396. 11 refs.

Improvements in the storage performance of lithium niobate and barium sodium niobate are reported in this paper. Enhancements are achieved by the introduction of transition metal impurities or by irradiating undoped crystals. These modified materials have increased

sensitivity with diffraction efficiencies well over 50%. Fixing techniques permit nondestructive readout for phase-holograms stored in single thick crystals of lithium niobate and barium sodium niobate. Good quality storage is shown to exist for approximately five months. Estimates of storage times between five and fifteen years are predicted for samples stored at 0°C.

- (ANDERSON,HR 71) Anderson, H.R., Jr., E.A. Bartkus, and J.A. Reynolds. "Molecular Engineering in the Development of Materials for Thermoplastic Recording." IBM Journal of Research and Development. Vol. 15, No. 2, March 1971, pp. 140-150. 4 refs.

Polymerization, testing, and preparation of thermoplastic media is discussed. Two types of recording tests were performed: One to determine the response characteristics of thermoplastics in air and the other to determine their characteristics in vacuo. Various polymers are studied and response characteristics are found to be affected strongly by the plasticizer content of the polymer. Coating thickness is an important factor in controlling the rate-of-response. Write-read-erase cycle testing is performed on various thermoplastics. Styrene-octyl-decyl methacrylate (85-15) copolymer film is subjected to 50,000 write-read-erase cycles with equivalent deformations being produced at the beginning and end of the cycling period. The thermoplastic recording properties of a polymer are found to be related to the polymer chemistry, molecular weight, and the degree and type of plasticization.

- (ASH,GS 80) Ash, Gary S., and Thomas H. Allen. "Optical Properties of Tellurium Films Used for Data Recording." Jamberdino, Albert A., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Scanning and Recording for Advanced Image and Data Handling; April 8-9, 1980; Washington, D.C. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1980; Vol. 222: pp. 64-69. 13 refs.

Optical constants for tellurium at wavelengths ranging from 439 to 633 nm are measured and reported in this paper. Deposition of films is discussed and the theory of ellipsometry for the measurements is given. Measurements are made on film thicknesses in the range from 6 to 208 Angstrom units (0.6 to 20.8 nm). Adhesion properties of tellurium deposited on glass substrates are investigated and found to be poor but improved with aging. This is believed to be due to the formation of an oxide film at the interface. Measured values of reflectance and transmittance of single-layer tellurium

films with a thickness of 250 Angstrom units (25.0 nm) are given as well as absorptance for a three-layer design.

- (BARTOLINI,RA 76) Bartolini, R.A., H.A. Weakliem, and B.F. Williams. "Review and Analysis of Optical Recording Media." Optical Engineering. Vol. 15, No. 2, March-April 1976, pp. 99-108. 54 refs.

Optical recording materials are organized into eleven classes. Several materials for each class are tabulated and characteristics of the materials are provided. Some of the characteristics given are usable thickness, recording process, processing, recording sensitivity, and resolution. A procedure is described which facilitates choosing recording materials based on system requirements.

- (BARTOLINI,RA 81A) Bartolini, R.A. "Media for High Density Optical Recording." DiStephano, T.H. ed Proceedings of the Society of Photo-Optical Instrumentation Engineers: Optical Storage Materials; November 18, 1980; Ossining, New York. Bellingham Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 263: pp. 70-74. 11 refs.

This article begins with a list of advantages that optical disk recording systems provide. This is followed by a short description of a basic optical storage concept. Succeeding topics delineate the desired characteristics for optical recording media. A tellurium trilayer recording structure is then described. Sources of defects are discussed. A subbing layer placed over the substrate material can be used to minimize defects from one source.

- (BARTOLINI,RA 81B) Bartolini, Robert A. "Media for High-Density Optical Recording." Optical Engineering. Vol. 20, No. 3, May-June 1981, pp. 382-386. 11 refs.

For annotation of this paper, see (BARTOLINI,RA 81A).

- (BEESLEY,MJ 70) Beesley, M.J., and J.G. Castledine. "The Use of Photoresist as a Holographic Recording Medium." Applied Optics. Vol. 9, No. 12, December 1970, pp. 2720-2724. 6 refs.

This paper describes the use of pre-exposure or post-exposure techniques for reducing the exposure times required for storing holograms in a photo-resist material. The use of pre-exposure techniques can reduce exposure time to about 25% of the normal value. Pre-exposure also reduces the effects of stray light.

- (BELL,AE 78) Bell, Alan E., and Fred W. Spong. "Antireflection Structures for Optical Recording." IEEE Journal of Quantum Electronics. Vol. QE-14, No. 7, July 1978, pp. 487-495. 23 refs.

Three optical recording structures are described: Monolayer structures, bilayer antireflection structures, and trilayer antireflection structures. It is found that the bilayer antireflection structures are of particular value for use with organic dye film recording media and that the trilayer structures are more appropriately used with metallic film recording media.

- (BELL,AE 79A) Bell, A.E., and R.A. Bartolini. "High-Performance Te Trilayer for Optical Recording." Applied Physics Letters. Vol. 34, No. 4, February 15, 1979, pp. 275-276. 4 refs.

This is a report on the optical recording characteristics of a fully encapsulated tellurium trilayer structure. The tellurium trilayer structure maintains the 50 dB signal-to-noise ratio quoted for a titanium trilayer structure (BELL,AE 79B). Recording sensitivity of the tellurium is shown to be 4 times as great as for titanium. With this increased sensitivity, the tellurium trilayer can be optimized for recording with GaAs laser diodes which have a wavelength of approximately 800 nm.

- (BELL,AE 79B) Bell, A.E., R.A. Bartolini, and F.W. Spong. "Optical Recording With The Encapsulated Titanium Trilayer." RCA Review. Vol. 40, No. 3, September 1979, pp. 345-362. 5 refs.

This paper concentrates on RCA's Encapsulated Titanium Trilayer optical recording disk. The design is described and substrates and encapsulation are discussed. One feature of this paper is that errors (detected dropouts) are shown for encapsulated and non-encapsulated disks for various states of surface cleanliness. Signal-to-noise ratios equal to or greater than 50 dB are achieved with this encapsulated titanium trilayer medium deposited on a plastic substrate. Recording beam power of 25 mW incident on the disk surface is employed in achieving this performance.

- (BLOM,GM 79) Blom, G.M. "Single Te Films and Te Trilayers for Optical Recording." *Applied Physics Letters*. Vol.35, No. 1, July 1, 1979, pp. 81-83. 6 refs.

This paper compares the characteristics of single layer tellurium films with those of tellurium trilayer structures. Signal-to-noise ratios are enhanced by utilizing the trilayer antireflection structure. Thermal design is beneficial in optimizing the performance for optical recording. Tests were performed using a He-Cd laser with a wavelength of 4416 Angstroms (441.6 nm).

- (BOOTH,BL 72) Booth, B.L. "Polymer Material for Holography." *Applied Optics*. Vol. 11, No. 12, December 1972, pp.2994-2995. 5 refs.

DuPont photopolymer film is subjected to several experiments relative to holographic storage. For most thicknesses of the film coated on glass, Kogelnik's criteria for volume holograms is satisfied. Various wavelengths of light for recording the holograms are employed with good results. Results of this experimentation enables optimization of dye concentrations and thickness for both sensitivity and peak diffraction efficiency.

- (BORDOGNA,J 72) Bordogna, Joseph, Scott A. Keneman, and Juan J. Amodoi. "Recyclable Holographic Storage Media." *RCA Review*. Vol. 33, No. 1, March 1972, pp. 227-247. 63 refs.

Several materials are investigated for their potential applicability as recyclable holographic storage media. The investigations are not limited to one writing or reading technique. Several techniques are used; e.g., magnetooptics, electrooptics, and plastic deformation. A figure-of-merit is defined for use as a guideline in the choice of holographic storage media.

- (BORRELLI,NF 79) Borrelli, Nicholas F., and Peter L. Young. "New Thin Film Optical Recording Medium." Jamberdino, Albert A., ed. *Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Recording and Information Handling*; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 200: pp. 51-56. 3 refs.

An erasable film structure composed of a silver halide phase in contact with a chemically produced discontinuous silver phase is described and a mechanism is proposed to explain

the induced optical anisotropy when the material is exposed to light from a polarized He-Ne laser. The polarized He-Ne laser is used as the writing and erasing source and a GaAs laser is employed for the readout source. Erasure is accomplished by re-exposing the recorded spot to a 45 or 90 degree rotation of the polarization direction of the write beam.

(BORRELLI,NF 80) Borrelli, N.F., and P.L. Young. "Read-Write-Erasable Thin Film Optical Recording Medium." Jamberdino, Albert A., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Scanning and Recording for Advanced Image and Data Handling; April 8-9, 1980; Washington, D.C. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1980; Vol. 222: pp. 48-53. 2 refs.

Writing, reading, and erasure on a silver halide thin film structure is shown to be possible in an earlier paper (BORRELLI,NF 79). This later paper presents recording data relevant to the writing sensitivity, the resulting contrast, and efficiency of erasing. The extent to which write-read-erase recycling can be done without degradation of the material is not determined.

(BOSCH,MA 82) Bosch, M.A., K.S. Kang, S. Hackwood, G. Beni, and J.L. Shay. "Optical Writing on Blue, Sputtered Iridium Oxide Films." Applied Physics Letters. Vol. 41, No. 1, July 1, 1982, pp. 103-105. 8 refs.

An interesting mechanism for optical writing on sputtered iridium oxide films is investigated. A laser beam is used to dehydrate the film where the beam is focused. A change in the film's microstructure occurs in the exposed region producing a change in its optical characteristics. Both electronic conductivity measurements and optical spectra support this dehydration theory. It is claimed that high contrast writing at low power is due to dehydration accompanied by film shrinkage. Due to the high stability of iridium oxide films this process seems promising for optical archival information storage.

(BRODY,H 82) Brody, Herb. "Materials for Optical Storage: A State-of-the-Art Survey." Journal of Micrographics. Vol. 15, No. 1, January 1982, pp. 33-37. No refs.

This article first discusses the impossibility of producing the ideal optical storage medium and then moves on to discuss the characteristics required for a suitable recording medium. Several classes of recording media are discussed and include: Thin metal films,

dye films, photographic and electrophotographic media, bubble media, and erasable media.

- (BROWN, BR 74) Brown, B.R. "Optical Data Storage Potential of Six Materials." Applied Optics. Vol. 13, No. 4, April 1974, pp. 761-766. 10 refs.

Six materials are subjected to writing sensitivity measurements and tests for resolution limits. The read/write experiments are made using GaAs lasers. Two materials have resolution limits due to grain noise, one to domain stability, and two demonstrate wavelength limited resolution. PtCo appears capable of greater than 10^8 bits/cm² (6.45×10^8 bits/in²) at data rates of 50 Mbits/second. Readout signal-to-noise ratios are calculated on theoretical grounds.

- (CHAUDHARI, P 73) Chaudhari, P., J.J. Cuomo, and R.J. Gambino. "Amorphous Metallic Films for Magneto-Optic Applications." Applied Physics Letters. Vol. 22, No. 7, April 1, 1973, pp. 337-339. 4 refs.

Compositions of Gd-Co have been found which have compensation points near room temperature. One consequence of this is the possibility of using GdCo films as a write-read-erase storage medium. Magneto optic properties of these films are reported here and write and erase experiments are performed. Typical laser power density required is 0.5 nJ/um² with a 1 nsec pulsewidth to write a spot with a diameter of a few micrometers. Two methods of erasure are achieved; i.e., erasure can be accomplished by using a large bias field at room temperature, or a laser pulse similar to the write pulse can be used in conjunction with a smaller bias field to accomplish erasure. Good signal-to-noise ratios are observed. Write-read-erase cycling can be accomplished many times without degradation of the films.

- (CHEN, D 64) Chen, D., and Y. Gondo. "Temperature Dependence of the Magneto-Optic Effect and Resonance Phenomena in Oriented MnBi Films." Journal of Applied Physics. Vol. 35, No. 3, March 1964, pp. 1024-1025. 7 refs.

Observations of the magnetooptic properties of oriented MnBi films are made at temperatures ranging from 80°K to 300°K. The films are polycrystalline thin films with the c axis of the crystallites oriented perpendicular to the plane of the film. As the temperature decreases from 300°K to 84°K, it was found that the Kerr rotation

decreases by a factor of $3/2$ when the film is in the remanent state and increases by a factor of 10 when the film is in the saturation state. It is also observed that the resistivity decreases by a factor of 2 and the reflected light intensity decreases by a factor of 6. The anisotropy constant estimated from ferromagnetic resonance data decreases from 4.5×10^6 erg/cm³ (4.5×10^{-1} J/cm³) at 1620K to zero at 840K.

(CHEN,D 68B) Chen, D., J.F. Ready, and E. Bernal G. "MnBi Thin Films: Physical Properties and Memory Applications." Journal of Applied Physics. Vol. 39, No. 8, July 1968, pp. 3916-3927. 20 refs.

This paper describes MnBi film preparation; discusses the relationship of absorption coefficients, wavelength, and Faraday rotation; and magnetic properties of the MnBi-mica films. Writing techniques, reading techniques, and reading speed at a good signal-to-noise ratio are thoroughly discussed. Experimental results which are given on the required laser power, writing spot size, signal-to-noise ratios, and readout rates are in general agreement with theoretical analysis.

(CHEN,D 70A) Chen, D., R.L. Aagard, and T.S. Liu. "Magneto-Optic Properties of Quenched Thin Films of MnBi and Optical Memory Experiments." Journal of Applied Physics. Vol. 41, No. 3, March 1, 1970, pp. 1395-1396. 7 refs.

Low temperature phase MnBi thin films are prepared and their physical properties are measured and compared. Optical memory experiments are performed using the high temperature phase quenched film. The results of laser Curie-point writing indicates that high temperature quenched phase MnBi is more desirable as an optical storage medium than the low temperature phase film. The quenched high temperature phase film anneals back to the low temperature phase with an annealing time constant of about 2 years at room temperature and an activation energy of 1.08 eV (1.73×10^{-19} J). Useful life is shorter than predicted by the annealing time constant since the Curie-point writing characteristics are affected by only a small amount of transformation to the normal phase. Further information on the high temperature phase MnBi film characteristics are presented in (CHEN,D 70B) which is not separately annotated.

- (CHEN,D 71) Chen, Di. "Preparation and Stability of MnBi Thin Films." Journal of Applied Physics. Vol. 42, No. 9, August 1971, pp. 3625-3628, 13 refs.

A new vapor deposition method of preparing MnBi thin films is described in this paper. This method deposits the low temperature phase MnBi which is transformable to the high temperature phase by quenching from above 360°C.

- (CHEN,D 73) Chen, Di, Gary N. Otto, and Francis M. Schmit. "MnBi Films for Magneto-optic Recording." IEEE Transactions on Magnetics. Vol. MAG-9, No. 2, June 1973, pp. 66-83. 43 refs.

This comprehensive treatment of magneto-optic recording on MnBi films gives an in-depth coverage of film preparation, magnetic properties, optical and magneto-optic properties of manganese bismuth. The mechanism of thermomagnetic writing on these films is described as well as the magneto-optic readout technique. Results of thermomagnetic writing on and magneto-optic reading from an MnBi coated glass disk are discussed. Some attention is also given to holographic memories on MnBi films.

- (CHEN,D 74) Chen, D. "Magnetic Materials for Optical Recording." Applied Optics. Vol. 13, No.4, April 1974, pp. 767-778. 40 refs.

This paper presents a review of the present status (circa 1974) of optomagnetic recording technology. A table of eleven recording parameters for 21 magneto-optic memory materials is presented.

- (CHEN,FS 68) Chen, F.S., J.T. LaMacchia, and D.B. Fraser. "Holographic Storage in Lithium Niobate." Applied Physics Letters. Vol. 13, No. 7, October 1, 1968, pp. 223-225. 5 refs.

This paper describes experiments using lithium niobate as a holographic storage medium. Complete erasure is possible by heating the crystals to 170°C. Diffraction efficiencies up to 40% and recorded spatial frequencies up to 1600 lines/mm are reported. A related paper (CHEN,FS 69) studies in depth the optically induced change of refractive indices responsible for the performance of lithium niobate as a holographic storage medium.

- (CHEN,M 81) Chen, M., and V. Marrello. "The Effect of Overcoats on the Ablative Writing Characteristics of Tellurium Films." DiStephano, T.H., ed Proceedings of the Society of Photo-Optical Instrumentation Engineers: Optical Storage Materials; November 18,1980; Ossining, New York. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 263: pp. 75-77. 7 refs.

Degradation in the writing sensitivity of Te films is found to occur as a result of recording through surface coatings of silicon dioxide or polymethyl methacrylate. Experiments are made using several thicknesses of overcoats. Measurement results are compared to results of thermal calculations. Effects on the writing sensitivity which are not thermal in nature are also noted.

- (CHIDA,K 77) Chida, Kazunori, Bunjiro Tsujiyama, Akinori Katsui, and Kazumichi Egashira. "Magneto-optical Memory Experiments on a Rotating Mn-Cu-Bi Disk Medium." IEEE Transactions on Magnetism. Vol. MAG-13, No. 3, May 1977, pp. 982-988. 18 refs.

Dynamic memory characteristics of a magneto-optic memory medium are investigated. The medium consists of vacuum deposited layers of Bi, Mn, and Cu with an overcoating of SiO₂. The material is deposited on a 139mm diameter glass disk. Writing on the disk is performed at a 0.5 MHz rate. Reading is accomplished with a raw bit error rate of 5.09×10^{-6} without error correction. Curie-point writing is performed using an Argon ion laser with a wavelength of 5145 Angstrom units (514.5 nm). The same laser with reduced intensity is used for Kerr effect reading from the disk.

- (CHOW,KK 68) Chow, Kungta K., William B. Leonard, and R. Lawrence Comstock. "Magneto-optic Studies of Thin GdIG Sections." IEEE Transactions on Magnetism. Vol. MAG-4, No. 3, September 1968, pp. 416-421. 20 refs.

This paper discusses writing and reading techniques, bit density and stability, and coercivity of thin GdIG sections. Of particular note is the achieving of high coercivity--approximately an order of magnitude greater than for bulk materials. This high coercivity is attributed to stress induced in the wafers by the sectioning and polishing operations. Tests are performed that substantiate this belief. Compressional stress applied during the writing of bits improve the stability of the written bits. Areal bit densities of $10^4/\text{in}^2$ ($1.55 \times 10^3/\text{cm}^2$) are obtained.

- (COEURE,P 71) Coeure, Philippe, Jean-Claude Gay, and Jacques Carcey. "Thermomagnetic Properties of Fine-Grain Polycrystalline GdIG." IEEE Transactions on Magnetism. Vol. MAG-7, No. 3, September 1971, pp. 397-401. 18 refs.

Bulk and wafer thermomagnetic properties of $\text{Gd}_3\text{Fe}_{50}\text{O}_{12}$ and $\text{Gd}_{2.5}\text{Tb}_{0.5}\text{Fe}_{50}\text{O}_{12}$ are measured and the results are reported. Experimental recording and reading is then performed on GdIG. Bit size is a function of the bias field and bias temperature. A writing speed of 10^5 bits/second is obtained. The bit diameter was approximately 15 μm . Erasure is possible and write-read-erasure cycles are performed 10^6 times with no noticeable change in read signals.

- (COMSTOCK,RL 70A) Comstock, R.L., and P.H. Lissberger. "Magneto-Optic Properties of CrTe Films Prepared by Sequential Evaporation." Journal of Applied Physics. Vol. 41, No. 3, March 1, 1970, pp. 1397-1398. 4 refs.

CrTe films are prepared by sequential evaporation and subjected to tests for the magnetic properties which are relevant to magneto-optic memories. The predicted laser power required for writing at 0.9 μm with CrTe is one-third that required with MnBi. With 0.4 A/W photodiode responsivity, 1 mW transmitted laser power and 10 MHz bandwidth, the ultimate S/N of CrTe is predicted to be 53 dB compared with 65 dB for MnBi.

- (COMSTOCK,RL 70B) Comstock, R. Lawrence, Eugene B. Moore, and D.A. Nepela. "Magnetic Properties of Tb-Substituted GdIG Films Chemically Deposited on YAG Substrates." IEEE Transactions on Magnetism. Vol. MAG-6, No. 3, September 1970, pp. 558-563. 24 refs.

$\text{GdFe}_{50}\text{O}_{12}$ is deposited on yttrium aluminum garnet substrates by spin coating followed by a high temperature (300-500°C) drying procedure. Tb is substituted for Gd ions in the iron garnet and $\text{Tb}_{1.4}\text{Gd}_{1.6}\text{Fe}_{50}\text{O}_{12}$ is written on with an argon laser. The recorded bits are 6 μm wide and have sharp bit boundaries.

- (CRAIGHEAD,HG 82) Craighead, H.G., R.E. Howard, P.F. Liao, D.M. Tennant, and J.E. Sweeney. "Textured Germanium Optical Storage Medium." Applied Physics Letters. Vol. 40, No. 8, April 15, 1982, pp. 662-664. 6 refs.

Textured germanium films are prepared by thermal evaporation in vacuo onto glass and then subjected to ion etching with a gas mixture of CCl_2F_2 , argon, and oxygen. This process results in the generation of tall

uniform columns of germanium. This textured surface can be converted into reflective spots by locally melting the columnar structures which subsequently collapse to form a smooth surface. The recording characteristics of this medium exhibit low writing energy requirements, high contrast, and long term stability.

- (CREDELLE, TL 72) Credelle, T.L., and F.W. Spong. "Thermoplastic Media for Holographic Recording." RCA Review. Vol. 33, No. 1, March 1972, pp. 206-226. 19 refs.

A sandwich type structure consisting of substrate, conductive coating, photoconductor, and thermoplastic layers is described physically and operationally. The medium is used to store holograms which are readable almost instantaneously. The medium is also bulk erasable and reusable.

- (DEKKER, P 74) Dekker, P., P.W. Jedeloo, and S. Middlehoek. "Temperature Dependence of the Coercive Force of MnBi Films." IEEE Transactions on Magnetics. Vol. MAG-10, No. 3, September 1974, pp. 591-594. 13 refs.

This paper reports on an investigation of the variation of coercive force of MnBi films with temperature. Experimental measurement results are in partial agreement with theory; precise comparison is not possible due to other unknown factors.

- (DREXLER, J 81) Drexler, J. "Drexon(TM) Optical Memory Media for Laser Recording and Archival Data Storage." DiStephano, T.H., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Optical Storage Materials; November 18, 1980; Ossining, New York. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 263: pp. 87-91. 1 ref.

Drexon(TM) is an optical data storage medium composed of particles of silver suspended in a photographic-quality gelatin. Both reflective spherical particles and black filamentary particles of silver are used. Because of the long life properties of silver halide photographic films using these materials, it is expected that Drexon(TM) will also have long life characteristics as an optical data storage medium.

- (EDEN,DD 81) Eden, Dayton D. "Vanadium Dioxide Storage Material." Optical Engineering. Vol. 20, No. 3, May-June 1981, pp.377-378. 4 refs.

Vanadium dioxide is tested for its suitability as an optical data storage material. Results of this testing indicate that 0.5 μm spot diameters should be achievable with write times of a few nanoseconds. The material is bulk erasable and has survived 10^8 record-erase cycles without degradation. These results are dependent on careful thermal design of the media structure.

- (EGASHIRA,K 74) Egashira, K. and T. Yamada. "Kerr-Effect Enhancement and Improvement of Readout Characteristics in MnBi Film Memory." Journal of Applied Physics. Vol. 45, No. 8, August 1974, pp. 3643-3648. 12 refs.

Silicon oxide, SiO_2 , is used to enhance the Kerr effect by coating it on magnetic films. Enhancements of the Kerr effect up to a factor of 2 or more is accomplished when a SiO_2 layer is coated on an MnBi film surface. Measurements compare favorably with calculations.

- (EVTIHIEV,NN 76) Evtihiev, N.N., N.A. Economov, A.R. Krebs, N.A. Zamjatina. "Co-Ferrite-New Magneto-optic Recording Material." IEEE Transactions on Magnetics. Vol. MAG-12, No. 6, November 1976, pp. 773-775. 5 refs.

Cobalt-ferrite thin films are grown on MgO substrates. The flux reversal mechanism and magneto-optic parameters of these films are studied over a wide composition range. Performance factors for thermomagnetic recording with Co-ferrites are found to approximate those of MnBi. Co-ferrites have good stability of phase composition in recording and display good thermal stability.

- (HARTSTEIN,A 80) Hartstein, A., J.C. Tsang, D.J. DiMaria, and D.W. Dong. "Observation of Amorphous Silicon Regions in Silicon-Rich Silicon Dioxide Films." Applied Physics Letters. Vol. 36, No. 10, May 15, 1980, pp. 836-837. 12 refs.

Chemically vapor-deposited silicon-rich SiO_2 films are measured for their Raman scattering and optical transmission characteristics. There are segregated regions of amorphous silicon in the as-deposited films. Annealing at specific temperatures produce films with both amorphous and crystalline regions. If the films are annealed at 1150°C , complete crystallization occurs.

- (HAUDEK,H 71) Haudek, H., and W.K. Unger. "Lattice Constants and Phase Transitions in Oriented MnBi Films." *Physica Status Solidi*. Vol. (a)7, No. 1, September 16, 1971, pp. 393-400. 13 refs.

MnBi films evaporated onto mica substrates are studied in thicknesses from 20 to 100 nanometers. Discontinuities are observed in the lattice parameter c during low temperature to high temperature phase transitions. Quenched high temperature phase films transform to a low temperature phase film via a metastable phase at temperatures between 80°C and 220°C. Results on thermomagnetic writing reported previously (CHEN,D 70B) are interpreted and the following conclusion is stated. "...one can conclude that either the spots are heated to above the 'real-Curie-temperature' of the 1t phase (approximately 480°C,...) or that writing can be performed in 1t phase MnBi films without complete loss of magnetization in the spots during the writing process."

- (HERD,SR 82A) Herd, S.R., K.Y. Ahn, R.J. von Gutfeld, and D.R. Vigliotti. "Structural Changes in Se-Te Bilayers by Laser Writing." *Journal of Applied Physics*. Vol. 53, No. 5, May 1982, pp. 3520-3522. 1 ref.

Bilayer films of selenium on tellurium are prepared as well as films of tellurium and results of melting holes in these films are compared. Some of the films are prepared by sputtering and some by evaporation. Holes are melted using krypton lasers and dye lasers. It is concluded that superior hole formations are obtained in the SeTe films due to amorphous alloy formation which provide both an antireflection condition and corrosion protection.

- (HERD,SR 82B) Herd, S.R., K.N. Tu, K.Y. Ahn, T.H. DiStefano, and N.J. Mazzeo. "Laser Writing on Silicon-Metal Bilayers for Optical Storage. II. Microscopic Study." *Journal of Applied Physics*. Vol. 53, No. 6, June 1982, pp. 4372-4378. 11 refs.

Several materials are investigated for their writing characteristics. This paper is a continuance of a previous paper (HERD,SR 82A). Among the several materials investigated, Rh-Si requires a relatively low writing power and has excellent archival properties.

- (JIPSON,VB 81) Jipson, V.B., and C.R. Jones. "Infrared Dyes for Optical Storage." DiStephano, T.H., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Optical Storage Materials; November 18, 1980; Ossining, New York. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 263: pp. 105-109. 15 refs.

An infrared absorbing dye, hydroxy squarylium, is subjected to experimentation relative to the use as an optical storage medium. Several structural variations are tried and found to be generally more sensitive than tellurium. The investigators are interested in developing an optical storage material suitable for use with GaAlAs lasers. It is determined that finding organic dyes with suitable optical absorption characteristics is difficult, but that in general their thermal properties are superior to those of metal films. Hydroxy squarylium is found to be stable under repeated readout conditions. It exhibits good thermal stability and has writing characteristics similar to tellurium.

- (KIVITS,P 81) Kivits, P., B. Jacobs, and P. Zalm. "Summary Abstract: Research on Materials for Optical Storage." DiStephano, T.H. ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Optical Storage Materials; November 18, 1980; Ossining, New York. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 263: pp. 68-69. 10 refs.

This is a summary of information on tellurium and tellurium compounds which has been gathered over a period of time. Among the points of interest are that the substrate material has a strong influence on the threshold power which is required to open holes, and that amorphous compounds of tellurium are somewhat less sensitive than pure tellurium films.

- (LANGLET,R 73) Langlet, Regis., Bernard Carre, and Jean-Paul Pivot. "High Speed Recording on MnBi Thin Films Deposited on Discs." IEEE Transactions on Magnetics. Vol. MAG-9, No. 3, September 1973, pp. 401-405. 11 refs.

Experiments on a rapidly rotating (24,000 rpm) disk using argon and helium-neon lasers are performed. Thermomagnetic writing on the MnBi disk is employed and reading is accomplished using polar Kerr effects. Disks 9 mm thick and 40 mm in diameter and rotated at high speed allow the use of linear speeds from 1 m/sec to 40 m/sec. A variety of pulse widths are used with

a maximum pulse repetition frequency of 33 MHz. Writing of 1 to 5 μm spots is done with an argon laser at 488 nm and reading is accomplished with a helium-neon laser. The read scheme employs an electrooptical phase modulator in order to achieve modulated detection which is claimed to be relatively insensitive to various noise sources. It is shown that increased writing power is required to reduce problems with the dynamic stability of the disk. It is also found that for short pulse widths, the speed of the rotating disk produces bit displacement and also requires increased writing power. This bit displacement requires compensation during the readout process.

- (LAW,KY 80) Law, K.Y., P.S. Vincett, R.O. Loutfy, L. Alexandru, M.A. Hopper, J.H. Sharp, and G.E. Johnson. "Ablative Optical Recording Using Organic Dye-In-Polymer Films." *Applied Physics Letters*. Vol. 36, No. 11, June 1, 1980, pp. 884-885. 9 refs.

The results of investigations relative to using dissolved dyes in polymer films as an optical storage medium are discussed. The investigations are made with a laser wavelength of 457 nm recording marks as small as 0.5 μm using a 0.95 NA objective lens. The dye used in these experiments is polyester yellow dissolved in poly(vinyl acetate) spin coated on a reflecting layer. A glass substrate is used and tests are made with and without an overcoating. When compared with a 15 nm monolayer of Te, the dye-in-polymer medium is found to be the more sensitive. A 100 hour test at 50°C is performed which indicates little, if any, degradation.

- (LEE,K 73B) Lee, Kenneth. "Magnetic Thin Films for Optical Storage." *Journal of Vacuum Science and Technology*. Vol. 10, No. 5, September/October 1973, pp. 631-639. 65 refs.

Material requirements for thermal magnetic recording are discussed in this paper. Many materials are compared for these requirements and four materials are found to exhibit the necessary properties for an optical storage medium. The four materials having the desired properties are MnBi doped with Ti or Ni, MnAlGe, MnGaGe, and amorphous GdCo₅.

- (LEWICKI,GW 69) Lewicki, G.W. "Curie-Point Switching in Mn-Bi Films." IEEE Transactions on Magnetics. Vol. MAG-5, No. 3, September 1969, pp. 298-299. 2 refs.

Helium-neon laser experiments with Curie-point switching in MnBi films are described in this paper. It is concluded that magnetization structure smaller than the wavelength of light can be written in with Curie-point switching and that the average magnetization can be switched to any value between $+I_s$ and $-I_s$ by varying the applied magnetic field over a range of a few hundred oersteds (7.96×10^1 A/m) while writing 1 μ m spots on MnBi films.

- (LEWICKI,GW 70) Lewicki, G., and J.E. Guisinger. "Narrow Curie-Point Switching Transfer Characteristics in Mn-Bi Films." Applied Physics Letters. Vol. 16, No. 6, March 15, 1970, pp. 240-242. 5 refs.

MnBi films have a wide range of magnetic field from 300 Oe (2.39×10^4 A/m) to 500 Oe (3.98×10^4 A/m) which controls switching (LEWICKI,GW 69). This paper reports on investigations which show that the range of magnetic fields which control Curie-point switching varies with the relative concentration of manganese to bismuth and reaches a minimum when the Mn-to-Bi weight ratio is approximately 0.49. Films are prepared which had a range of controlling field as small as 18 Oe (1.4×10^3 A/m).

- (MIMURA,Y 76) Mimura, Y., N. Imamura, and T. Kobayashi. "Magnetic Properties and Curie Point Writing in Amorphous Metallic Films." IEEE Transactions on Magnetics. Vol. MAG-12, No. 6, November, 1976, pp. 779-781. 8 refs.

Curie point writing in amorphous films of Tb-Fe and Dy-Fe is described in this paper. The magnetic reversal profile inside the bits is explained by the self demagnetizing field originating within the reversed region itself. Bits are written with a He-Ne laser beam modulated electrooptically. Reading is accomplished visually by using a polarizing microscope.

- (RANCOURT,JD 81) Rancourt, James D. "Design and Production of Tellurium Optical Data Disks." Beiser, Leo, ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Advances in Laser Scanning Technology; August 27-28, 1981; San Diego, California. Bellingham Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 299: pp. 57-63. 5 refs.

A "first order merit function" is defined for tellurium based optical data disks. The relative efficiencies of monolayer and trilayer structures are discussed. The discussion states that using

a trilayer structure can result in as much as a 20-fold improvement over the monolayer structure. Preparation of substrates prior to coating is reviewed. The lack of suitable RBER (raw bit error rate) measuring equipment and the lack of specifications regarding storage, usage, and test conditions for optical data disks is mentioned.

(SMITH,AW 73) Smith, A. W. "Optical Storage in VO₂ Films." Applied Physics Letters. Vol. 23, No. 8, October 15, 1973, pp. 437-438. 9 refs.

At near infrared wavelengths, a semiconductor-to-metal transition in vanadium dioxide, VO₂ can be utilized for storing digital information. Experiments are conducted on rf sputtered polycrystalline films using double-heterostructure GaAs injection lasers whose output is varied with neutral-density attenuators. Grain in the films limit the spot spacing to about 2 micrometers. Another storage medium, Te-As-Ge chalcogenide glass utilizing a crystalline-to-amorphous transition, is compared to the VO₂ and found to be somewhat less sensitive. Both media are considered to have good writing rates and large read signals without the necessity of polarized light.

(SMITH,TW 81) Smith, T. W. "The Role of Polymers in Optical Recording Media." DiStephano, T. H. ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Optical Storage Materials; November 18, 1980; Ossining, New York. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 263: pp. 100-105. 33 refs.

This paper reviews and summarizes the use of polymer materials in optical storage media. Discussions are presented for the use of polymers in substrates, imaging layers, dielectric spacers, and protective overcoatings. Dye/polymer and metal (pigment)/polymer composites are also discussed.

(STRAND,D 80) Strand, David. "Optical Recording with Amorphous Materials." Optical Engineering. Vol. 20, No. 3, May-June 1981, pp. 379-381. 16 refs.

This paper is a non-mathematical discussion of the property changes which occur in amorphous materials when they are exposed to light. Although several property changes are possible, the major emphasis is placed on changes between the amorphous and crystalline states. In some materials, the changes can be reversible. The general conclusion states that "ovonic chalcogenide films can be used to produce ideal optical recording media."

(SUNAGO,K 76) Sunago, K., S. Matsushita, and Y. Sakurai. "Thermomagnetic Writing in Tb-Fe Films." IEEE Transactions on Magnetism. Vol. MAG-12, No. 6, November 1976, pp. 776-778. 12 refs.

Curie-point (thermomagnetic) writing experiments are performed on films of Tb-Fe deposited on glass substrates. These films do not

exhibit grain noise since they are amorphous. Good signal-to-noise ratios can be obtained because of this property. Experiments are made with both thermally evaporated films and rf-sputtered films. Spots written with a He-Ne laser are clear, circular, and can be produced with low power lasers. A significant feature of Tb-Fe films is that they have low Curie temperatures and high coercive forces which permit the use of low power lasers for writing spots.

- (TERAO,M 79) Terao, M., K. Shigematsu, M. Ojima, S. Horigome, Y. Taniguchi, and S. Yonezawa. "New Recording Thin Film for Optical Video Disk." Digest of Technical Papers: 1979 IEEE/OSA Conference on Laser Engineering and Applications; May 30-June 1, 1979; Washington, D.C. New York: Institute of Electrical and Electronic Engineers; 1979; pp. 103-104. 4 refs.

This digest reports on the use of As-Te-Se amorphous chalcogenide films for direct-read-after-write optical video-disk applications. Arsenic used in conjunction with tellurium results in clean holes and selenium is added which greatly increases film stability. About 10 mW of incident laser-beam power is required to write on films deposited on PMMA. Frequency modulated NTSC video signals are recorded on As-Te-Se films and when read by reflected light, a signal-to-noise ratio of about 45 dB is obtained.

- (TOGAMI,Y 78) Togami, Yuji. "Stability of Small Bits Written in Amorphous GdCo Thin Films." Applied Physics Letters. Vol. 32, No. 10, May 15, 1978, pp. 673-675. 3 refs.

This paper reports the results of experiments dealing with the stability of small bits written on four GdCo amorphous thin films. Two films are homogeneous and two are inhomogeneous along the film thickness. It is concluded that bits written on the inhomogeneous films are stable and those written on homogeneous films are unstable.

- (TOGAMI,Y 82) Togami, Y., K. Kobayashi, M. Kajiura, K. Sato, and T. Teranishi. "Amorphous, GdCo Disk for Thermomagnetic Recording." Journal of Applied Physics. Vol. 53. No. 3, March 1982, pp. 2335-2337. 7 refs.

Disks of amorphous GdCo are prepared by rf-sputtering onto a glass substrate and subjected to thermomagnetic writing and magnetooptic readout experiments. The GdCo films are deposited in two layers as a result of findings from previous experiments (TOGAMI,Y 78). A signal-to-noise ratio of 32 dB (100 kHz bandwidth) is obtained. The writing rate is 1 MHz with an incident laser power of 5.6 mW. Readout laser power is approximately 2 mW.

(VONGUTFELD,RJ 72) von Gutfeld, R. J., and P. Chaudhari. "Laser Writing and Erasing on Chalcogenide Films." Journal of Applied Physics. Vol. 43, No. 11, November 1972, pp. 4688-4692. 17 refs.

Reverse mode (RM) recording and erasure methods are studied for amorphous films composed of Te, Ge, and As. Films were prepared by both sputtering and evaporation techniques on a variety of substrates. The amorphous films are crystallized by heating to approximately 900°C as a preparation for the RM recording. RM recording consists of switching the crystalline material locally to the amorphous state as opposed to the conventional procedure of switching from the amorphous to the crystalline state. It is found possible to erase in any one of three ways. RM recording is a fast-write, slow-erase process in chalcogenide media. Limited write-read-erase cycles are found to cause no significant damage to the films although this is not studied extensively.

5.2 GENERAL LITERATURE

- (AAGARD,RL 68) Aagard, Roger L., Di Chen, Roger W. Honebrink, Gary N. Otto, and Francis M. Schmit. "Optical Mass Memory Experiments on Thin Films of MnBi." IEEE Transactions on Magnetism. Vol. MAG-4, No. 3 September 1968, pp. 412-416. 9 refs.
- (AAGARD,RL 71) Aagard, R.L., F.M. Schmit, W. Walters, and D. Chen. "Experimental Evaluation of an MnBi Optical Memory System." IEEE Transactions on Magnetism. Vol. MAG-7, No. 3, September 1971, pp. 380-383. 12 refs.
- (AAGARD,RL 72) Aagard, R.L., T.C. Lee, and D. Chen. "Advanced Optical Storage Techniques for Computers." Applied Optics. Vol. 11, No.10, October 1972, pp. 2133-2138. 24 refs.
- (AAGARD,RL 73A) Aagard, Roger L., Francis M. Schmit, T.S. Liu, and Di Chen. "Observations of Repeated Curie-Point Writing Effects on MnBi Films." IEEE Transactions on Magnetism. Vol. MAG-9, No. 3, September 1973, pp. 463-466. 10 refs.
- (AAGARD,RL 73B) Aagard, Roger L. "Signal-to- Noise Ratio for Magneto-optic Readout from MnBi Films." IEEE Transactions on Magnetism. Vol. MAG-9, No. 4, December 1973, pp. 705-707. 8 refs.
- (ADACHI,K 61) Adachi, Kengo. "Magnetic Anisotropy Energy in Nickel Arsenide Type Crystals." Journal of the Physical Society of Japan. Vol. 16, No. 11, November 1961, pp. 2187-2206. 26 refs.
- (ADAMS,E 56) Adams, Edmond. "Stress Corrosion in Permanent Magnets Composed of Anisotropic Powdered Manganese Bismuthide." Hall, R.C. ed. Proceedings of the Conference on Magnetism and Magnetic Materials: October 16-18, 1956; Boston, Massachusetts. New York, New York: American Institute of Electrical Engineers; February 1957; pp. 212-215. 2 refs.
- (AHN,KY 68) Ahn, Kie Y. "Kerr Effects in Thin EuO Films on Mirror Substrates." IEEE Transactions on Magnetism. Vol. MAG-4, No. 3, September 1968, pp. 408-411. 8 refs.
- (AHN,KY 70A) Ahn, K.Y., and M.W. Shafer. "Relationship Between Stoichiometry and Properties of EuO Films." Journal of Applied Physics. Vol. 41, No. 3, March 1, 1970, pp. 1260-1262. 5 refs.
- (AHN,KY 70B) Ahn, K.Y. "Increase of Curie Temperature in EuO Films by Fe Doping." Applied Physics Letters. Vol. 17, No. 8, October 15, 1970, pp. 347-349. 6 refs.

- (AHN,KY 71) Ahn, Kie. Y., and M.W. Shafer. "Preparation and Properties of EuS Films and Effects of Fe Doping. IEEE Transactions on Magnetism. Vol. MAG-7, No. 3, September 1971, pp. 394-396. 7 refs.
- (AHN,KY 82) Ahn, K.Y., T.H. DiStefano, S.R. Herd, N.J. Mazzeo, and K.N. Tu. "High-Sensitivity Silicide Films for Optical Recording." Journal of Applied Physics. Vol. 53, No. 9, September 1982, pp. 6360-6364. 4 refs.
- (AHRENKIEL,RK 73) Ahrenkiel, R.K., and T.J. Coburn. "Hot pressed CoCr_2S_4 : A Magneto-Optical Memory Material." Applied Physics Letters. Vol. 22, No. 7, April 1, 1973, pp. 340-341. 7 refs.
- (AHRENKIEL,RK 74) Ahrenkiel, Richard K., Theodore J. Coburn, and Edward Carnal, Jr. "Magneto-optical Properties of Ferrimagnetic CoCr_2S_4 in the Near Infrared." IEEE Transactions on Magnetism. Vol. MAG-10, No. 1, March 1974, pp. 2-7. 12 refs.
- (AHRENKIEL,RK 75) Ahrenkiel, R., and T. Coburn. "Magneto-Optic Insulators Utilizing the Optical Activity of $\text{Co}^{++}(\text{Td})$." IEEE Transactions on Magnetism. Vol. MAG-11, No. 5, September 1975, pp. 1103-1108. 27 refs.
- (AISENBERG,S 81) Aisenberg, S., and M. Stein. "Novel Materials for Improved Optical Disk Lifetime." Beiser, Leo, ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Advances in Laser Scanning Technology; August 27-28, 1981; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 299: pp. 64-67. 6 refs.
- (ALLEN,TH 81) Allen, Thomas H. and Gary S. Ash. "Optical Properties of Tellurium Films Used for Data Recording." Optical Engineering. Vol. 20, No. 3, May-June 1981, pp. 373-376. 13 refs.
- (ALMASI,GS 71) Almasi, G.S. "Magneto-Optic Bubble Domain Devices." IEEE Transactions on Magnetism. Vol. MAG-7, No. 3, September 1971, pp. 370-373. 9 refs.
- (AMMON,GJ 78) Ammon, G.J. "Wideband Optical Disc Archival Data Storage." Proceedings of the Technical Program: Electro-Optical/Laser 78 Conference and Exposition; September 19-21, 1978; Boston, Massachusetts. Chicago, Illinois: Industrial and Scientific Conference Management; 1978; pp. 399-406. 2 refs.

- (AMMON,GJ 79) Ammon, G.J. "Wideband Optical Disc Data Recorder Systems." Jamberdino, Albert A., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Recording and Information Handling; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 200: pp. 64-72. 5 refs.
- (AMMON,GJ 80) Ammon, G.J. "Archival Optical Disk Data Storage." Jamberdino, Albert A., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers; April 8-9, 1980; Washington, D.C. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1980; Vol. 222: pp. 128-135.
- (AMMON,GJ 81A) Ammon, G.J. "Archival Optical Disc Data Storage." Optical Engineering. Vol. 20, No. 3, May-June 1981, pp. 394-398. 5 refs.
- (AMMON,GJ 81B) Ammon, G.J., and C.W. Reno. "Optics for Multibeam Optical Disk Systems." Beiser, Leo, ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Advances in Laser Scanning Technology; August 27-28, 1981; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 299: pp. 25-32. 3 refs.
- (AMODEI,JJ 71) Amodei, J.J., D.L. Staebler, and A.W. Stephens. "Holographic Storage in Doped Barium Sodium Niobate ($\text{Ba}_2\text{NaNb}_5\text{O}_{15}$)." Applied Physics Letters. Vol. 18, No. 11, June 1, 1971, pp. 507-509. 8 refs.
- (AMODEI,JJ 72) Amodei, J.J., W. Phillips, and D.L. Staebler. "Improved Electrooptic Materials and Fixing Techniques for Holographic Recording." Applied Optics. Vol. 11, No. 2, February 1972, pp. 390-396. 11 refs.
- (ANDERSON,HR 71) Anderson, H.R., Jr., E.A. Bartkus, and J.A. Reynolds. "Molecular Engineering in the Development of Materials for Thermoplastic Recording." IBM Journal of Research and Development. Vol. 15, No. 2, March 1971, pp. 140-150. 4 refs.
- (ANDERSON,LK 66) Anderson, L.K., and B.J. McMurtry. "High-Speed Photodetectors." Proceedings of the IEEE. Vol. 54, No. 10, October 1966, pp. 1335-1349. 73 refs.
- (ANDERSON,LK 67) Anderson, L.K., S. Brojdo, J.T. LaMacchia, and L.H. Lin. "A High-Capacity, Semipermanent Optical Memory." IEEE Journal of Quantum Electronics. Vol. QE-3, No. 6, June 1967, p. 245. (Abstract only). 1 ref.

- (ANDERSON,LK 68) Anderson, L.K. "Holographic Optical Memory for Bulk Data Storage." Bell Laboratories Record. Vol. 46, No. 10, November 1968, pp. 319-325. No refs.
- (ANDERSON,LK 71) Anderson, Lawrence K. "Application of Holographic Optical Techniques to Bulk Memory." IEEE Transactions on Magnetics. Vol. MAG-7, No. 3, September 1971, pp. 601-605. 16 refs.
- (ANDRESEN,AF 67) Andresen, A.F., W. Halg, P. Fischer, and E. Stoll. "The Magnetic and Crystallographic Properties of MnBi Studied by Neutron Diffraction." Acta Chemica Scandinavica. Vol. 21, No. 6, pp. 1543-1554. 12 refs.
- (ANDRESEN,AF 72) Andresen, A.F., J.E. Engebretsen, and J. Refsnes. "Neutron Diffraction Investigations on Quenched MnBi and $\text{MnBi}_{0.9}\text{Sb}_{0.1}$." Acta Chemica Scandinavica. Vol. 26, No.1, pp. 175-190. 17 refs.
- (ASBECK,PM 79) Asbeck, P.M., D.A. Cammack, J.J. Daniele, D. Lou, J.P.J. Heemskerk, W.J. Kleuters, and W.H. Opley. "High-Density Optical Recording with (Ga,Al)AsDH Lasers." Applied Physics Letters. Vol. 34, No. 12, June 15, 1979, pp. 835-837. 16 refs.
- (ASH,GS 80) Ash, Gary S., and Thomas H. Allen. "Optical Properties of Tellurium Films Used for Data Recording." Jamberdino, Albert A., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Scanning and Recording for Advanced Image and Data Handling; April 8-9, 1980; Washington, D.C. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1980; Vol. 222: pp. 64-69. 13 refs.
- (ASHKIN,A 66) Ashkin, A., G.D. Boyd, J.M. Dziedzic, R.G. Smith, A.A. Ballman, J.J. Levinstein, and K. Nassau. "Optically-Induced Refractive Index Inhomogeneities in LiNbO_3 and LiTaO_3 ." Applied Physics Letters. Vol. 9, No. 1, July 1, 1966, pp. 72-74. 14 refs.
- (BADEMIAN,L 81) Bademian, Leo. "Acousto-Optic Laser Recording." Optical Engineering. Vol. 20, No. 1, January-February 1981, pp. 143-149. 7 refs.
- (BARBE,DF 75) Barbe, David F. "Imaging Devices Using the Charge-Coupled Concept." Proceedings of the IEEE. Vol. 63, No. 1, January 1975, pp. 38-67. 36 refs.
- (BARDOS,A 74) Bardos, Andrew. "Wideband Holographic Recorder. Applied Optics. Vol. 13, No. 4, April 1974, pp. 832-840. 4 refs.

- (BARRETT,R 81) Barrett, R. "Prospects for the Optical Disc in the Office of the Future." *Reprographics Quarterly*. Vol. 14, No. 4, Autumn 1981, pp. 140-143. 3 refs.
- (BARRETT,R 82) Barrett, R. "Developments in Optical Disk Technology and the Implications for Information Storage and Retrieval." *Journal of Micrographics*. Vol. 15, No. 1, January 1982, pp. 22-26. 3 refs.
- (BARTOLINI,RA 74) Bartolini, R.A. "Characteristics of Relief Phase Holograms Recorded in Photoresists." *Applied Optics*. Vol. 13, No. 1, January 1974, pp. 129-139. 27 refs.
- (BARTOLINI,RA 76) Bartolini, R.A., H.A. Weakliem, and B.F. Williams. "Review and Analysis of Optical Recording Media." *Optical Engineering*. Vol. 15, No. 2, March-April 1976, pp. 99-108. 54refs.
- (BARTOLINI,RA 78) Bartolini, R.A., A.E. Bell, R.E.Flory, M. Lurie, and F.W. Spong. "Optical Disk Systems Emerge." *IEEE Spectrum*. Vol. 15, No. 8, August 1978, pp. 20-28. 21 refs.
- (BARTOLINI,RA 79) Bartolini, R.A., A.E. Bell, and F.W. Spong. "Optical Recording Structures for Use with GaAs Diode Lasers." *Digest of Technical Papers: 1979 IEEE/OSA Conference on Laser Engineering and Applications; May 30-June 1, 1979; Washington, D.C.* New York: Institute of Electrical and Electronic Engineers; 1979; pp. 102-103. One reference. Digest only.
- (BARTOLINI,RA 81A) Bartolini, R.A. "Media for High Density Optical Recording." DiStephano, T.H. ed *Proceedings of the Society of Photo-Optical Instrumentation Engineers: Optical Storage Materials; November 18, 1980; Ossining, New York.* Bellingham Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 263: pp. 70-74. 11 refs.
- (BARTOLINI,RA 81B) Bartolini, Robert A. "Media for High-Density Optical Recording." *Optical Engineering*. Vol. 20, No. 3, May-June 1981, pp. 382-386. 11 refs.
- (BASOV,NG 72) Basov, N.G., W.H. Culver, and B. Shah. "Applications of Lasers to Computers." Arecchi, F.T. and E.O. Schulz-DuBois, eds. *Laser Handbook*. Amsterdam, The Netherlands: North-Holland; 1972: Vol. 2, pp. 1649-1693. 82 refs.

5.2 GENERAL LITERATURE

5.2 GENERAL LITERATURE

- (BEAN,CP 55) Bean, C.P. "Hysteresis Loops of Mixtures of Ferromagnetic Micropowders." *Journal of Applied Physics*. Vol. 26, No. 11, November 1955, pp. 1381-1383. 8 refs.
- (BECK,JW 70) Beck, J.W. "Noise Considerations of Optical Beam Recording." *Applied Optics*. Vol. 9, No. 11, November 1970, pp. 2559-2564. 19 refs.
- (BECKER,CH 66) Becker, C.H. "Unicon Computer Mass Memory System." AFIPS Conference Proceedings: Fall Joint Computer Conference; November 7-10, 1966; San Francisco, California. Washington, D.C.: Spartan Books. 1966; Vol. 29, pp. 711-716. No refs.
- (BEESLEY,MJ 70) Beesley, M.J., and J.G. Castledine. "The Use of Photoresist as a Holographic Recording Medium." *Applied Optics*. Vol. 9, No. 12, December 1970, pp. 2720-2724. 6 refs.
- (BELL,AE 78) Bell, Alan E., and Fred W. Spong. "Antireflection Structures for Optical Recording." *IEEE Journal of Quantum Electronics*. Vol. QE-14, No. 7, July 1978, pp. 487-495. 23 refs.
- (BELL,AE 79A) Bell, A.E., and R.A. Bartolini. "High-Performance Te Trilayer for Optical Recording." *Applied Physics Letters*. Vol. 34, No. 4, February 15, 1979, pp. 275-276. 4 refs.
- (BELL,AE 79B) Bell, A.E., R.A. Bartolini, and F.W. Spong. "Optical Recording With The Encapsulated Titanium Trilayer." *RCA Review*. Vol. 40, No. 3, September 1979, pp. 345-362. 5 refs.
- (BELL,AE 82) Bell, Alan E. "Recording Mechanisms in Antireflection Trilayer Structures." *Journal of Applied Physics*. Vol. 53, No. 5, May 1982, pp. 3438-3443. 14 refs.
- (BERG,AD 76) Berg, A. D., and J. P. Wheeler. "Laser Noise in Writing Applications." *Optical Engineering*. Vol. 15, No. 2, March-April 1976, pp. 84-89. 2 refs.
- (BERKOWITZ,AE 71) Berkowitz, A.E., and W.H. Meiklejohn. "Thermomagnetic Recording Materials." Graham, Jr., C.D., and J.J. Rhyne eds. AIP Conference Proceedings: Magnetism and Magnetic Materials; November 16-19, 1971; Chicago, Illinois. New York, New York: American Institute of Physics; 1972; p. 764. Abstract only. No refs.

- (BERKOWITZ,AE 75) Berkowitz, Ami E., and William H. Meiklejohn.
"Thermomagnetic Recording: Physics and Materials."
IEEE Transactions on Magnetism. Vol. MAG-11, No. 4,
July 1975, pp. 996-1017. 257 refs.
- (BERLEKAMP,ER 80) Berlekamp, Elwyn R. "The Technology of Error-
Correcting Codes." Proceedings of the IEEE. Vol 68,
No. 5, May 1980, pp. 564-593. 32 refs.
- (BERNAL,GE 70) Bernal G., E., R.L. Aagard, and D. Chen. "The Effect
of the Demagnetizing Field on Curie-Point Writing
in Magneto-optic Thin Films of MnBi." IEEE Transactions on
Magnetism. Vol. MAG-6, No. 3, September 1970,
pp. 572. 1 ref.
- (BERNAL,GE 71A) Bernal G., Enrique. "Mechanism of Curie-Point Writing in
Thin Films of Manganese Bismuth." Journal of Applied Physics.
Vol. 42, No. 10, September 1971, pp. 3877-3887.
12 refs.
- (BERNAL,GE 71B) Bernal G., Enrique, D. Chen, and G.N. Otto.
"Dynamics of Thermomagnetic Writing on MnBi Thin Films."
Graham, Jr., C.D., and J.J. Rhyne eds. AIP Conference
Proceedings: Magnetism and Magnetic Materials;
November 16-19, 1971; Chicago, Illinois. New York,
New York: American Institute of Physics; 1972;
p. 737. (Abstract). 1 ref.
- (BLOM,GM 79) Blom, G.M. "Single Te Films and Te Trilayers for
Optical Recording." Applied Physics Letters. Vol.35, No. 1,
July 1, 1979, pp. 81-83. 6 refs.
- (BLOOM,AL 66) Bloom, A.L. "Gas Lasers." Proceedings of the IEEE.
Vol. 54, No. 10, October 1966, pp. 1262-1276.
62 refs.
- (BOGELS,PW 76) Bogels, P.W. "System Coding Parameters, Mechanics
and Electro-Mechanics of the Reflective Video Disc
Player." IEEE Transactions on Consumer Electronics.
Vol. CE-22, No. 4, November 1976, pp. 309-317.
3 refs.
- (BOOTH,BL 72) Booth, B.L. "Polymer Material for Holography." Applied
Optics. Vol. 11, No. 12, December 1972, pp.2994-2995.
5 refs.
- (BORDOGNA,J 72) Bordogna, Joseph, Scott A. Keneman, and Juan J.
Amodei. "Recyclable Holographic Storage Media."
RCA Review. Vol. 33, No. 1, March 1972, pp. 227-247.
63 refs.

- (BORRELLI,NF 72) Borrelli, Nicholas F., Shih L. Chen, and James A. Murphy. "Magnetic and Optical Properties of Thin Films in the System $1-x \text{Fe}_3\text{O}_4 \cdot x \text{Fe}_8/304$." IEEE Transactions on Magnetics. Vol. MAG-8, No. 3, September 1972, pp. 648-651. 6 refs.
- (BORRELLI,NF 79) Borrelli, Nicholas F., and Peter L. Young. "New Thin Film Optical Recording Medium." Jamberdino, Albert A., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Recording and Information Handling; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 200: pp. 51-56. 3 refs.
- (BORRELLI,NF 80) Borrelli, N.F., and P.L. Young. "Read-Write-Erasable Thin Film Optical Recording Medium." Jamberdino, Albert A., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Scanning and Recording for Advanced Image and Data Handling; April 8-9, 1980; Washington, D.C. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1980; Vol. 222: pp. 48-53. 2 refs.
- (BOSCH,MA 82) Bosch, M.A., K.S. Kang, S. Hackwood, G. Beni, and J.L. Shay. "Optical Writing on Blue, Sputtered Iridium Oxide Films." Applied Physics Letters. Vol. 41, No. 1, July 1, 1982, pp. 103-105. 8 refs.
- (BOSOMWORTH,DR 68) Bosomworth, D.R., and H.J. Gerritsen. "Thick Holograms in Photochromic Materials." Applied Optics. Vol. 7, No. 1, January 1968, pp. 95-98. 10 refs.
- (BOTEZ,D 78) Botez, Dan. "Single-Mode CW Operation of 'Double-Dovetail' Constricted DH (AlGa)As Diode Lasers." Applied Physics Letters. Vol. 33, No. 10, November 15, 1978, pp. 872-874. 26 refs.
- (BOUSKY,S 71) Bousky, Samuel, and J. Diermann. "Characteristics of Scanning Laser and Electron Beams in Bulk Data Storage." IEEE Transactions on Magnetics. Vol. MAG-7, No. 3, September 1971, pp. 594-598. 1 ref.
- (BOUSKY,S 76) Bousky, Samuel. "Optical and Magnetic Digital Recording --A Comparative Review." Optical Engineering. Vol. 15, No. 2, March/April 1976, pp. 109-114. 24 refs.
- (BOUWHUIS,G 78) Bouwhuis, G., and J.J.M. Braat. "Video Disk Player Optics," Applied Optics. Vol. 17, No. 13, July 1, 1978, pp. 1993-2000. 20 refs.

- (BOWERS,DM 65) Bowers, Dan M., and Miles B. Fisk. "The World's Fair Machine Translator." *Computer Design*. Vol. 4, No. 4, April 1965, pp. 16-29. 6 refs.
- (BRAAT,JJ 78A) Braat, J.J.M., and G. Bouwhuis. "Position Sensing in Video Disk Readout." *Applied Optics*. Vol. 17, No. 13, July 1 1978, pp. 2013-2021. 6 refs.
- (BRAAT,JJM 78B) Braat, J.J.M., and G. Buowhuis. "Optical Video Disks with Undulating Tracks." *Applied Optics*. Vol. 17, No. 13, July 1, 1978, pp. 2022-2028. 10 refs.
- (BRANDT,GB 68) Brandt, Gerald B. "Techniques and Applications of Holography." *Electro-Technology*. April 1968,pp. 53-72. 49 refs.
- (BRICOT,C 76) Bricot, C., J.C. Lehureau, and C. Puech. "Optical Readout of Videodisc." *IEEE Transactions on Consumer Electronics*. Vol. CE-22, No. 4, November 1976, pp. 304-308. No refs.
- (BROADBENT,KD 74) Broadbent, Kent D. "A Review of the MCA Disco-Vision System." *Journal of the Society of Motion Picture and Television Engineers*. Vol. 83, No. 7, July 1974, pp. 554-559. No refs.
- (BRODY,H 82) Brody, Herb. "Materials for Optical Storage: A State-of-the-Art Survey." *Journal of Micrographics*. Vol. 15, No. 1, January 1982, pp. 33-37. No refs. This article was reprinted from *Laser Focus*. Vol. 17, No. 8, August 1981, pp. 47,52.
- (BROUHA,M 75) Brouha, M., and K.H.J. Buschow. "Thermomagnetic History Effects in LaCo₅, ThCo₅ and Related Compounds." *IEEE Transactions on Magnetism*. Vol. MAG-11, No. 5, September 1975, pp. 1358-1360. 10 refs.
- (BROUT,R 65) Brout, Robert. "Statistical Mechanics of Ferromagnetism." Rado, George T., and Harry Suhl, eds. *Magnetism*. New York, New York: Academic Press; 1965; Vol. 11, Part A: pp. 43-103. 48 refs.
- (BROWN,BR 72) Brown B.R. "Readout Performance Analysis of a Cryogenic Magneto-Optical Data Storage System." *IBM Journal of Research and Development*. Vol. 16, No. 1, January 1972, pp. 19-26. 6 refs.
- (BROWN,BR 74) Brown, B.R. "Optical Data Storage Potential of Six Materials." *Applied Optics*. Vol. 13, No. 4, April 1974, pp. 761-766. 10 refs.

- (BROWN,CJ 68) Brown, C.J., and J.T. Ma. "Time-Optimal Control of a Moving-Coil Linear Actuator." IBM Journal of Research and Development. Vol. 12, No. 5, September 1968, pp. 372-379. 6 refs.
- (BULTHUIS,K 79) Bulthuis, Kees, Marino G. Carasso, Jacques P.J. Heemskerk, Peter J. Kivits, Wilhelm J. Kleuters, and Pieter Zalm. "Ten Billion Bits on a Disk." IEEE Spectrum. Vol. 16, No. 8, August 1979, pp. 26-33. 14 refs.
- (BURCKHARDT,CB 70) Burckhardt, C.B. "Use of a Random Phase Mask for the Recording of Fourier Transfer Holograms of Data Masks." Applied Optics. Vol. 9, No. 3, March 1970, pp. 695-700. 9 refs.
- (BURKE,WJ 78) Burke, W. J., D. L. Staebler, W. Phillips, and G. A. Alphonse. "Volume Phase Holographic Storage in Ferroelectric Crystals." Optical Engineering. Vol. 17, No. 4, July/August 1978, pp. 308-316. 57 refs.
- (BURNS,LL 79) Burns, Leslie L. "Slidestore-A Laser Mass Memory for Image Storage." Jamberdino, Albert A., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Recording and Information Handling; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 200: pp. 79-83. No refs.
- (BURNS,LL 80) Burns, Leslie L. "Laser Memories for Image Storage." Laser Focus. Vol. 16, No. 7, July 1980, pp. 48-54. No refs.
- (CARLSON,CD 66) Carlson, C.D., E. Stone, H.L. Bernstein, W.K. Tomita, and W.C. Myers. "Helium-Neon Laser: Thermal High-Resolution Recording." Science. Vol. 154, No. 3756, December 1966, pp. 1550-1551. No refs.
- (CASASENT,D 72) Casasent, David, and Jack Stephenson. "Electrooptical Processing of Phased-Array Antenna Data." Applied Optics. Vol. 11, No. 5, May 1972, pp. 1269-1271. 6 refs.
- (CASASENT,D 79) Casasent, D., S. Natu, T. Luu, G. Lebreton, and E. DeBazelaire. "New Birefringence Theory and Uses of the Photo-DKDP Spatial Light Modulator in Optical Data Processing." Tracy, John, ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Active Optical Devices; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 202: pp. 122-132. 25 refs.

- (CASHMAN,MW 73) Cashman, Michael W. "A Read/Write Optical Memory." Datamation. Vol. 19, No. 3, March 1973, pp. 66-69. No refs.
- (CATHEY,WT 74) Cathey, W.T. "Classification of Holograms." Proceedings of the Society of Photo-Optical Instrumentation Engineers: Coherent Optical Processing; August 21-22, 1974; San Diego, California. Palo Verdes Estates, California: Society of Photo-Optical Instrumentation Engineers; 1975; Vol. 52: pp. 10. 29 refs.-110.
- (CHANCE,DA 79) Chance, D.A., J.-C.A. Chastang, V.S. Crawford, R.E. Horstmann, and R.O. Lussow. "HeNe Parallel Plate Laser Development." IBM Journal of Research and Development. Vol. 23, No. 2, March 1979, pp. 108-118. 22 refs.
- (CHANG,BJ 80) Chang, B. J. "Dichromated Gelatin Holograms and Their Applications." Optical Engineering. Vol. 19, No. 5, September-October 1980, pp. 642-648. 54 refs.
- (CHANG,JT 65) Chang, J.T., J.F. Dillon, Jr., and U.F. Gianola. "Magneto-Optical Variable Memory Based Upon the Properties of a Transparent Ferrimagnetic Garnet at Its Compensation Temperature." Journal of Applied Physics. Vol. 36, No. 3, March 1965, pp. 1110-1111. 4 refs.
- (CHAUDHARI,P 73) Chaudhari, P., J.J. Cuomo, and R.J. Gambino. "Amorphous Metallic Films for Magneto-Optic Applications." Applied Physics Letters. Vol. 22, No. 7, April 1, 1973, pp. 337-339. 4 refs.
- (CHEN,CH 80) Chen, C.H. and K.L. Tai. "Whisker Growth Induced by Ag Photodoping in Glassy $\text{Ge}_x\text{Se}_{1-x}$ Films." Applied Physics Letters. Vol. 37, No. 12, December 15, 1980, pp. 1075-1077. 14 refs.
- (CHEN,CT 79A) Chen, Che-Tsung and Dae M. Kim. "Efficient Hologram Recording in $\text{LiNbO}_3\text{:Fe}$ Using Optical Pulses." Applied Physics Letters. Vol. 34, No. 5, March 1, 1979, pp. 321-324. 11 refs.
- (CHEN,CT 79B) Chen, C., D.M. Kim, and D. von der Linde. "Efficient Pulsed Photorefractive Process in $\text{LiNbO}_3\text{:Fe}$ for Optical Storage and Deflection." Digest of Technical Papers: 1979 IEEE/OSA Conference on Laser Engineering and Application; May 30-June 1, 1979; Washington, D.C. New York: Institute of Electrical and Electronic Engineers; 1979; p. 105. 1 ref. (Digest only.)

5.2 GENERAL LITERATURE

5.2 GENERAL LITERATURE

- (CHEN,CT 80) Chen, Che-Tsung, Dae M. Kim, and D. Von der Linde. "Efficient Pulsed Photorefractive Process in $\text{LiNbO}_3\text{:Fe}$ for Optical Storage and Deflection." IEEE Journal of Quantum Electronics. Vol. QE-16, No. 2, February 1980, pp. 126-131. 12 refs.
- (CHEN,D 64) Chen, D., and Y. Gondo. "Temperature Dependence of the Magneto-Optic Effect and Resonance Phenomena in Oriented MnBi Films." Journal of Applied Physics. Vol. 35, No. 3, March 1964, pp. 1024-1025. 7 refs.
- (CHEN,D 65) Chen, D., Y. Gondo, and M.D. Blue. "Hall and Faraday Effects in Oriented MnBi Films." Journal of Applied Physics. Vol. 36, No. 3, March 1965, pp. 1261-1263. 11 refs.
- (CHEN,D 66) Chen, D. "Flux Reversal in Single-Crystal MnBi Films." Journal of Applied Physics. Vol. 37, No. 3, March 1, 1966, pp. 1486-1488. 7 refs.
- (CHEN,D 67A) Chen, Di. "Direct Observation of Domain-Wall Movements in MnBi Films." Journal of Applied Physics. Vol. 38, No. 3, March 1, 1967, pp. 1309-1311. 4 refs.
- (CHEN,D 67B) Chen, D., J.F. Ready, and E. Bernal G. "Thin Films of MnBi for Beam Addressable Beam Alterable Optical Memory Applications." International Electron Devices Meeting; October 18-20, 1967; Washington, D.C. New York, New York: Institute of Electrical and Electronics Engineers; 1967; p. 96. (Abstract). No refs.
- (CHEN,D 68A) Chen, D., J.F. Ready, E. Bernal G., and R.L. Aagard. "Laser Beam Writing, Erasing, and Reading on Manganese Bismuth Films." IEEE Journal of Quantum Electronics. Vol. QE-4, No. 5, May 1968, pp. 378-379. (Abstract only). No refs.
- (CHEN,D 68B) Chen, D., J.F. Ready, and E. Bernal G. "MnBi Thin Films: Physical Properties and Memory Applications." Journal of Applied Physics. Vol. 39, No. 8, July 1968, pp. 3916-3927. 20 refs.
- (CHEN,D 70A) Chen, D., R.L. Aagard, and T.S. Liu. "Magneto-Optic Properties of Quenched Thin Films of MnBi and Optical Memory Experiments." Journal of Applied Physics. Vol. 41, No. 3, March 1, 1970, pp. 1395-1396. 7 refs.

- (CHEN,D 70B) Chen, D., and R.L. Aagard. "MnBi Films: High-Temperature Phase properties and Curie-Point Writing Characteristics." Journal of Applied Physics. Vol. 41, No. 6, May 1970, pp. 2530-2534. 9 refs.
- (CHEN,D 71) Chen, Di. "Preparation and Stability of MnBi Thin Films." Journal of Applied Physics. Vol. 42, No. 9, August 1971, pp. 3625-3628, 13 refs.
- (CHEN,D 73) Chen, Di, Gary N. Otto, and Francis M. Schmit. "MnBi Films for Magneto optic Recording." IEEE Transactions on Magnetics. Vol. MAG-9, No. 2, June 1973, pp. 66-83. 43 refs.
- (CHEN,D 74) Chen, D. "Magnetic Materials for Optical Recording." Applied Optics. Vol. 13, No.4, April 1974, pp. 767-778. 40 refs.
- (CHEN,D 75) Chen, Di, and J. David Zook. "An Overview of Optical Data Storage Technology." Proceedings of the IEEE. Vol 63, No. 8, August 1975, pp. 1207-1230. 184 refs.
- (CHEN,FS 68) Chen, F.S., J.T. LaMacchia, and D.B. Fraser. "Holographic Storage in Lithium Niobate." Applied Physics Letters. Vol. 13, No. 7, October 1, 1968, pp. 223-225. 5 refs.
- (CHEN,FS 69) Chen, F.S. "Optically Induced Change of Refractive Indices in LiNbO_3 and LiTaO_3 ." Journal of Applied Physics. Vol. 40, No. 8, July 1969, pp.3389-3396. 18 refs.
- (CHEN,M 81) Chen, M., and V. Marrello. "The Effect of Overcoats on the Ablative Writing Characteristics of Tellurium Films." DiStephano, T.H., ed Proceedings of the Society of Photo-Optical Instrumentation Engineers: Optical Storage Materials; November 18, 1980; Ossining, New York. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 263: pp. 75-77. 7 refs.
- (CHEN,T 74) Chen, Tu, and W.E. Stutius. "The Phase Transformation and Physical Properties of the MnBi and $\text{Mn}_{1.08}\text{Bi}$ Compounds." IEEE Transactions on Magnetics. Vol. MAG-10, No. 3, September 1974, pp. 581-586. 21 refs.
- (CHENG,CC 79) Cheng, Charles C.K. "Laser Scanning Reader for Automated Data Entry Operation." Jamberdino, Albert A., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Recording and Instrumentation Handling; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Engineers; 1979; Vol. 200: pp. 152-158. No refs.

- (CHENG,D 81) Cheng, David. "Recording and Readout Testing of Optical Recording Materials." Beiser, Leo, ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Advances in Laser Scanning Technology; August 27-28, 1981; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 299: pp. 48-52. 7 refs.
- (CHI,CS 82) Chi, Chao S. "Advances in Computer Mass Storage Technology." Computer. Vol. 15, No. 5, May 1982, pp. 60-74. 23 refs.
- (CHIDA,K 77) Chida, Kazunori, Bunjiro Tsujiyama, Akinori Katsui, and Kazumichi Egashira. "Magneto-optical Memory Experiments on a Rotating Mn-Cu-Bi Disk Medium." IEEE Transactions on Magnetics. Vol. MAG-13, No. 3, May 1977, pp. 982-988. 18 refs.
- (CHOW,KK 68) Chow, Kungta K., William B. Leonard, and R. Lawrence Comstock. "Magneto-optic Studies of Thin GdIG Sections." IEEE Transactions on Magnetics. Vol. MAG-4, No. 3, September 1968, pp. 416-421. 20 refs.
- (CLARK,MG 73) Clark, M.G., F.J. DiSalvo, A.M. Glass, and G.E. Peterson. "Electronic Structure and Optical Index Damage of Iron-Doped Lithium Niobate." Journal of Chemical Physics. Vol. 59, No. 12, December 15, 1973, pp. 6209-6219. 69 refs.
- (CLEMENS,JK 82) Clemens, Jon K. "Video Disks: Three Choices." IEEE Spectrum. Vol. 19, No. 3, March, 1982, pp. 38-42. No refs.
- (CLOVER,RB 71) Clover, Richmond B. Jr., Chandler Wentworth, and Stanley S. Mroczkowski. "Low Birefringent Orthoferrites for Optical Devices." IEEE Transactions on Magnetics. Vol. MAG-7, No. 3, September 1971, pp. 480-483. 12 refs.
- (COEURE,P 71) Coeure, Philippe, Jean-Claude Gay, and Jacques Carcey. "Thermomagnetic Properties of Fine-Grain Polycrystalline GdIG." IEEE Transactions on Magnetics. Vol. MAG-7, No. 3, September 1971, pp. 397-401. 18 refs.
- (COHEN,MS 80) Cohen, M.S. "Computer Modelling Study of Ablative Optical Recording." Applied Physics Letters. Vol. 36, No. 12, June 15, 1980, pp. 950-952. 9 refs.
- (COLBURN,WS 71) Colburn, W.S., and K.A. Haines. "Volume Hologram Formation in Photopolymer Materials." Applied Optics. Vol. 10, No. 7, July 1971, pp. 1636-1641. 12 refs.

- (COLBURN,WS 74) Colburn, W.S., and E.N. Tompkins. "Improved Thermoplastic-Photoconductor Devices for Holographic Recording." *Applied Optics*. Vol. 13, No. 12, December 1974, pp. 2934-2941. 17 refs.
- (COLLIER,RJ 68) Collier, Robert J. "Holograms for Information Storage." *Journal of the Optical Society of America*. Vol. 58, No. 11, November 1968, p. 1548. (Abstract only). No refs.
- (COMSTOCK,RL 70A) Comstock, R.L., and P.H. Lissberger. "Magneto-Optic Properties of CrTe Films Prepared by Sequential Evaporation." *Journal of Applied Physics*. Vol. 41, No. 3, March 1, 1970, pp. 1397-1398. 4 refs.
- (COMSTOCK,RL 70B) Comstock, R. Lawrence, Eugene B. Moore, and D.A. Nepela. "Magnetic Properties of Tb-Substituted GdIG Films Chemically Deposited on YAG Substrates." *IEEE Transactions on Magnetics*. Vol. MAG-6, No. 3, September 1970, pp. 558-563. 24 refs.
- (CONGLETON,DB 77) Congleton, D.B., M.R. Smith, and A.S. Diamond. "A Comparison of Plastic Versus Metal Coatings for Real Time Laser Recording." *Journal of Photographic Engineering*. Vol. 3, No. 2, Spring 1977, pp. 97-105. 5 refs.
- (CONROY,JJ 79) Conroy, J.J., M. Gottlieb, and J.D. Feichtner. "Microcomputer-Controlled Tunable Acousto-Optic Filter." Tracy, John. ed. *Proceedings of the Society of Photo-Optical Instrumentation Engineers: Active Optical Devices*; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 202: pp. 33-39. 7 refs.
- (CORSOVER,SL 81) Corsover, S.L., and C.H. Thomas. "Error Management Techniques for Optical Disk Systems." Beiser, Leo, ed. *Proceedings of the Society of Photo-Optical Instrumentation Engineers: Advances in Laser Scanning Technology*; August 27-28, 1981; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 299: pp. 33-39. No refs.
- (COSENTINO,LS 73) Cosentino, L.S., and W.C. Stewart. "A Membrane Page Composer." *RCA Review*. Vol. 34, No. 1, March 1973, pp. 45-79. 6 refs.
- (CRAIGHEAD,HG 82) Craighead, H.G., R.E. Howard, P.F. Liao, D.M. Tennant, and J.E. Sweeney. "Textured Germanium Optical Storage Medium." *Applied Physics Letters*. Vol. 40, No. 8, April 15, 1982, pp. 662-664. 6 refs.

- (CREDELLE, TL 72) Credelle, T.L., and F.W. Spong. "Thermoplastic Media for Holographic Recording." RCA Review. Vol. 33, No. 1, March 1972, pp. 206-226. 19 refs.
- (CROW, JD 79) Crow, J.D. "(GaAl)As Laser Requirements for Local Attached Data Link Applications. IBM Journal of Research and Development. Vol. 23, No. 5, September 1979, pp. 576-584. 37 refs.
- (CUMMINS, SE 67) Cummins, S.E. "A New Optically Read Ferroelectric Memory." Proceedings of the IEEE. Vol. 55, No. 7, July 1967, pp. 1536-1537. 12 refs.
- (DALISA, AL 70) Dalisa, A.L., W.K. Zwicker, D.J. DeBitetto, and P. Harnack. "Photoanodic Engraving of Holograms on Silicon." Applied Physics Letters. Vol. 17, No. 5, September 1, 1970, pp. 208-210. 14 refs.
- (DANEU, V 66) Daneu, V., C.A. Sacchi, and O. Svelto. "9C1-Single Transverse and Longitudinal Mode Q-Switched Ruby Laser." IEEE Journal of Quantum Electronics. Vol. QE-2, No. 8, August 1966, pp. 290-293. 13 refs.
- (DAURIA, L 73) d'Auria, L., J.P. Huignard, and E. Spitz. "Holographic Read-Write Memory and Capacity Enhancement by 3-D Storage." IEEE Transactions on Magnetics. Vol. MAG-9, No. 2, June 1973, pp. 83-94. 35 refs.
- (DAURIA, L 74) d'Auria, L., J.P. Huignard, C. Slezak, and E. Spitz. "Experimental Holographic Read-Write Memory Using 3-D Storage." Applied Optics. Vol. 13, No. 4, April 1974, pp. 808-818. 21 refs.
- (DAVAL, J 75) Daval, J., B. Ferrand, J. Geynet, D. Challeton, J.C. Peuzin, A. Leclert, and M. Monerie. "Properties at 1.152 μ m of Garnet Films on GdGaG." IEEE Transactions on Magnetics. Vol. MAG-11, No. 5, September 1975, pp. 1115-1117. 8 refs.
- (DEBOUARD, D 68) de Bouard, D. "Feasibility Study of a Large Capacity Magnetic-Film Optical Memory." IEEE Journal of Quantum Electronics. Vol. QE-4, No. 5, May 1968, p. 378. (Digest). No refs.
- (DEHAAN, MR 77) DeHaan, M.R., and C.H.F. Velzel. "Intermodulation and Moire Effects in Optical Video Recording." Philips Research Reports. Vol. 32, No. 5/6, October 1977, pp. 436-459. 11 refs.

- (DEKKER,P 74) Dekker, P., P.W. Jedeloo, and S. Middlehoek. "Temperature Dependence of the Coercive Force of MnBi Films." IEEE Transactions on Magnetism. Vol. MAG-10, No. 3, September 1974, pp. 591-594. 13 refs.
- (DEKKER,P 76) Dekker, Pieter. "Manganese Bismuth and Other Magnetic Materials for Beam Addressable Memories." IEEE Transactions on Magnetism. Vol. MAG-12, No. 4, July 1976, pp. 311-327. 103 refs.
- (DENTON,RT 68) Denton, Richard T., and Tracy S. Kinsel. "Terminals for a High-Speed Optical Pulse Code Modulation Communication System: I. 224-Mbit/s Single Channel." Proceedings of the IEEE. Vol. 56, No. 2, February 1966, pp. 140-145. 13 refs.
- (DENTON,RT 72) Denton, R.T. "Modulation Techniques." Laser Handbook, Vol. 1, pp. 703-724. F.T. Arecchi and E.O. Schulz-DuBois, eds. Amsterdam, The Netherlands: North-Holland, 1972. Vol. 1, pp. 703,724. 16 refs.
- (DEVELIS,JB 74) DeVelis, J.B., Y.M. Hong, and G.O. Reynolds. "Review of Noise Reduction Techniques in Coherent Optical Processing Systems." Proceedings of the Society of Photo-Optical Instrumentation Engineers: Coherent Optical Processing; August 21-22, 1974; San Diego, California. Palo Verdes Estates, California: Society of Photo-Optical Instrumentation Engineers; 1975; Vol. 52: pp. 55-81. 78 refs.
- (DICKSON,LD 70) Dickson, L.D. "Characteristics of a Propagating Gaussian Beam." Applied Optics. Vol. 9, No. 8, August 1970, pp. 1854-1860. 8 refs.
- (DILLON,JF 59) Dillon, Jr., J.F. "Optical Absorptions and Rotations in the Ferrimagnetic Garnets." Le Journal de Physique Et Le Radium. Vol. 20, February/March 1959, pp. 374-377. 10 refs.
- (DILLON,JF 63) Dillon, J.F., Jr., H. Kamimura, and J.P. Remeika. "Magneto-Optical Studies of Chromium Tribromide." Journal of Applied Physics. Vol. 34, No. 4, April 1963, pp. 1240-1245. 14 refs.
- (DILLON,JF 70) Dillon, J.F., E.M. Gyorgy, and J.P. Remeika. "Photoinduced Uniaxial Magnetic Anisotropy and Optical Dichroism in Silicon-Doped Yttrium Iron Garnet (YIG(Si))." Journal of Applied Physics. Vol. 41, No. 3, March 1970, pp. 1211-1217. 10 refs.

5.2 GENERAL LITERATURE

5.2 GENERAL LITERATURE

- (DITTMER,G 77) Dittmer, G., A. Klopfer, and J. Schroder.
 "Heterogeneous Reactions and Chemical Transport of Tungsten with Oxygen, Flourine, and Flourides of Several Metalloids." Philips Research Reports. Vol. 32, Nos. 5/6, October 1977, pp. 341-364. 57 refs.
- (DIXON,RW 67) Dixon, R.W. "Photoelastic Properties of Selected Materials and Their Relevance for Applications to Acoustic Light Modulators and Scanners." Journal of Applied Physics. Vol. 38, No. 13, December 1967, pp. 5149-5153. 6 refs.
- (DIXON,RW 70) Dixon, Richard W. "Acoustooptic Interactions and Devices." IEEE Transactions on Electron Devices. Vol. ED-17, No. 3, March 1970, pp. 229-235. 19 refs.
- (DOYLE,WD 70) Doyle, William D., Gerald K. Goldberg, and Wiliam E. Flannery. "Thermomagnetic Writing in GdIG." IEEE Trans. on Magnetics. Vol. MAG-6, No. 3, September 1970, 549-553. 19 refs.
- (DRAKE,MD 74) Drake, M.D. "PLZT Matrix-Type Block Data Composers." Applied Optics. Vol. 13, No. 2, February 1974, pp. 347-352. 9 refs.
- (DREXLER,J 81) Drexler, J. "Drexon(T.M.) Optical Memory Media for Laser Recording and Archival Data Storage." DiStephano, T.H., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Optical Storage Materials; November 18, 1980; Ossining, New York. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 263: pp. 87-91. 1 ref.
- (DUARDO,JA 80) Duardo, J.A., W.F. Hug, and J.A. Lucero. "Polarization Induced Noise in Acousto-Optic (AO) Modulation of Internal Mirror He-Ne Laser Beams." Jamberdino, Albert A. ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Scanning and Recording for Advanced Image and Data Handling; April 8-9, 1980; Washington, D.C. Bellingham, Washington: The Society of Photo-Optical Instrumentation Engineers; 1980; Vol. 222: pp. 28-38. 32 refs.
- (DUNCAN,RC 70) Duncan, R.C., Jr., B.W. Faughnan, and W. Phillips. "Inorganic Photochromic and Cathodochromic Recording Materials." Applied Optics. Vol. 9, No. 10, October 1970, pp. 2236-2243. 17 refs.

- (EDEN,DD 81) Eden, Dayton D. "Vanadium Dioxide Storage Material." Optical Engineering. Vol. 20, No. 3, May-June 1981, pp.377-378. 4 refs.
- (EGASHIRA,K 74) Egashira, K. and T. Yamada. "Kerr-Effect Enhancement and Improvement of Readout Characteristics in MnBi Film Memory." Journal of Applied Physics. Vol. 45, No. 8, August 1974, pp. 3643-3648. 12 refs.
- (ELECCION,M 72) Eleccion, Marce. "The Family of Lasers: A Survey." IEEE Spectrum. Vol. 9, No. 3, March 1972, pp. 26-40. 51 refs.
- (EMMEL,PM 80) Emmel, Peter M. "System Design Considerations for Laser Scanning." Jamberdino, Albert A., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Scanning and Recording for Advanced Image and Data Handling; April 8-9, 1980; Washington, D.C. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1980; Vol. 222: pp. 2-14. 6 refs.
- (ESCHENFELDER,AH 70) Eschenfelder, A.H. "Promise of Magneto-Optic Storage Systems Compared to Conventional Magnetic Technology." Journal of Applied Physics. Vol. 41, No. 3, March 1, 1970, pp. 1372-1376. 13 refs.
- (EVTIHIEV,NN 76) Evtihiev, N.N., N.A. Economov, A.R. Krebs, N.A. Zamjatina. "Co-Ferrite-New Magneto optic Recording Material." IEEE Transactions on Magnetism. Vol. MAG-12, No. 6, November 1976, pp. 773-775. 5 refs.
- (EWARD,RS 75) Eward, Ronald S. "Optical Memories are Alive and Well and Growing." Optical Spectra. Vol. 9, No. 8, August 1975, pp. 25-28. No refs.
- (FAN,G 70) Fan, G., and J.H. Greiner. "Low-Temperature Storage Using GaAs Lasers and EuO as Storage Medium." Journal of Applied Physics. Vol. 41, No. 3, March 1, 1970, pp. 1401-1403. 3 refs.
- (FAN,GJ 71) Fan, G.Y. "Magneto optic Storage." IEEE Transactions on Magnetism. Vol. MAG-7, No. 3, September 1971, pp. 590-594. 23 refs.
- (FAN,GY 67) Fan, G.Y., and J.H. Greiner. "Low-Temperature Optical Beam-Addressable Memory." Abstracts of the International Electron Devices Meeting; October 18-20, 1967; Washington D.C. New York, New York: Institute of Electrical and Electronics Engineers; 1967; p. 96 (Abstract). No refs.

- (FAN,GY 68) Fan, G.Y., and J.H. Greiner. "Low-Temperature Beam-Addressable Memory." *Journal of Applied Physics*. Vol. 39, No. 2, February 1, 1968, pp. 1216-1218. 11 refs.
- (FAUGHNAN,BW 69) Faughnan, Brian W., and Zolton J. Kiss. "Optical and EPR Studies of Photochromic SrTiO_3 Doped with Fe/Mo and Ni/Mo." *IEEE Journal of Quantum Electronics*. Vol. QE-5, No. 1, January 1969, pp. 17-21. 11 refs.
- (FEINLEIB,J 72) Feinleib, J., and D.S. Oliver. "Reusable Optical Image Storage and Processing Device." *Applied Optics*. Vol. 11, No. 12, December 1972, pp. 2752-2758. 18 refs.
- (FELDMAN,A 79) Feldman, Albert. "Bistable Optical Systems Based on a Pockels Cell." *Optics Letters*. Vol. 4, No. 4, April 1979, pp. 115-117. 13 refs.
- (FELDTKELLER,E 72) Feldtkeller, Ernst. "Suitability of MnBi and $\text{Mn}_{1-x}\text{Ti}_x\text{Bi}$ Films for Magneto-optic Memories." *IEEE Transactions on Magnetics*. Vol. MAG-8, No. 3, September 1972, pp. 481-486. 20 refs.
- (FERRE,J 71) Ferre', Jacques, Jacques P. Badoz, C. Paparoditis, and R. Suryanarayanan. "Magnetic Circular Dichroism of EuO Films." *IEEE Transactions on Magnetics*. MAG-7, No. 3, September 1971, pp. 388-391. 14 refs.
- (FILES,V 71) Files, V. "Dye-Sensitized High-Efficiency Thick Dielectric Diffraction Gratings." *Applied Physics Letters*. Vol. 19, No. 11, December 1, 1971, pp. 451-452. 9 refs.
- (FINDLAY,D 70) Findlay, David, and Deryck W. Goodwin. "The Neodymium in YAG Laser." Goodwin, D.W., ed. *Advances in Quantum Electronics*. London, England: Academic Press; 1970; Vol. 1: pp. 77-128. 127 refs.
- (FIRESTER,AH 78A) Firester, A.H., C.B. Carroll, I. Gorog, M.E. Heller, J.P. Russell, and W.C. Stewart. "Optical Readout of the RCA VideoDisc." *RCA Review*. Vol. 39, No. 3, September 1978, pp. 392-426. 19 refs.
- (FIRESTER,AH 78B) Firester, A.H., I. Gorog, J.P. Russell, J.J. Gibson, C.B. Carroll, and W.R. Roach. "Optical Recording Techniques for the RCA VideoDisc." *RCA Review*. Vol. 39, No. 3, September 1978, pp. 427-471. 10 refs.
- (FISHLOCK,D 69) Fishlock, David, ed. *A Guide to the Laser*. New York: Elsevier Publishing Company, Inc. 1969, 163 p.

- (FLIPPEN,RB 73) Flippen, R.B., and C.W. Haas. "Nonplanar Domain Walls in Ferroelastic $Gd_2(MoO_4)_3$ and $Pb_3(PO_4)_2$." Solid State Communications. Vol. 13, No. 8, October 15, 1973, pp. 1207-1209. 4 refs.
- (FORSHAW,MR 74) Forshaw, M.R.B. "Thick Holograms: A Survey." Optics and Laser Technology. Vol. 6, No. 1, February 1974, pp. 28-35. 38 refs.
- (FOWLER,CA 52) Fowler, C.A., Jr., and E.M. Fryer. "Magnetic Domains on Silicon Iron by the Longitudinal Kerr Effect." Physical Review. Vol. 86, No. 3, May 1, 1952, p. 426. 5 refs.
- (FOWLER,CA 55) Fowler, Charles A, Jr., And Edward M. Fryer. "Magnetic Domains in Thin Films of Nickel-Iron." Physical Review. Vol. 100, No. 2, October 15, 1955, pp. 746-747. 8 refs.
- (FOWLER,CA 56A) Fowler, Charles A., Jr., and Edward M. Fryer. "Magnetic Domains in Thin Films by the Faraday Effect." Physical Review. Vol. 104, No. 2, October 15, 1956, pp. 552-553. 2 refs.
- (FOWLER,CA 56B) Fowler, Charles A., Jr., Edward M. Fryer, and John R. Stevens. "Magnetic Domains in Evaporated Thin Films of Nickel-Iron." Physical Review. Vol. 104, No. 3, November 1, 1956, pp. 645-649. 13 refs.
- (FOWLER,VJ 66) Fowler, V.J., and J. Schlafer. "A Survey of Laser Beam Techniques." Proceedings of the IEEE. Vol. 54, No. 10, October 1966, pp. 1437-144. 40 refs..
- (FRIESEM,AA 70) Friesem, A.A., and J.L. Walker. "Thick Absorption Recording Media in Holography." Applied Optics. Vol. 9, No. 1, January 1970, pp. 201-214. 15 refs.
- (FROST,WT 74) Frost, W. T., J.J. Hagopian, R.M. Ross, and R.J. Wohl. "High-Density Beam-Addressable Recording Using Thermo-magnetic Transfer." IEEE Transactions on Magnetism. Vol. MAG-10, No. 3, September 1974, pp. 895-898. 8 refs.
- (FUJIWARA,T 72) Fujiwara, Tatsuo, and Jack H. Judy. "Experimental Studies of Magneto-optical Kerr Readout SNR." IEEE Transactions on Magnetism. Vol. MAG-8, No. 3, September 1972, pp. 525-527. 4 refs.
- (GABOR,D 48) Gabor, D. "A New Microscopic Principle." Nature. Vol. 161, No. 4098, May 15, 1948, pp. 777-778. No refs.

- (GABOR,D 71) Gabor, Dennis, Winston E. Kock, and George W. Stroke. "Holography." *Science*. Vol. 173, No. 3991. July 2, 1971, pp. 11-23. 46 refs.
- (GARMIRE,E 75) Garmire, E. "Semiconductor Components for Monolithic Applications." Tamir, Theodore, ed. *Integrated Optics*. New York: Springer-Verlag; 1975: pp. 243-304. (Lotsch, Helmut K. V., founder *Topics in Applied Physics*: Vol. 7). 83 refs.
- (GELLER,SB 74) Geller, Sidney B. "Archival Data Storage." *Datamation*. Vol. 20, No. 10, October, 1974, pp. 72-80. 6 refs.
- (GOLDBERG,MW 79) Goldberg, Mark W. "Preheat-Aided Laser Recording." Jamberdino, Albert A., ed. *Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Recording and Information Handling*; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 200: pp. 84-88. 5 refs.
- (GOLDBERG,N 67) Goldberg, Norman. "A High-Density Magneto-Optic Memory." *IEEE Transactions on Magnetism*. Vol. MAG-3, No. 4, December 1967, pp. 605-611. 11 refs.
- (GOLDSTEIN,CM 82) Goldstein, Charles M. "Optical Disk Technology and Information." *Science*. Vol. 215, No. 4354, February 12, 1982, pp. 862-868. 33 refs.
- (GOODENOUGH,JB 61) Goodenough, J.B., A. Wold, R.J. Arnott, and N. Menyuk. "Relationship Between Crystal Symmetry and Magnetic Properties of Ionic Compounds Containing Mn^{3+} ." *Physical Review*. Vol. 124, No. 2, October 15, 1961, pp. 373-384. 59 refs.
- (GOROG,I 78A) Gorog, I. "Optical Techniques Developed for the RCA VideoDisc." *RCA Review*. Vol. 39, No. 1, March 1978, pp. 162-185. 8 refs.
- (GOROG,I 78B) Gorog, Istvan. "VideoDisc Optics." *RCA Review*. Vol. 39, No. 3, September 1978, pp. 389-391. No refs.
- (GOULD,HL 57) Gould, H.L.B., and D.H. Wenny. "A New Rectangular Loop Magnetic Material." *Electrical Engineering*. Vol. 6/7, No. 3, March 1957, pp. 208-211. 7 refs.
- (GRAF,P 72) Graf, P., and M. Lang. "Geometrical Aspects of Consistent Holographic Memory Design." *Applied Optics*. Vol. 11, No. 6, June 1972, pp. 1382-1388. 7 refs.

- (GRAY,EE 72) Gray, Edward E. "Laser Mass Memory System." IEEE Transactions on Magnetics. Vol. MAG-8, No. 3, September 1972, pp. 416-420. No refs.
- (GRIFFITH,RL 69) Griffith, R.L. "Data Recovery in a Photo-Digital Storage System." IBM Journal of Research and Development. Vol. 13, No. 7, July 1969, pp. 456-467. 12 refs.
- (GUERIN,JM 79) Guerin, Jean-Michel. "Sound Diffraction and the Optimizing of Acousto-Optic Modulator Efficiency." Jamberdino, Albert A., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Recording and Information Handling; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 200: pp. 200-207. No refs.
- (GUNNING,WJ 79) Gunning, W.J. and Pochi Yeh. "Multiple-Cavity Infrared Electro-Optic Tunable Filter." Tracy, John, ed. Proceedings of the Society Photo-Optical Instrumentation Engineers: Active Optical Devices; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 202: pp. 21-32. 12 refs.
- (GUNTHERODT,G 70) Guntherodt, G., J. Schoenes, and P. Wachter. "Optical Constants of the Eu Chalcogenides Above and Below the Magnetic Ordering Temperatures." Journal of Applied Physics. Vol. 41, No. 3, March 1, 1970, pp. 1083-1084. 8 refs.
- (HANNAN,WJ 73) Hannan, W.J., R.E. Flory, M. Lurie, and R.J. Ryan. "Holotape: A Low Cost Prerecorded Television System Using Holographic Storage." Journal of the Society of Motion Picture and Television Engineers. Vol. 82, No. 11, November 1973, pp. 905-915. 22 refs.
- (HARTSTEIN,A 80) Hartstein, A., J.C. Tsang, D.J. DiMaria, and D.W. Dong. "Observation of Amorphous Silicon Regions in Silicon-Rich Silicon Dioxide Films." Applied Physics Letters. Vol. 36, No. 10, May 15, 1980, pp. 836-837. 12 refs.
- (HASKAL,HM 70) Haskal, Haim M. "Polarization and Efficiency in Magnetic Holography." IEEE Transactions on Magnetics. Vol. MAG-6, No. 3, September 1971, pp. 542-545. 6 refs.
- (HASKAL,HM 71A) Haskal, H.M., and A.N. Rosen. "Power and Focusing Considerations for Recording with a Laser Beam in the TEM00 Mode." Applied Optics. Vol. 10, No. 6, June 1971, pp. 1354-1358. 7 refs.

- (HASKAL, HM 71B) Haskal, Haim M. "Power, Size, and Depth of Focus in Thermomagnetic Writing." IEEE Transactions on Magnetics. Vol. MAG-7, No. 3, September 1971, pp. 383-384. 3 refs.
- (HASKAL, HM 77) Haskal, H., and D. Chen. "Optical Data Storage." Ross, Monte, ed. Laser Applications. New York, New York: Academic Press; 1977; Vol. 3: pp. 135-230. 171 refs.
- (HAUDEK, H 71) Haudek, H., and W.K. Unger. "Lattice Constants and Phase Transitions in Oriented MnBi Films." Physica Status Solidi. Vol. (a)7, No. 1, September 16, 1971, pp. 393-400. 13 refs.
- (HECHT, J 82) Hecht, Jeff. "Lasers Store A Wealth of Data." High Technology. Vol. 2, No. 3, May-June 1982, pp. 60-67. No refs.
- (HEEMSKERK, JP 78) Heemskerk, J.P.J. "Noise in a Video Disk System: Experiments with an (AlGa)As Laser." Applied Optics. Vol. 17, No. 13, July 1, 1978, pp. 2007-2012. 14 refs.
- (HEEMSKERK, JP 79) Heemskerk, J.P.J., W.G. Ophey, W.J. Kleuters, G. Gerritsen, and K. Bulthuis. "Optical Recording with Diode Lasers." Digest of Technical Papers: 1979 IEEE/OSA Conference on Laser Engineering and Applications; May 30-June 1, 1979; Washington, D.C. New York: Institute of Electrical and Electronic Engineers; 1979; pp. 101-102. 2 refs.
- (HEFFNER, P 79) Heffner, Paul, and Edward Connell. "Flexible High-Resolution Film Recorder Systems." Jamberdino, Albert A., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Recording and Information Handling; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 200: pp. 90-99. No refs.
- (HEIKES, RR 55) Heikes, R.R. "Magnetic Transformation in MnBi." Physical Review. Vol. 99, No. 2, July 15, 1955, pp. 446-447. 6 refs.
- (HEILMEIER, GH 68) Heilmeier, George H., Louis A. Zanoni, and Lucian A. Barton. "Dynamic Scattering: A New Electrooptic Effect in Certain Classes of Nematic Liquid Crystals." Proceedings of the IEEE. Vol. 56, No. 7, July 1968, pp. 1162-1171. 15 refs.

- (HENDERSON,DM 79) Henderson, D.M., J.F. Lotspeich, and R.R. Stephens. "Programmable Electro-Optic Tunable Filters." Tracy, John, ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Active Optical Devices; August 27-28 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 202: pp. 16-20. 5 refs.
- (HERD,SR 82A) Herd, S.R., K.Y. Ahn, R.J. von Gutfeld, and D.R. Vigliotti. "Structural Changes in Se-Te Bilayers by Laser Writing." Journal of Applied Physics. Vol. 53, No. 5, May 1982, pp. 3520-3522. 1 ref.
- (HERD,SR 82B) Herd, S.R., K.N. Tu, K.Y. Ahn, T.H. DiStefano, and N.J. Mazzeo. "Laser Writing on Silicon-Metal Bilayers for Optical Storage. II. Microscopic Study." Journal of Applied Physica. Vol. 53, No. 6, June 1982, pp. 4372-4378. 11 refs.
- (HERZOG,DG 79) Herzog, Donald G. "Description of a Dry Film Tactical Laser Beam Recorder." Jamberdino, Albert A., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Recording and Information Handling; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 200: pp. 125-143. No refs.
- (HILL,B 72) Hill, B. "Some Aspects of a Large Capacity Holographic Memory." Applied Optics. Vol. 11, No. 1, January 1972, pp. 182-191. 24 refs.
- (HILL,B 73) Hill, B. and K.P. Schmidt. "New Page Composer for Holographic Data Storage." Applied Optics. Vol. 12, No. 6, June 1973, pp. 1193-1198. 3 refs.
- (HOAGLAND,AS 72) Hoagland, A.S. "Mass Storage--Past, Present, and Future." AFIPS Conference Proceedings: Fall Joint Computer Conference; December 5-7, 1972; Anaheim, California. Montvale, New Jersey: AFIPS Press. 1972; Vol. 41, Part II, pp. 985-991. 6 refs.
- (HOAGLAND,AS 79) Hoagland, A.S. "Storage Technology: Capabilities and Limitations." Computer. Vol. 12, No. 5, May 1979, pp. 12-18. 4 refs.
- (HONDA,S 73) Honda, Shigeo., Takanobu Nomura, and Tetsuzo Kusuda. "Wall Propagation by Thermomagnetic Writing in MnBi Single Crystal Films." IEEE Transactions on Magnetism. Vol. MAG-9, No. 3, September 1973, pp. 467-470. 8 refs.

- (HOPKINS,HH 53) Hopkins, H.H. "On the Diffraction Theory of Optical Images." Proceedings of the Royal Society of London. Serial A217, 1953, pp. 408-432. 6 refs.
- (HOPKINS,HH 66) Hopkins, H.H. "The Use of Diffraction-Based Criteria of Image Quality in Automatic Optical Design." Optica Acta. Vol. 13, No. 4, October 1966, pp. 343-369. 5 refs.
- (HOPKINS,HH 67) Hopkins, H.H. "Extra-paraxial Theory of Spatial Coherence." Optica Acta. Vol. 14, No. 1, January 1967, pp. 1-16. 3 refs.
- (HOPKINS,RE 76) Hopkins, R. E., and M. J. Buzawa. "Optics for Laser Scanning." Optical Engineering. Vol. 15, No. 2, March-April 1976, pp. 90-94. 4 refs.
- (HORNER,JL 80) Horner, Joseph L., and Jacques E. Ludman. "Holographic Optical Element (HOE) for Demultiplexing in Fiber Optic Systems." Tzuo-Chang Lee and Poohsan N. Tamura, eds. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Recent Advances in Holography; February 4-5, 1980; Los Angeles, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1980; Vol. 215: pp. 46-49. 6 refs.
- (HOU,SL 71) Hou, S.L., and D.S. Oliver. "Pockels Readout Optical Memory Using $\text{Bi}_{12}\text{SiO}_{20}$." Applied Physics Letters. Vol. 18, No. 8, April 15, 1971, pp. 325-328. 8 refs.
- (HOWE,DG 81) Howe, D.G., and J.J. Wrobel. "Solvent-Coated Organic Materials for High-Density Optical Recording." DiStephano, T.H., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Optical Storage Materials; November 18, 1980; Ossining, New York. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 263: pp. 92-99. 9 refs.
- (HRBEK,GW 74) Hrbek, George W. "An Experimental Optical Videodisc Playback System." Journal of the Society of Motion Picture and Television Engineers. Vol. 83, No. 7, July 1974, pp. 580-582. No refs.
- (HUHN,D 70) Huhn, D., and W. Martienssen. "Holographic Information Storage in Potassium Bromide." Opto-Electronics. Vol. 2, No. 1, February 1970, pp. 47-48. 5 refs.

- (HUNT,RP 69) Hunt, R.P. "Magnetooptics, Lasers, and Memory Syatems." IEEE Transactions on Magnetics. Vol. MAG-5, No. 4, December 1969, pp. 700-716. 60 refs.
- (HUTH,BG 74) Huth, B.G. "Calculations of Stable Domain Radii Produced by Thermomagnetic Writing." IBM Journal of Research and Development. Vol. 18, No. 2, March 1974, pp. 100-109. 13 refs.
- (IWASA,S 74) Iwasa, Sato, and Edward D. Hartfield. "High Speed Laser Recording on the ITEK PROM." Proceedings of the Society of Photo-Optical Instrumentation Engineers: Coherent Optical Processing; August 21-22, 1974; San Diego, California. Palo Verdes Estates, California: Society of Photo-Optical Instrumentation Engineers; 1975; Vol. 52: pp. 27-42. 23 refs.
- (JACOBS,BA 78) Jacobs, B.A.J. "Laser Beam Recording of Video Master Disks." Applied Optics. Vol. 17, No. 13, July 1, 1978, pp. 2001-2006. 7 refs.
- (JAMBERDINO,AA 81A) Jamberdino, Albert A. "Laser Recording and Data Handling." Optical Engineering. Vol. 20, NO. 3, May-June 1981, p. 329. No refs.
- (JAMBERDINO,AA 81B) Jamberdino, Albert A. "High-Capacity High-Speed Recording." Optical Engineering. Vol. 20, No. 3, May-June 1981, pp. 394-398. No refs.
- (JAMBERDINO,AA 81C) Jamberdino, A.A. "Overview of Requirements for Optical Storage Media." DiStephano, T.H. ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Optical Storage Materials; November 18, 1980; Ossining, New York. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 263: pp 65-67. No refs.
- (JANAI,M 82) Janai, M. and F. Moser. "Optical Recording in Amorphous Silicon Films." Journal of Applied Physics. Vol. 53, No. 3, March 1982, pp. 1385-1386. 6 refs.
- (JAVAN,A 61) Javan, A., W.R. Bennett, Jr., and D.R. Herriott. "Population Inversion and Continuous Optical Maser Oscillation in a Gas Discharge Containing a He-Ne Mixture." Physical Review Letters, Vol. 6, No. 3, February 1, 1961, pp. 10. 11 refs.-110.
- (JENNEY,JA 70) Jenney, J.A. "Holographic Recording with Photopolymers." Journal of the Optical Society of America. Vol. 60, No. 9, September 1970, pp. 1155-1161. 11 refs.

- (JIPSON,VB 81) Jipson, V.B., and C.R. Jones. "Infrared Dyes for Optical Storage." DiStephano, T.H., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Optical Storage Materials; November 18, 1980; Ossining, New York. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 263: pp. 105-109. 15 refs.
- (JOHANNES,R 70) Johannes, R., and R. Vogenthaler. "Spatial Modulation in Thin CdS Films." Applied Optics. Vol. 9, No. 7, July 1970, pp. 1714-1716. 5 refs.
- (JOHNSON,C 75) Johnson, Clayton. "IBM 3850-Mass Storage System." AFIPS Conference Proceedings: National Computer Conference; May 19-22, 1975; Anaheim, California. Montvale, New Jersey: AFIPS Press; 1975; Vol. 44, pp. 509-514. No refs.
- (JOHNSON,LH 78) Johnson, L. H., D. S. Lo, and R. W. Honebrink. "Thermoplastic Recording." Optical Engineering. Vol. 17, No. 3, May/June 1978, pp. 252-255. 13 refs.
- (JOHNSON,RV 79) Johnson, Richard V. "Focus Error Detection in Optical Data Storage Systems." Jamberdino, Albert A., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Recording and Information Handling; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 200: pp.73-78. No refs.
- (JONES,K 81) Jones, Keith. "Rotating-Memory Devices Move to Optical Reading." Mini-Micro Systems. Vol. XIV, No. 10, October 1981, pp. 75,78. No refs.
- (JUDY,JH 71) Judy, Jack H., K. Yokoyama, and T. Fujiwara. "Magnetooptic Kerr Effect of Electroless-Plated CO-P Films." IEEE Transactions on Magnetics. Vol. MAG-7, No. 3, September 1971, p. 377. (Digest). No refs.
- (KACZOROWSKI,EM 77) Kaczorowski, Edward M. "Optical Mass Storage." Digest of Papers: Spring Compcon 77 Fourteenth IEEE Computer Society International Conference; February 28-March 3, 1977; San Francisco, California. New York, New York: Institute of Electrical and Electronics Engineers; 1977; pp. 33-36. No refs.
- (KAMINOW,IP 66) Kaminow, I.P. and E.H. Turner. "Electrooptic Light Modulators." Proceedings of the IEEE. Vol. 54, No. 10, October 1966, pp. 1374-1390. 125 refs.

- (KAMINOW,IP 68) Kaminow, Ivan P. "Measurements of the Electrooptic Effect in CdS, ZnTe, and GaAs at 10.6 Microns." IEEE Journal of Quantum Electronics. Vol. QE-4, No. 1, January 1968, pp. 23-26. 11 refs.
- (KAMINOW,IP 71) Kaminow, Ivan P., and Edward H. Turner. "Linear Electrooptical Materials." Pressley, R.J. ed. Handbook of Lasers. Cleveland, Ohio: Chemical Rubber Company, 1971; pp. 447-459. 138 refs.
- (KATSUI,A 76) Katsui, A. "Magnetic and Magneto-optic Properties of Ferromagnetic MnCuBi Thin Films." Journal of Applied Physics. Vol. 47, No. 8, August 1976, pp. 3609-3611. 12 refs.
- (KATZKA,P 79) Katzka, P., and I.C. Chang. "Noncollinear Acousto-Optic Filter for the Ultraviolet." Tracy, John, ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Active Optical Devices; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 202: pp. 26-32. 12 refs.
- (KEIZER,E0 78) Keizer, E.O. and D.S. McCoy. "The Evolution of the RCA 'SelectaVision' VideoDisc System--A Historical Perspective." RCA Review. Vol. 39, No. 1, March 1978, pp. 14-32. 1 ref.
- (KENNEY,G 76) Kenney, George, F. Zernike, D. Lou, M. Goutman, A. Milch, D. Stanton, M. Strzelczyk, R. Hunt, J. Wagner, A. Chan, and R. McFarlane. "Development of an Optical Disc Recorder; Quarterly Technical Report. July 1, 1976 to September 30, 1976." Briarcliff Manor, New York: Philips Laboratories; November 1976. 98p. Available from: NTIS, Springfield, Virginia; ADA034128. 1 ref.
- (KENNEY,G 77A) Kenney, George, F. Zernike, D. Lou, R. Harper, M. Giebler, A. Milch, J. Wagner, A. Chan, and R. McFarlane. "Development of an Optical Disc Recorder; Quarterly Technical Report. October 1, 1976 to December 31, 1976." Briarcliff Manor, New York: Philips Laboratories; February 1977. 72p. Available from: NTIS, Springfield, Virginia; ADA037832. 10 refs.
- (KENNEY,G 77B) Kenney, George, F. Zernike, D. Lou, M. Giebler, A. Milch, J. Wagner, A. Chan, and R. McFarlane. "Development of an Optical Disc Recorder; Quarterly Technical Report. January 1, 1977 to March 31, 1977." Briarcliff Manor, New York: Philips Laboratories; April 1977. 43p. Available from: NTIS, Springfield, Virginia; ADA040659. No refs.

- (KENNEY,G 77C) Kenney, George, F. Zernike, D. Lou, A. Milch, J. Wagner, A. Chan, and R. McFarlane. "Development of an Optical Disc Recorder; Quarterly Technial Report. April 1, 1977 to June 30, 1977." Briarcliff Manor, New York: Philips Laboratories; July 1977. 15p. Available from: NTIS, Springfield, Virginia; ADA043468. No refs.
- (KENNEY,G 79) Kenney, George C., David Y.K. Lou, Robert McFarlane, Albert Y. Chan, Joseph S. Nadan, Thomas R. Kohler, John G. Wagner, and Fritz Zernicke. "An Optical Disk Replaces 25 Mag Tapes." IEEE Spectrum. Vol. 16, No. 2, February 1979, pp. 33-38. No refs.
- (KENVILLE,RF 78) Kenville, Richard F. "Optical Video Disc for Digital Mass Memory Applications." Digest of Papers: Spring Compcon 78 Sixteenth IEEE Computer Society International Conference; February 28-March 3, 1978; San Francisco, California. New York, New York: Institute of Electrical and Electronics Engineers; 1978; pp. 170-172. 2 refs.
- (KENVILLE,RF 81) Kenville, R.F. "Fifteen Years of Laser Recording--Where We've Been and Where We're Going." Optical Engineering. Vol. 20, No. 3, May-June 1981, pp. 330-334. 37 refs.
- (KERR,JR 66) Kerr, J. Richard. "The FM Laser and Optical Communication Systems." Applied Optics. Vol. 5, No. 4, April 1966, pp. 671-672. No refs.
- (KIEMLE,H 72) Kiemle, H. "Holographic Information Storage." Optical and Acoustical Holography. E. Camatini, Ed. New York: Plenum Press, 1972, pp. 209-234. 14 refs.
- (KIEMLE,H 74) Kiemle, H. "Considerations on Holographic Memories in the Gigabyte Region." Applied Optics. Vol. 13, No.4, April 1974, pp. 803-807. 11 refs.
- (KIM,DM 77) Kim, Dae M., T. A. Rabson, Rajiv R. Shah, and F. K. Tittel. "Photorefractive Materials for Optical Storage and Display." Optical Engineering. Vol. 16, No. 2, March/April 1977, pp. 189-196. 33 refs.
- (KING,GW 65A) King, Gilbert W. "Photooptical Storage and Processing of Information." Applied Optics. Vol. 4, No. 4, April 1965, pp. 369-371. No refs.
- (KING,GW 65B) King, Gilbert W. "Design Considerations for a Photooptical Storage Device." Applied Optics. Vol. 4, No. 4, April 1965, pp. 429-433. 2 refs.

- (KIRTON,J 74) Kirton, J., and R.W. Sarginson. "Some New Display Techniques--A Critical Survey." Opto-Electronics. Vol. 6, No. 9, September 1974, pp. 349-367. 34 refs.
- (KITTEL,C 46) Kittel, Charles. "Theory of the Structure of Ferromagnetic Domains in Films and Small Particles." Physical Review. Vol. 70, Nos. 11 and 12, December 1 and 15, 1946, pp. 965-971. 30 refs.
- (KIVITS,P 81) Kivits, P., B. Jacobs, and P. Zalm. "Summary Abstract: Research on Materials for Optical Storage." DiStefano, T.H. ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Optical Storage Materials; November 18, 1980; Ossining, New York. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 263: pp. 68-69. 10 refs.
- (KNIGHT,GR 75) Knight, Gordon R. "Holographic Memories." Optical Engineering. Vol. 14, No. 5, September-October 1975, pp. 453-459. 25 refs.
- (KOGELNIK,H 66) Kogelnik, H., and T. Li. "Laser Beams and Resonators." Proceedings of the IEEE. Vol. 54, No. 10, October 1966, pp. 1312-1329. 44 refs.
- (KOGELNIK,H 69) Kogelnik, Herwig. "Coupled Wave Theory for Thick Hologram Gratings," The Bell System Technical Journal, Vol. 48, No. 9, November 1969, pp. 2909-2947. 38 refs.
- (KOKUBU,A 72) Kokubu, Akio, and Osamu Ishii. "Properties of Multiple Longitudinal Kerr Magneto-optic Reflections." IEEE Transactions on Magnetics. Vol. MAG-8, No. 3, September 1972, pp. 530-533. 13 refs.
- (KORPEL,A 78) Korpel, A. "Simplified Diffraction Theory of the Video Disk." Applied Optics. Vol. 17, No. 13, July 1, 1978, pp. 2037-2042. 2 refs.
- (KRAMER,CJ 79) Kramer, C.J. "Minimization of Wobble Effects in Holographic Scanners." Digest of Technical Papers: 1979 IEEE/OSA Conference on Laser Engineering and Applications; May 30-June 1, 1979; Washington, D.C. New York: Institute of Electrical and Electronic Engineers; 1979; pp. 105-106. (Digest). No refs.
- (KRESSEL,H 74A) Kressel, H. "Gallium Arsenide and (AlGa)As Devices Prepared by Liquid-Phase Epitaxy." Journal of Electronic Materials. Vol. 3, No. 4, 1974, pp. 747-790. 94 refs.

5.2 GENERAL LITERATURE

5.2 GENERAL LITERATURE

- (KRESSEL,H 74B) Kressel, H., H.F. Lockwood, I. Ladany, and M. Ettenberg. "Heterojunction Laser Diodes for Room Temperature Operation." Optical Engineering. Vol. 13, No. 5, September/October 1974, pp. 416-422. 26 refs.
- (KRUMME,JP 73A) Krumme, Jens-Peter, and Heinz Dimigen. "Ion-Beam Etching of Groove Patterns into Garnet Films." IEEE Transactions on Magnetism. Vol MAG-7, No. 3, September 1973, pp. 405-408. 11 refs.
- (KRUMME,JP 73B) Krumme, J.P., and P. Hansen. "New Magneto-Optic Memory Concept Based on Compensation Wall Domains." Applied Physics Letters. Vol. 23, No. 10, November 15, 1973, pp. 576-578. 6 refs.
- (KRUMME,JP 75) Krumme, Jens-Peter., and Hans Jurgen Schmitt. "Ferrimagnetic Garnet Films for Magneto-optic Information Storage." IEEE Transactions on Magnetism. Vol. MAG-11, September 1975, pp. 1097-1102. 23 refs.
- (KUEHLER,JD 66) Kuehler, J.D. and H.R. Kerby. "A Photo-Digital Mass Storage System." Proceedings of the Fall Joint Computer Conference; November 7-10, 1966; San Francisco, California. Washington, D.C.: Spartan Books; 1966; Vol. 29: pp. 735-742. 2 refs.
- (KURTZ,RL 75) Kurtz, Robert L. and Robert B. Owen. "Holographic Recording Materials--A Review." Optical Engineering. Vol. 14, No. 5, September-October 1975, pp. 393-401. 93 refs.
- (LABRUNIE,G 74) Labrunie, G., J. Robert, and J. Borel. "Nematic Liquid Crystal 1024 Bits Page Composer." Applied Optics. Vol. 13, No. 6, June 1974, pp. 1355-1358. 9 refs.
- (LACKLISON,DE 73) Lacklison, David E., George B. Scott, H.I. Ralph, and John L. Page. "Garnets with High Magneto-optic Figures of Merit in the Visible Region." IEEE Transactions on Magnetism. Vol. Mag.-9, No. 3, September 1973, pp. 457-460. 10 refs.
- (LACKLISON,DE 75) Lacklison, D.E., G.B. Scott, R.F. Pearson, and J.L. Page. "Magneto-Optic Display." IEEE Transactions on Magnetism. Vol. MAG-11, No. 5, September 1975, pp.1118-1120. 6 refs.
- (LAMB,WE 64) Lamb, W.E. "Theory of an Optical Maser." Physical Review. Vol. 134, No. 6A, June 15, 1964, pp. A1429-A1450. 32 refs.

- (LAND,CE 69) Land, C.E., and P.P. Thatcher. "Ferroelectric Ceramic Electrooptic Materials and Devices." Proceedings of the IEEE. Vol. 57, No. 5, May 1969, pp. 751-768. No refs.
- (LAND,CE 78) Land, C. E. "Optical Information Storage and Spatial Light Modulation in PLZT Ceramics." Optical Engineering. Vol. 17, No. 4, July/August 1978, pp. 317-326. 41 refs.
- (LANGDON,RM 69) Langdon, R.M. "Design of a Large Read-Only Holographic Memory." The Radio and Electronic Engineer. Vol. 38, No. 6, December 1969, pp. 369-375. 5 refs.
- (LANGLET,R 72) Langlet, Regis. "Thermomagnetic Writing on Thin MnBi Films." IEEE Transactions on Magnetics. Vol. MAG-8, No. 3, September 1972, pp. 489-491. 7 refs.
- (LANGLET,R 73) Langlet, Regis, Bernard Carre, and Jean-Paul Pivot. "High Speed Recording on MnBi Thin Films Deposited on Discs." IEEE Transactions on Magnetics. Vol. MAG-9, No. 3, September 1973, pp. 401-405. 11 refs.
- (LASERF 74) "Videodisk: A Status Report." Laser Focus. Vol. 10, No. 8, August 1974, pp. 36-39. No refs.
- (LAUB,LJ 76) Laub, L.J. "Optics of Reflective Video Disc Players." IEEE Transactions on Consumer Electronics, Vol. CE-22, No. 3, August 1976, pp. 258-265. 4 refs.
- (LAW,KY 80) Law, K.Y., P.S. Vincett, R.O. Loutfy, L. Alexandru, M.A. Hopper, J.H. Sharp, and G.E. Johnson. "Ablative Optical Recording Using Organic Dye-In-Polymer Films." Applied Physics Letters. Vol. 36, No. 11, June 1, 1980, pp 884-885. 9 refs.
- (LEE,JN 79) Lee, J.N., and N.J. Berg. "Acousto-Photoreflexive Storage at 1060 nm." Digest of Technical Papers: 1979 IEEE/OSA Conference on Laser Engineering and Application; May 30-June 1, 1979; Washington, D.C. New York: Institute of Electrical and Electronic Engineers; 1979; pp. 104-105. 2 refs.
- (LEE,K 71) Lee, K., and J.C. Suits. "Preparation of Doped EuO Films on Rotating Disks." IEEE Transactions on Magnetics. Vol. MAG-7, No. 3, September 1971, pp. 391. 2 refs.
- (LEE,K 73A) Lee, Kenneth, and J.C. Suits. "Magnetic Properties of Thin Films in the Mn-Ga-Ge System." American Institute of Physics Conference Proceedings; 1973; Vol. 10, Part 2, pp. 1429-1433. 3 refs.

- (LEE,K 73B) Lee, Kenneth. "Magnetic Thin Films for Optical Storage." *Journal of Vacuum Science and Technology*. Vol. 10, No. 5, September/October 1973, pp. 631-639. 65 refs.
- (LEE,TC 68) Lee, T.C., and J. David Zook. "Light Beam Deflection with Electrooptic Prisms." *IEEE Journal of Quantum Electronics*. Vol. QE-4, No. 7, July 1968, pp. 442-454. 21 refs.
- (LEE,TC 71) Lee, T.C., and D. Chen. "Writing Characteristics of MnBi Films for Holographic Recording." *Applied Physics Letters*. Vol. 19, No. 3, August 1, 1971, pp. 62-65. 7 refs.
- (LEE,TC 72) Lee, T.C. "MnBi Films as Potential Storage Media in Holographic Optical Memories." *Applied Optics*. Vol. 11, No. 2, February 1972, pp. 384-389. 16 refs.
- (LEE,TC 79A) Lee, T.C. "Automated Thermoplastic Holographic Camera Development." *Digest of Technical Papers: 1979 IEEE/OSA Conference on Laser Engineering and Applications*; May 30-June 1, 1979; Washington, D.C. New York: Institute of Electrical and Electronic Engineers; 1979; p. 100. See also (LEUNG,KM 79). No refs.
- (LEE,TC 79B) Lee, T.C., J. Rebholz, P. Tamura, and J. Lindquist. "Ambiguity Processing by Joint Fourier Transform Holography." *Digest of Technical Papers: 1979 IEEE/OSA Conference on Laser Engineering and Applications*; May 30-June 1, 1979; Washington, D.C. New York: Institute of Electrical and Electronic Engineers; 1979; p. 101. No refs.
- (LEE,TC 79C) Lee, T.C., and C. Butter. "Thermoplastic Spatial Light Modulator." Tracy, John, ed. *Proceedings of the Society of Photo-Optical Instrumentation Engineers: Active Optical Devices*; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 202: pp. 147-151. 4 refs.
- (LEE,WH 72) Lee, Wai-Hon. "Effect of Film-Grain Noise on the Performance of Holographic Memory." *Journal of the Optical Society of America*. Vol. 62, No. 6, June 1972, pp. 797-801. 11 refs.
- (LEITH,EN 62) Leith, Emmett N., and Juris Upatnieks. "Reconstructed Wavefronts and Communication Theory." *Journal of the Optical Society of America*. Vol. 52, No. 10, October 1962, pp. 1123-1130. 6 refs.

- (LEITH,EN 67) Leith, E.N., and J. Upatnieks. "Recent Advances in Holography." Wolf, E., ed. Progress in Optics. Amsterdam, The Netherlands: North Holland; 1967; Vol. 6: pp. 1-65. 70 refs.
- (LEUNG,KM 79) Leung, K.M., E. Bernal G., and J.C. Wyant. "In-Situ Holographic Testing of Lenses with an Automatic Holocamera." Digest of Technical Papers: 1979 IEEE/OSA Conference on Laser Engineering and Applications; May 30-June 1, 1979; Washington, D.C. New York: Institute of Electrical and Electronic Engineers; 1979; p. 100. See also (LEETC 79A). 3 refs.
- (LEWICKI,GW 69) Lewicki, G.W. "Curie-Point Switching in Mn-Bi Films." IEEE Transactions on Magnetics. Vol. MAG-5, No. 3, September 1969, pp. 298-299. 2 refs.
- (LEWICKI,GW 70) Lewicki, G., and J.E. Guisinger. "Narrow-Curie Point Switching Transfer Characteristics in Mn-Bi Films." Applied Physics Letters. Vol. 16, No. 6, March 15, 1970, pp. 240-242. 5 refs.
- (LEWICKI,GW 73) Lewicki, G., and J.E. Guisinger. "Laser Recording on MnBi Films." IEEE Transactions on Magnetics. Vol. MAG-9, No. 4, December 1973, pp. 700-704. 8 refs.
- (LIN,LH 69) Lin, L.H. "Hologram Formation in Hardened Dichromated Gelatin Films." Applied Optics. Vol. 8, No. 5, May 1969, pp. 963-966. 5 refs.
- (LIN,LH 70) Lin, L.H., and H.L. Beauchamp. "Write-Read-Erase in Situ Optical Memory Using Thermoplastic Holograms." Applied Optics. Vol. 9, No. 9, September 1970, pp. 2088-2092. 10 refs.
- (LIN,LH 71) Lin, L.H. "Method of Characterizing Hologram-Recording Materials." Journal of the Optical Society of America. Vol. 61, No. 2, February 1971, pp. 203-208. 4 refs.
- (LIPP,J 71) Lipp, James, and Jerry L. Reynolds. "A High Capacity Holographic Storage System." Barakette, E.S., et al eds. Applications of Holography. New York: Plenum Press, 1971; pp. 377-388. 1 ref.
- (LIU,TS 71) Liu, T.S., and C.I. Knudson. "Identification and Measurement of Phases in MnBi Thin Films Using an X-Ray Diffractometric Technique." Physica Status Solidi. Vol. (a)5, No. 1, April 16, 1971, pp. K91-K94. 7 refs.

- (LO,DS 74) Lo, D.S. "Photochromic Salicylideneaniline as Storage Medium for Interferometry and High Speed Recording." *Applied Optics*. Vol. 13, NO. 4, April 1974, pp. 861-865. 7 refs.
- (LOHMAN,RD 71) Lohman, R.D., R.S. Mezrich, and W.C. Stewart. "Holographic Mass Memory's Promise: Megabits Accessible in Microseconds." *Electronics*. Vol. 44, No.2, January 18, 1971, pp. 61-66. 10 refs.
- (LOU,DY 81) Lou, David Y., Gerard M. Bloom, and George C. Kenney. "Bit Oriented Optical Storage with Thin Tellurium Films." DiStefano, T.H., ed. *Proceedings of the Society of Photo-Optical Instrumentation Engineers: Optical Storage Materials*; November 18, 1980; Ossining, New York. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 263: pp. 78-86. 16 refs.
- (LOU,DY 82) Lou, David Y. "Characterization of Optical Disks." *Applied Optics*. Vol. 21, No. 9, May 1, 1982, pp. 1602-1609. 7 refs.
- (LYNCH,RT 79) Lynch, R.T., Jr., M.B. Small, and R.Y. Hung. "GaAs/(GaAl)As Laser Technology." *IBM Journal of Research and Development*. Vol. 23, No. 5, September 1979, pp. 585-595. 57 refs.
- (MACDONALD,RE 69) MacDonald, R.E., and J.W.Beck. "Magneto-Optical Recording." *Journal of Applied Physics*, Vol. 40, No. 3, March 1, 1969, pp. 1429-1435. 38 refs.
- (MAIMAN,TH 60) Maiman, T.H. "Stimulated Optical Radiation in Ruby." *Nature*. Vol. 187, August 6, 1960, pp. 493-494. 4 refs.
- (MANSURIPUR,M 82) Mansuripur, Masud, G.A. Neville Connell, and Joseph W. Goodman. "Laser-Induced Local Heating of Multilayers." *Applied Optics*. Vol. 21, No. 6, March 15, 1982, pp. 1106-1114. 6 refs.
- (MARCHANT,AB 82) Marchant, Alan B. "Optical Disk Readout: A Model for Coherent Scanning." *Applied Optics*. Vol. 21, No. 11, June 1, 1982, pp. 2085-2088. 8 refs.
- (MARECHAL,A 47) Marechal, A. "Mechanical Integrator for Studying the Distribution of Light in the Optical Image." *Journal of the Optical Society of America*. Vol. 37, No. 5, May 1947, pp. 403-404. (Letter to the Editor). No refs.

- (MARINACE,JC 70) Marinace, J.C. "One-Dimensional GaAs Laser Arrays for CW Operation at 77°K." Journal of the Electrochemical Society. Vol. 117, No.3, March 1970, p. 95C. (Abstract only). No refs.
- (MATICK,RE 72) Matick, Richard E. "Review of Current Proposed Technologies for Mass Storage Systems." Proceedings of the IEEE. Vol. 60, No. 3, March 1972, pp. 266-289. 112 refs.
- (MATSUMURA,M 74) Matsumura, Masaru. "Speckle Noise Reduction by Random Phase Shifters." Japanese Journal of Applied Physics. Vol. 13, No. 3, March 1974, pp. 557-558. 5 refs.
- (MATSUSHITA,S 75) Matsushita, S., k. Sunago, and Y. Sakurai. "Thermomagnetic Writing in Gd-Co Sputtered Films." IEEE Transactions on Magnetics. Vol. MAG-11, No. 5, September 1975, pp. 1109-1111. 8 refs.
- (MAYDAN,D 70A) Maydan, Dan. "Acoustooptical Pulse Modulators," IEEE Journal of Quantum Electronics. Vol. QE-6, No. 1, January 1967, pp. 15-24. 16 refs.
- (MAYDAN,D 70B) Maydan, D. "Fast Modulator for Extraction of Internal Laser Power." Journal of Applied Physics. Vol. 41, No. 4, March 15, 1970, pp. 1552-1559. 18 refs.
- (MAYDAN,D 71) Maydan, D. "Micromachining and Image Recording on Thin Films by Laser Beams." The Bell System Technical Journal. Vol. 50, No. 6, July-August 1971, pp. 1761-1789. 13 refs.
- (MAYER,L 55) Mayer, Ludwig. "On Electron Mirror Microscopy." Journal of Applied Physics. Vol. 26, No. 10, October 1955, pp. 1228-1230. 8 refs.
- (MAYER,L 57) Mayer, Ludwig. "Electron Mirror Microscopy of Magnetic Domains." Journal of Applied Physics. Vol. 28, No. 9, September 1957, pp. 975-983. 13 refs.
- (MAYER,L 58A) Mayer, Ludwig. "Electron Mirror Microscopy of Patterns Recorded on Magnetic Tape." Journal of Applied Physics. Vol. 29, No. 4, April 1958, pp. 658-660. 8 refs.
- (MAYER,L 58B) Mayer, Ludwig. "Curie-Point Writing on Magnetic Film." Journal of Applied Physics. Vol. 29, No.6, June 1958, p. 1003. 2 refs.

- (MAYER,L 58C) Mayer, Ludwig. "Magnetic Writing with an Electron Beam." Journal of Applied Physics. Vol. 29, No. 10, October 1958, pp. 1454-1456. 4 refs.
- (MAYER,L 60A) Mayer, L. "Observations on MnBi Films during Heat Treatment." Journal of Applied Physics. Vol. 31, No. 2, February 1960, pp. 346-351. 10 refs.
- (MAYER,L 60B) Mayer, Ludwig. "Nucleation Experiments on Thin Magnetic MnBi Films." Journal of Applied Physics. Vol. 31 Suppl., No. 5, May 1960, pp. 384S-385S. 2 refs.
- (MCCAMY,CS 65) McCamy, C.S. "On the Information in a Microphotograph." Applied Optics. Vol. 4, No. 4, April 1965, pp. 405-411. 16 refs.
- (MCCOY,DS 78) McCoy, D.S. "The RCA 'SelectaVision' VideoDisc System." RCA Review. Vol. 39, No. 1, March 1978, pp. 7-13. No refs.
- (MCFARLAND,K 68) McFarland, K., and M. Hashiguchi. "Laser Recording Unit for High Density Permanent Digital Data Storage." Proceedings of the Fall Joint Computer Conference; December 9-11, 1968; San Francisco, California. Washington, D.C.: Thompson Book Company; 1968; Vol. 33: pp. 1369-1380. 5 refs.
- (MCGUIRE,TR 71) McGuire, T.R., G.F. Petrich, B.L. Olson, V.L. Moruzzi, and K.Y. Ahn. "Magnetic and Magneto-Optical Properties of Fe-Doped EuO Films." Journal of Applied Physics. Vol. 42, No. 4, March 15, 1971, pp. 1775-1777. 8 refs.
- (MCLEOD,J 81A) McLeod, Jonah. "Optical Disks Loom as Replacements for Tape." Electronic Design. Vol. 29, No. 201, September 30, 1981, pp. 97-103. No refs.
- (MCLEOD,J 81B) McLeod, Jonah. "Optical Disk Storage Technology---New Materials, New Methods." Optical Spectra. Vol. 15, No. 11, November, 1981, pp. 52-54. 6 refs.
- (MEE,CD 67) Mee, C.D., and G.J. Fan. "A Proposed Beam-Addressable Memory." IEEE Transactions on Magnetism. Vol. MAG-3, No. 1, March 1967, pp. 72-76. 15 refs.
- (MEGLA,GK 66) Megla, G.K. "Optical Properties and Applications of Photochromic Glass." Applied Optics. Vol. 5, No. 6, June 1966, pp. 945-959. 1 ref.
- (MEHTA,RR 71) Mehta, R.R. "Ferroelectric/Photoconductor Memory Device." Journal of Applied Physics. Vol. 42, No. 5, April 1971, pp. 1842-1845. 12 refs.

- (MELCHIOR,H 70) Melchior, Hans, Mahlon B. Fisher, and Frank R. Arams. "Photodetectors for Optical Communication Systems." Proceedings of the IEEE. Vol. 58, No. 10, October 1970, pp. 1466-1486. 159 refs.
- (MELCHIOR,H 72) Melchior, H. "Demodulation and Photodetection Techniques." Arecchi, F.T. and Schulz-DuBois, E.O., eds. Laser Handbook. Amsterdam, The Netherlands: North-Holland; 1972; Vol. 1: pp. 725-835. 329 refs.
- (MENNIE,D 79) Mennie, Don, assoc. ed. "Consumer Electronics: Personal and Plentiful." IEEE Spectrum. Vol. 16, No. 1, January 1979, pp. 62-66. No refs.
- (MENZEL,RW 81) Menzel, R.W. "Image Resolution of a Holographic System; Final Report. October 1, 1979 to July 30, 1980." Arnold Air Force Station, Tennessee: Arnold Engineering Development Center; July 1981. 29p. Available from NTIS, Springfield, Virginia; ADA102616. 23 refs.
- (MEYER,H 72) Meyer, H., D. Riekman, K.P. Schmidt, U.J. Schmidt, M. Rahlff, E. Schroder, and W. Thust. "Design and Performance of a 20-Stage Digital Light Beam Deflector." Applied Optics. Vol. 11, No. 8, August 1972, pp. 1732-1736. 7 refs.
- (MEZRICH,RS 69) Mezrich, R.S. "Curie-Point Writing of Magnetic Holograms on MnBi." Applied Physics Letters. Vol. 14, No. 4, February 15, 1969, pp. 132-134. 6 refs.
- (MEZRICH,RS 70A) Mezrich, Reuben S. "Reconstruction Effects in Magnetic Holography." IEEE Transactions on Magnetics. Vol. MAG-6, No. 3, September 1970, pp. 537-541. 6 refs.
- (MEZRICH,RS 70B) Mezrich, R.S. "Magnetic Holography." Applied Optics. Vol. 9, No. 10, October 1970, pp. 2275-2279. 12 refs.
- (MICHIRON,F 72) Micheron, F., and G. Bismuth. "Electrical Control of Fixation and Erasure of Holographic Patterns in Ferroelectric Materials." Applied Physics Letters. Vol. 20, No. 2, January 15, 1972, pp. 79-81. 8 refs.
- (MICHIRON,F 74A) Micheron, F., C. Mayeux, and J.C. Trotier. "Electrical Control in Photoferroelectric Materials for Optical Storage." Applied Optics. Vol. 13, No. 4, April 1974, pp. 784-787. 17 refs.

- (MICHERON,F 74B) Micheron, F., J.M. Rouchon, and M. Vergnolle. "Optical Recording of Digital Data in PLZT Ceramics." *Applied Physics Letters*. Vol. 24, No. 12, June 15, 1974, pp. 605-607. 4 refs.
- (MIDDELHOEK,S 70) Middelhoek, S. "Projection Masking, Thin Photo-resist Layers and Interference Effects." *IBM Journal of Research and Development*. Vol. 14, No. 2, March 1970, pp. 117-124. 8 refs.
- (MIKAELIANE,AL 70) Mikaeliane, A.L., and V.I. Bobrinev. "Holographic Memory Devices." *Opto-Electronics*. Vol. 2, No. 4, November 1970, pp. 193-199. 18 refs.
- (MILLER,RC 79) Miller, R.C., R.H. Willens, H.A. Watson, L.A. D'Asaro, and M. Feldman. "A Gallium-Arsenide Laser Facsimile Printer." *The Bell System Technical Journal*. Vol. 58, No. 9, November 1979, pp. 1909-1998. 62 refs.
- (MIMURA,Y 76) Mimura, Y., N. Imamura, and T. Kobayashi. "Magnetic Properties and Curie Point Writing in Amorphous Metallic Films." *IEEE Transactions on Magnetics*. Vol. MAG-12, No. 6, November 1976, pp. 779-781. 8 refs.
- (MINNAJA,N 73) Minnaja, N., P.L. Boschetti, and D. Chen. "Magnetic Field Effect in Thermomagnetic Recording." *American Institute of Physics Conference Proceedings*. Vol. 10, Part 2, 1973, pp. 1435-1438. 10 refs.
- (MITSUHASHI,Y 76) Mitsuhashi, Y., T. Morikawa, K. Sakurai, A. Seko, and J. Shimada. "Self-Coupled Optical Pickup." *Optics Communications*. Vol. 17, No. 1, April 1976, pp. 95-97. 4 refs.
- (NAKADA,O 74) Nakada, Osamu, Naoki Chinone, Satoshi Nakamura, Hisao Nakashima, and Ryoichi Ito. "Continuous Operation over 2500 h of Double Heterostructure Laser Diodes with Output Powers More than 80 mW." *Japanese Journal of Applied Physics*. Vol. 13, No. 9, September 1974, pp. 1485-1486. 11 refs.
- (NAKAMURA,JK 68) Nakamura, J.K., and S.E. Schwarz, "Synchronous Detection vs Pulse Counting for Sensitive Photomultiplier Detection Systems." *Applied Optics*. Vol. 7, No. 6, June 1968, pp. 1073-1078. 16 refs.
- (NARUSE,Y 78) Naruse, Yosuke, and Akio Ohkoshi. "A New Optical Videodisc System with One Hour Playing Time." *IEEE Transactions on Consumer Electronics*. Vol. CE-24, No. 3, August 1978, pp. 453-457. 8 refs.

- (NEALE,RG 73) Neale, R.G., and John A. Aseltine. "The Application of Amorphous Materials to Computer Memories." IEEE Transactions on Electron Devices. Vol. ED-20, No. 2, February 1973, pp. 195-205. 1 ref.
- (NEARY,DR 82) Neary, Dennis R. "Optical Disk: Part of Tomorrow's Media Picture." Modern Office Procedures. Vol. 27, No. 2, February 1982, pp. 52-57. No refs.
- (NELSON,RH 74) Nelson, R.H., A. Vander Lugt, and R.G. Zech. "Holographic Data Storage and Retrieval." Optical Engineering. Vol. 13, No. 5., September-October 1974, pp. 429-434. No refs.
- (NELSON,TJ 68) Nelson, Thomas J. "Switching Speed of GdIG Crystals near the Compensation Temperature." IEEE Transactions on Magnetics. Vol. MAG-4, No. 3, September 1968, pp. 421-425. 8 refs.
- (NEUGEBAUER,CA 59) Neugebauer, C.A. "Saturation Magnetization of Nickel Films of Thickness Less Than 100A." Physical Review. Vol. 116, No. 6, December 15, 1959, pp. 1441-1446. 23 refs.
- (NIJBOER,BR 57) Nijboer, B.R.A., and F.W. DeWette. "On the Calculation of Lattice Sums." Physica. Vol. 23, No. 4, April 1957, pp. 309-321. 15 refs.
- (NISENSEN,P 72) Nisenson, Peter, and Sato Iwasa. "Real Time Optical Processing with $\text{Bi}_{12}\text{SiO}_{20}$ PROM." Applied Optics. Vol. 11, No. 12, December 1972, pp. 2760-2767. 9 refs.
- (NOGUCHI,M 82) Noguchi, Masaru. "Efficient Use of Laser Power in Heat-Mode Recording." Applied Optics. Vol. 21, No. 15, August 1, 1982, pp. 2665-2666. 1 ref.
- (OHTA,Y 78) Ohta, Y., and M. Sakaguchi. "Improvement in the Acoustooptic Modulator for Wideband Laser Recording Systems." Proceedings of the Technical Program: Electro-Optical/Laser 78 Conference and Exposition; September 19-21, 1978; Boston, Massachusetts. Chicago, Illinois: Industrial and Scientific Conference Management; 1978; pp. 381-386. 4 refs.

- (OLIJHOEK,JF 80) Olijhoek, J.F., Th. H. Peek, and C.A. Wesdrop.
"Mastering for Philips Optical Disk Systems." Kroon, D.J., ed.
Proceedings of the 1980 European Conference on Optical
Systems and Applications; September 23-25, 1980; Utrecht,
The Netherlands. Bellingham, Washington: Society of
Photo-Optical Instrumentation Engineers; 1980; Vol. 236:
pp. 464-466. 4 refs.
- (ONO,Y 72) Ono, Yuzo, Sotaro Esho, and Morimasa Nagao.
"Dynamic Observation of Thermomagnetic Writing on
MnBi Films." IEEE Transactions on Magnetism. Vol.
MAG-8, No. 3, September 1972, pp. 492-494.
3 refs.
- (OUCHI,K 72) Ouchi, Kazuhiro, and Shun-Ichi Iwasaki. "Thermo-
magnetic Behavior of Hard Magnetic Films." IEEE
Transactions on Magnetism. Vol. MAG-8, No. 3, September
1972, pp. 473-475. 6 refs.
- (OVSHINSKY,SR 72) Ovshinsky, S.R. and P.H. Klose, "Imaging in Amorphous
Materials by Structural Alteration." Journal of Non-Crystalline
Solids. Vol. 8, No. 10, June 1972, pp. 892-898.
11 refs.
- (OWECHKO,Y 79) Owechko, Y., and A.R. Tanguay, Jr. "Effects
of Charge Dynamics and Device Parameters on the
Resolution of Electrooptic Spatial Light Modu-
lators." Tracy, John, ed. Proceedings of the
Society of Photo-Optical Instrumentation
Engineers: Active Optical Devices; August 27-28,
1979; San Diego, California. Bellingham,
Washington: Society of Photo-Optical Instru-
mentation Engineers; 1979; Vol. 202: pp. 110-121.
15 refs.
- (PALERMO,P 77) Palermo, P., A. Korpel, G. Dickinson, and W. Watson.
"Video Disc Mastering and Replication." Optics and
Laser Technology. Vol. 9, No 4, August 1977, pp. 169-174.
17 refs.
- (PALM,CS 79) Palm, C.S., S.E. Weaver, B.W. Binns, and C.C. Mercer.
"Transparent Electrophotographic Film for High-Resolution
Holographic Recorders." Jamberdino, Albert A., ed.
Proceedings of the Society of Photo-Optical Instrumentation
Engineers: Laser Recording and Information Handling;
August 27-28, 1979; San Diego, California. Bellingham,
Washington: Society of Photo-Optical Instrumentation Engineers;
1979; Vol. 200: pp. 27-38. 41 refs.

- (PASKO,JG 79) Pasko, J.G., J. Tracy, and W. Elser. "Liquid Crystal Infrared Modulation." Tracy, John, ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Active Optical Devices; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 202: pp. 82-89. 10 refs.
- (PATELA,AM 80) Patela, Arvind M. "Error Recovery Scheme for the IBM 3850 Mass Storage System." IBM Journal of Research and Development. Vol. 24, No. 1, January 1980, pp. 32-42. 10 refs.
- (PATLACH,AM 72) Patlach, A.M. "Design Considerations for a Magneto-optic Cryogenic Film Memory." IBM Journal of Research and Development. Vol. 16, No.5, May 1972, pp. 313-319. 10 refs.
- (PENNINGTON,KS 71) Pennington, K.S. "Holographic Parameters and Recording Materials." R.J. Pressley, ed. Handbook of Lasers. Cleveland, Ohio: Chemical Rubber Company, 1971; pp. 549-591. 47 refs.
- (PEPPERL,R 77) Pepperl, R., and I. Sander. "High Density Direct Read After Write (DRAW) Recording." Optica Acta. Vol. 24, No. 4, April 1977, pp. 427-431. 4 refs.
- (PIERSON,PB 79) Pierson, Paul B. "Design Considerations for a Flexible High-Resolution Film Recording System." Jamberdino, Albert A., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Recording and Information Handling; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 200: pp. 100-113. No refs.
- (PINNOW,DA 70) Pinnow, Douglas A. "Guide Lines for the Selection of Acoustooptic Materials." IEEE Journal of Quantum Electronics. Vol. QE-6, No. 4, April 1970, pp. 223-238. 44 refs.
- (PIZZO,RJ 80) Pizzo, Ronald J. "Acousto-Optic and Electro-Optic Modulator Applications." Jamberdino, Albert A., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Scanning and Recording for Advanced Image and Data Handling; April 8-9, 1980; Washington, D.C. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1980; Vol. 222: pp. 19-27. 2 refs.

5.2 GENERAL LITERATURE

5.2 GENERAL LITERATURE

- (PLATT, JR 61) Platt, John R. "Electrochromism, A Possible Change of Color Producing in Dyes by an Electric Field." *Journal of Chemical Physics*. Vol. 34, No. 3, March 1961, pp. 862-863. 6 refs.
- (RAJCHMAN, JA 70A) Rajchman, Jan A. "Promise of Optical Memories." *Journal of Applied Physics*. Vol. 41, No. 3, March 1, 1970, pp. 1376-1383. 20 refs.
- (RAJCHMAN, JA 70B) Rajchman, J.A. "Holographic Optical Memory--An Optical Read-Write Mass Memory." *Applied Optics*. Vol. 9, No. 10, October 1970, pp. 2269-2271. 10 refs.
- (RAJCHMAN, JA 72) Rajchman, Jan A. "Promise of Optical Memories." *Journal of Vacuum Science Technology*. Vol. 9, No. 4, July-August 1972, pp. 1151-1159. 31 refs.
- (RALSTON, LM 81) Ralston, Lynda M. "Erasable Optical Disk Materials Evaluation." Beiser, Leo, ed. *Proceedings of the Society of Photo-Optical Instrumentation Engineers: Advances in Laser Scanning Technology*; August 27-28, 1981; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 299: pp. 53-56. 5 refs.
- (RANCOURT, JD 81) Rancourt, James D. "Design and Production of Tellurium Optical Data Disks." Beiser, Leo, ed. *Proceedings of the Society of Photo-Optical Instrumentation Engineers: Advances in Laser Scanning Technology*; August 27-28, 1981; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 299: pp. 57-63. 5 refs.
- (RATAJCZAK, H 70) Ratajczak, H., and Z. Sczaniecki. "Magnetic Properties of Mn_5Ge_3 Thin Films." *Physica Status Solidi*. Vol. 1, No. 1, 1970, pp. 171-176. 7 refs.
- (REDDERSEN, BR 80A) Reddersen, B.R., and L.M. Ralston. "Digital Optical Data Storage and Retrieval." *Optical Engineering*. Vol. 19, No. 2, March/April 1980, pp. 199-204. 17 refs.
- (REDDERSEN, BR 80B) Reddersen, Brad R. "High-Speed Archival Optical Mass-Memory Design." Jamberdino, Albert A., ed. *Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Scanning and Recording for Advanced Image and Data Handling*; April 8-9, 1980; Washington, D.C. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1980; Vol. 222: pp. 122-127. No refs.

- (ROBERTS,BW 54) Roberts, B.W., and C.P. Bean. "Large Magnetic Kerr Rotation in BiMn Alloy." *Physical Review*. Vol. 96, No. 6, December 15, 1954, pp. 1494-1496. 4 refs.
- (ROBERTS,BW 56) Roberts, B.W. "Neutron Diffraction Study of the Structures and Magnetic Properties of Manganese Bismuthide." *Physical Review*. Vol. 104, No. 3, November 1, 1956, pp. 607-616. 22 refs.
- (ROBERTS,HN 72) Roberts, H.N. "Strain-Biased PLZT Input Devices (Page Composers) for Holographic Memories and Optical Data Processing." *Applied Optics*. Vol. 11, No. 2, February 1972, pp. 397-404. 23 refs.
- (ROBERTS,HN 74) Roberts, H.N., J.W. Watkins, and R.H. Johnson. "High Speed Holographic Digital Recorder." *Applied Optics*. Vol. 13, No. 4, April 1974, pp. 841-856. 15 refs.
- (ROBERTSON,JM 75) Robertson, J.M., P.K. Larsen, and P.F. Bongers. "Epitaxially Grown Bi-Substituted Iron Garnet Films for Magneto-Optic Devices." *IEEE Transactions on Magnetics*. Vol. MAG-11, No. 5, September 1975, pp. 1112-1114. 13 refs.
- (ROLPH,S 80) Rolph, Sarah. "The Disk Revolution." *Datamation*. Vol. 26, No. 2, February 1980, pp. 147-150. No refs.
- (ROSENKRANTZ,LJ 79) Rosenkrantz, L. Jay, and J. Leon Yang. "Light-Emitting Diode (LED) Arrays for Optical Recorders." Jamberdino, Albert A., ed. *Proceedings of the Society of Photo-Optical Recording and Instrumentation Engineers: Laser Recording and Information Handling*; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 200: pp. 144-150. No refs.
- (ROSS,DL 78) Ross, D.L. "Coatings for Video Disks." *RCA Review*. Vol. 39, No. 1, March 1978, pp. 136-161. 11 refs.
- (RULL,H 75) Rull, H. "Holographic Techniques for Recording of Electrical Signals on Moving Storage Media." *Optical Engineering*. Vol. 14, No. 3, May-June 1975, pp. 232-236. 10 refs.
- (RULL,H 76) Rull, H., and K. Kempter. "Recording of One-Dimensional Holograms in MnBi Films." *Optics Communications*. Vol. 16, No. 1, January 1976, pp. 83-85. 14 refs.
- (RUSSELL,JT 76) Russell, J.T. and R.A. Walker. "Optical Digital Recording." *Optical Engineering*. Vol. 15, No. 1, January-February 1976, pp. 21-23. 4 refs.

- (RYKALIN, NN 67) Rykalin, N.N., A.A. Uglov, and N.I. Makarov. "Heating of a Two-Layer Plate in Laser-Beam Welding." Soviet Physics-Doklady. Vol. 11, No. 7, January 1967, pp. 632-634. 3 refs.
- (SALANSKY, NM 74) Salansky, N.M. "Some Magneto-optical and HF Properties of Magnetic Films." IEEE Transactions on Magnetics. Vol. MAG-10, No. 4, December 1974, pp. 1033-1038. 28 refs.
- (SANDERS, LS 82) Sanders, Lester S. "Pulse Codes in Serial Data Communications." Computer Design. Vol. 21, No. 1, January 1982, pp. 203-210. No refs.
- (SAWATZKY, E 71A) Sawatzky, E. "Magneto-Optical Properties of Sputtered Mn_5Ge_3 Films." Journal of Applied Physics. Vol. 42, No. 4, March 15, 1971, pp. 1706-1707.
- (SAWATZKY, E 71B) Sawatzky, Erich. "Magnetic and Magneto-optical Properties of Sputtered Fe_5Si_3 Films." IEEE Transactions on Magnetics. Vol. MAG-7, No. 3, September 1971, pp. 374-376. 10 refs.
- (SAWATZKY, E 71C) Sawatzky, Erich, and G. Byron Street. "The Structural Stability and Magneto-optical Properties of the NiAs Phase of the Manganese-Antimony System." IEEE Transactions on Magnetics. Vol. MAG-7, No. 3, September 1971, pp. 377-380. 9 refs.
- (SCHMIDT, U 69) Schmidt, U., and W. Thust. "A 10-Stage Digital Light Beam Deflector." Opto-Electronics. Vol. 1, No. 1, February 1969, pp. 21-23. 8 refs.
- (SCHNEIDER, I 70) Schneider, I., M. Marrone, and M.N. Kabler. "Dichroic Absorption of M Centers as a Basis for Optical Information Storage." Applied Optics. Vol. 9, No. 5, May 1970, pp. 1163-1166. 12 refs.
- (SCHOOT, CJ 73) Schoot, C.J., J.J. Ponjee, H.T. van Dam, R.A. van Doorn, and P.T. Bolwijn. "New Electrochromic Memory Display." Applied Physics Letters. Vol. 23, No. 2, July 15, 1973, pp. 64-65. 4 refs.
- (SCHULDT, S 71) Schuldt, S., and D. Chen. "Wall Stability of Cylindrical (Bubble) Domains in Thin Films and Platelets." Journal of Applied Physics. Vol. 42, No. 5, April 1971, pp. 1970-1976. 6 refs.
- (SCOTT, GB 76) Scott, G.B., and D.E. Lacklison. "Magneto-optic Properties and Applications of Bismuth Substituted Iron Garnets." IEEE Transactions on Magnetics. Vol. MAG-12, No. 4, July 1976, pp. 292-311. 66 refs.

- (SEYBOLT,AU 56) Seybolt, A.U., H. Hansen, B.W. Roberts, and P. Yurcisin. "Contribution to the Bi-Mn System." *Journal of Metals*. Vol. 8, No. 1, January 1956, pp. 606-610. 8 refs.
- (SHAHBENDER,R 74) Shahbender, Rabah. "Novel Magneto-Optic Systems." *IEEE Transactions on Magnetics*. Vol. MAG-10, No. 3, September 1974, pp. 575-580. 22 refs.
- (SHANKOFF,TA 68) Shankoff, T.A. "Phase Holograms in Dichromated Gelatin." *Applied Optics*. Vol. 7, No. 10, October 1968, pp. 2101-2105. 5 refs.
- (SHELTON,CF 73) Shelton, Carl F. "Magneto-optical Beam Addressable Storage Using MnGaGe and GdCo." *IEEE Transactions on Magnetics*. Vol. MAG-9, No. 3, September 1973, pp. 398-401. 26 refs.
- (SHELTON,CF 74) Shelton, Carl F., and Byron R. Brown. "Advances in Optical Storage--An Alternate Technology?" *IEEE Computer Society International Conference: 8th Compcon*; February 26-28, 1974; San Francisco, California. New York, New York: IEEE. pp. 97-98. 8 refs.
- (SHERIDON,NK 72) Sheridan, N.K. "The Ruticon Family of Erasable Image Recording Devices." *IEEE Transactions on Electron Devices*. Vol. ED-19, No. 9, September 1972, pp. 1003-1010. 20 refs.
- (SHERWOOD,RC 71) Sherwood, R.C., E.A. Nesbitt, J.H. Wernick, D.D. Bacon, A.J. Kertzig, and R. Wolfe. "MnAlGe Films for Magneto-Optic Applications." *Journal of Applied Physics*. Vol. 42, No. 4, March 15, 1971, pp. 1704-1705. 8 refs.
- (SHIBATA,K 72) Shibata, Kenzo, Takeshi Shinohara, and Hiroshi Watanabe. "Magnetic Properties of a New Ferromagnetic Compound MnGaGe." *Journal of the Physical Society of Japan*. Vol. 32, No. 5, May 1972, p. 1431. 3 refs.
- (SHUMATE,PW 71) Shumate, Paul W. Jr. "Magneto-optic-Measurement Techniques for Magnetic-Bubble Materials." *IEEE Transactions on Magnetics*. Vol. MAG-7, No. 3, September 1971, pp. 586-590. 34 refs.
- (SKURNICK,E 79) Skurnick, Eugene, Winston Davidian, and Michael Greenebaum. "Acousto-Optic Deflector Performance at 10.6 μ m." Tracy, John, ed. *Proceedings of the Society of Photo-Optical Instrumentation Engineers: Active Optical Devices*; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 202: pp. 56-62. No refs.

- (SMITH,AW 73) Smith, A.W. "Optical Storage in VO₂ Films." Applied Physics Letters. Vol. 23, No. 8, October 15, 1973, pp. 437-438. 9 refs.
- (SMITH,DO 67) Smith, D.O. "Magnetic Films and Optics in Computer Memories." IEEE Transactions on Magnetism. Vol. MAG-3, No. 3, September 1967, pp.433-452. 43 refs.
- (SMITH,K 80) Smith, Kevin. "Document Storage: A Billion-Dollar Prize." Electronics. Vol. 53, No. 23, October 23, 1980, pp. 95-96. No refs.
- (SMITH,PW 70) Smith, Peter W. "Mode-Locking of Lasers." Proceedings of the IEEE. Vol. 58, No. 9, September 1970, pp. 1342-1357. 193 refs.
- (SMITH,TW 81) Smith, T.W. "The Role of Polymers in Optical Recording Media." DiStefano, T.H. ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Optical Storage Materials; November 18, 1980; Ossining, New York. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1981; Vol. 263: pp. 100-104. 33 refs.
- (SMITS,FM 67) Smits, F.M., and L.E. Gallaher. "Design Considerations for a Semipermanent Optical Memory." The Bell System Technical Journal. Vol. 46, No. 6, July-August 1967, pp. 1267-1277. 12 refs.
- (SOROKIN,PP 79) Sorokin, P.P. "Contributions of IBM to Laser Science--1960 to the Present." IBM Journal of Research and Development. Vol. 23, No. 5, September 1979, pp. 476-489. 184 refs.
- (SPITZ,E 72) Spitz, E., L. D'Auria, and J.P. Huignard. "Optical Storage of Digital Information." IEEE Transactions on Magnetism. Vol. MAG-8, No. 3, September 1972, p. 473. (Abstract). 2 refs.
- (STARK,H 71) Stark, H., "Some Film-Noise Measurements by Diffraction of Coherent Light." Applied Optics. Vol. 10, No. 2, February 1971, pp. 333-337. 4 refs.
- (STEWART,WC 70) Stewart, W.C., and L.S. Cosentino. "Optics for a Read-Write Holographic Memory." Applied Optics. Vol. 9, No. 10, October 1970, pp. 2271-2275. 9 refs.
- (STEWART,WC 72) Stewart, W.C., A.H. Firester, and E.C. Fox. "Random Phase Data Masks: Fabrication Tolerances and Advantages of Four Phase Level Masks." Applied Optics. Vol. 11, No. 3, March 1972, pp. 604-608. 4 refs.

- (STEWART,WC 73) Stewart, W.C., R.S. Mezrich, L.S. Cosentino, E.M. Nagle, F.S. Wendt, and R.D. Lohman. "An Experimental Read-Write Holographic Memory." RCA Review. Vol. 34, No.1, March 1973, pp. 3-44. 14 refs.
- (STOFFEL,AM 70) Stoffel, A.M., and J. Schneider. "Magneto-Optic Properties of MnAs Films." Journal of Applied Physics. Vol. 41, No. 3, March 1, 1970, pp. 1405-1407. 4 refs.
- (STRAND,D 80) Strand, David. "Optical Recording with Amorphous Materials." Jamberdino, Albert A., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Scanning and Recording for Advanced Image and Data Handling; April 8-9, 1980; Washington, D.C. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1980; Vol. 222: pp. 70-74. 16 refs.
- (STRAND,D 81) Strand, David. "Optical Recording with Amorphous Materials." Optical Engineering. Vol. 20, No. 3, May-June 1981, pp. 379-381. 16 refs.
- (STREET,GB 72) Street, G. Bryan. "The Stability of EuO Films Doped with Iron and Europium." IEEE Transactions on Magnetics. Vol. MAG-8, No. 1, March 1972, pp. 45-47. 9 refs.
- (STREET,J 80) Street, Jules. "Video Disc Systems Come of Age." Electro-Optical Systems Design. Vol. 12, No. 12, December 1980, pp. 31-37. 1 ref.
- (STREHLOW,WH 74) Strehlow, W.H., R.L. Dennison, and J.R. Packard. "Holographic Data Store." Journal of the Optical Society of America. Vol. 64, No. 4, April 24, 1974, pp. 543-544. No refs.
- (SUITS,JC 66) Suits, J.C., B.E. Argyle, and M.J. Freiser. "Magneto-Optical Properties of Materials Containing Divalent Europium." Journal of Applied Physics. Vol. 37, No. 3, March 1, 1966, pp. 1391-1397. 23 refs.
- (SUITS,JC 68) Suits, J.C., T.R. McGuire, and M.W. Schafer. "Magneto-optical Properties of Cobalt Substituted RbNiF₃." IEEE Transactions on Magnetics. Vol. MAG-4, No. 3, September 1968, pp. 425-426. (Digest). 4 refs.
- (SUITS,JC 71) Suits, J.C., Kenneth Lee, H.F. Winters, P.B.P. Phipps, and D.F. Kyser. "Annealing Study of EuO Films Doped with Iron and Europium." Journal of Applied Physics. Vol. 42, No. 4, March 15, 1971, pp. 1777-1778. 7 refs.

- (SUITS,JC 72) Suits, James C. "A Review of Some Recent Work in Magneto-optical Recording." IEEE Transactions on Magnetics. Vol. MAG-8, No. 3, September 1972, pp. 421-425. 26 refs.
- (SUNAGO,K 76) Sunago, K., S. Matsushita, and Y. Sakurai. "Thermomagnetic Writing in Tb-Fe Films." IEEE Transactions on Magnetics. Vol. MAG-12, No. 6, November 1976, pp. 776-778. 12 refs.
- (SUTHERLIN,KK 74) Sutherlin, K.K., J.P. Lauer, and R.W. Olenick. "Holoscan: A Commercial Holographic ROM." Applied Optics. Vol. 13, No. 6, June 1974, pp. 1345-1354. 18 refs.
- (SUZUKI,T 70) Suzuki, Takeo. "Discharge Current Noise in He-Ne Laser and Its Suppression." Japanese Journal of Applied Physics. Vol. 9, No. 3, March 1970, pp. 309-317. 24 refs.
- (TAKEDA,Y 74) Takeda, Y. "Digital Spatial Modulators." Applied Optics. Vol. 13, No. 4, April 1974, pp. 825-831. 13 refs.
- (TANAKA,M 72) Tanaka, Masao, Takeshi Ito, and Yasuro Nishimura. "Diffraction Efficiency of Magnetic Hologram." IEEE Transactions on Magnetics. Vol. MAG-8, No. 3, September 1972, pp. 523-525. 2 refs.
- (TERAO,M 79) Terao, M., K. Shigematsu, M. Ojima, S. Horigome, Y. Taniguchi, and S. Yonezawa. "New Recording Thin Film for Optical Video Disk." Digest of Technical Papers: 1979 IEEE/OSA Conference on Laser Engineering and Applications; May 30-June 1, 1979; Washington, D.C. New York: Institute of Electrical and Electronic Engineers; 1979; pp. 103-104. 4 refs.
- (THAXTER,JB 69) Thaxter, J.B. "Electrical Control of Holographic Storage in Strontium-Barium Niobate." Applied Physics Letters. Vol. 15, No. 7, October 1, 1969, pp. 210-212. 6 refs.
- (THAXTER,JB 74) Thaxter, J.B., and M. Kestigian. "Unique Properties of SBN and Their Use in a Layered Optical Memory." Applied Optics. Vol. 13, No. 4, April 1974, pp. 913-924. 19 refs.
- (THORNTON,JR 69) Thornton, J. Ronald, William D. Fountain, Graham W. Flint, and Thomas G. Crow. "Properties of Neodymium Laser Materials." Applied Optics. Vol. 8, No. 6, October 1968, pp. 1087-1102. 88 refs.

- (TITLE,AM 79) Title, A.M., and W.J. Rosenberg. "Tunable Birefringent Networks." Tracy, John, ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers; Active Optical Devices; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 202: pp. 47-53. 6 refs.
- (TOGAMI,Y 78) Togami, Yuji. "Stability of Small Bits Written in Amorphous GdCo Thin Films." Applied Physics Letters. Vol. 32, No. 10, May 15, 1978, pp. 673-675. 3 refs.
- (TOGAMI,Y 82) Togami, Y., K. Kobayashi, M. Kajiura, K. Sato, and T. Teranishi. "Amorphous, GdCo Disk for Thermomagnetic Recording." Journal of Applied Physics. Vol. 53, No. 3, March 1982, pp. 2335-2337. 7 refs.
- (TOLKSDORF,W 75) Tolksdorf, W. "Growth and Properties of Garnet Films for Storage Application." IEEE Transactions on Magnetics. Vol. MAG-11, No. 5, September 1975, pp. 1074-1078. 30 refs.
- (TOMLINSON,WJ 70) Tomlinson, W.J., I.P. Kaminow, E.A. Chandross, R.L. Fork, and W.T. Silfvast. "Photoinduced Refractive Index Increase in Poly(Methylmethacrylate) and its Applications." Applied Physics Letters. Vol. 16, No. 12, June 15, 1970, pp. 486-489. 8 refs.
- (TOMLINSON,WJ 72) Tomlinson, W.J., E.A. Chandross, R.L. Fork, C.A. Pryde, and A.A. Lamola. "Reversible Photodimerization: A New Type of Photochromism." Applied Optics. Vol. 11. No. 3, March 1972, pp. 533-548. 30 refs.
- (TOROK,EJ 78) Torok, E.J., D.L. Fleming, T. R. Johansen, J.A. Krawczak, and G.L. Nelson. "Magneto-optic Color Effects in Bismuth Garnet Domains." IEEE Transactions on Magnetics. Vol. MAG-14, No. 1, January 1978, pp. 31-32. 3 refs.
- (TREVELYAN,B 69A) Trevelyan, B. "The Electro-Optic Effect in Proustite." Opto-Electronics. Vol. 1, No. 1, February 1969, pp. 9-12. 7 refs.
- (TREVELYAN,B 69B) Trevelyan, B. "The Acoustic Properties of Proustite." Opto-Electronics. Vol. 1, No. 1, February 1969, pp. 61-62. 3 refs.
- (TREVES,D 67) Treves, D. "Magneto-Optic Detection of High-Density Recordings." Journal of Applied Physics. Vol. 38, No. 3, March 1, 1967, pp. 1192-1196. 6 refs.

- (TREVES,D 69) Treves, D., R.P. Hunt, and B. Dickey. "Laser-Beam Recording on a Magnetic Film." *Journal of Applied Physics*. Vol. 40, No. 3, March 1, 1969, pp. 972-973. 14 refs.
- (TSUJIYAMA,B 72) Tsujiyama, Bunjiro, Shizuka Yoshii, and Katsumi Nishiguchi. "Magnetooptic Disk Utilizing MnBi Thin Films." *IEEE Transactions on Magnetism*. Vol. MAG-8, No. 3, September 1972, pp. 603-605. 5 refs.
- (TSUKAMOTO,H 74) Tsukamoto, H., A. Ishii, A. Ishida, M. Sumi, and N. Uchida. "Holographic Information Retrieval System." *Applied Optics*. Vol. 13, No. 4, April 1974, pp. 869-874. 6 refs.
- (TSUNODA,Y 73) Tsunoda, Y., and Y. Takeda. "High-Density Image-Storage Holograms by Sampling and Random Phase Shifter Method." *Journal of Applied Physics*. Vol. 44, No.5, May 1973, pp. 2422-2423. 9 refs.
- (TSUNODA,Y 74) Tsunoda, Y., and Y. Takeda. "High Density Image-Storage Holograms by a Random Phase Sampling Method." *Applied Optics*. Vol. 13, No. 9, September 1974, pp. 2046-2051. 11 refs.
- (TSUNODA,Y 76) Tsunoda, Y., K. Tatsuno, K. Kataoka, and Y. Takeda. "Holographic Video Disk: An Alternative approach to Optical Video Disks." *Applied Optics*. Vol. 15, No. 6, June 1976, pp. 1398-1403. 9 refs.
- (TU,KN 72) Tu, King-Ning, Kie Y. Ahn, and James C. Suits. "Epitaxial Growth of EuS Films and Magnetooptical Properties." *IEEE Transactions on Magnetism*. Vol. MAG-8, No. 3, September 1972, pp. 651-653. 10 refs.
- (TUFTE,ON 73A) Tufte, O.N. and D. Chen. "Optical Techniques for Data Storage." *IEEE Spectrum*, Vol. 10, No. 2, February 1973, pp. 26-32. 7 refs.
- (TUFTE,ON 73B) Tufte, O.N., and D. Chen. "Optical Memories: Controlling the Beam." *IEEE Spectrum*. Vol. 10, No. 3, March 1973, pp. 48-53. 8 refs.
- (UCHIDA,N 70) Uchida, Naoya. "Acousto-Optical Pattern Display Using Pulse-Modulated Ultrasound." *Opto-Electronics*. Vol. 2, No. 1, February 1970, pp. 43-45. 6 refs.
- (ULMER,DE 79) Ulmer, David E. "High Throughput Landsat Imagery Film Recorder." Jamberdino, Albert A., ed. *Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Recording and Information Handling*; August 27-28, 1979;

San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 200: pp. 114-124. 6 refs.

- (UNGER,WK 70) Unger, W.K. "Ummagnetisierung Orientierter MnBi-Schichten. (Magnetization Reversal in Oriented MnBi Films.)" Zeitschrift fur Angewandte Physik. Vol. 30, No. 1, 1970, pp. 91-94. (In German). 5 refs.
- (UNGER,WK 71A) Unger, W.K., and M. Stolz. "Growth of MnBi Films on Mica." Journal of Applied Physics. Vol. 42, No. 3, March 1, 1971, pp. 1085-1089. 10 refs.
- (UNGER,WK 71B) Unger, W.K., and E. Wolfgang. "High-Resolution Studies of Magnetic Domains in MnBi Films." Journal of Applied Physics. Vol. 42, No. 11, October 1971, pp. 4221-4224. 13 refs.
- (UNGER,WK 71C) Unger, Willibald K., and Rainer Rath. "Thermomagnetic Writing in Homogeneous MnBi Films." IEEE Transactions on Magnetism. Vol. MAG-7, No. 4, December 1971, pp. 885-890. 9 refs.
- (UNGER,WK 71D) Unger, W.K. "Temperature Dependence of Magnetic Properties of Oriented MnBi Films." Czechoslovak Journal of Physics. Vol. B21, No. 4-S, 1971, pp. 566-569. 7 refs.
- (UNGER,WK 72A) Unger, W.K., E. Wolfgang, H. Harms, and H. Haudek. "Structural, Magnetic, and Magneto-Optic Properties of Ti-Substituted MnBi Films." Journal of Applied Physics. Vol. 43, No. 6, June 1972, pp. 2875-2880. 19 refs.
- (UNGER,WK 72B) Unger, W.K. "Experiments on Curie-Temperature Writing in $\text{Mn}_{0.8}\text{Ti}_{0.2}\text{Bi}$ Films." International Journal of Magnetism. Vol. 3, September 1972, pp. 43-46. 9 refs.
- (URBACH,JC 66) Urbach, J.C. and R.W. Meier. "Thermoplastic Xerographic Holography." Applied Optics. Vol. 5, No. 4, April 1966, pp. 666-667. 11 refs.
- (VANDERLUGT,A 73) Vander Lugt, A. "Design Relationships for Holographic Memories." Applied Optics. Vol. 12, No. 7, July 1973, pp. 1675-1685. 6 refs.
- (VELZEL,CH 78) Velzel, C.H.F. "Laser Beam Reading of Video Records." Applied Optics. Vol. 17, No. 13, July 1, 1978, pp. 2029-2036. 11 refs.

- (VOLKER,S 79) Volker, S., and R.M. McFarlane. "Photochemical Hole Burning in Free-Base Porphyrin and Chlorin in n-Alkane Matrices." IBM Journal of Research and Development. Vol. 23, No. 5, September 1979, pp. 547-555. 29 refs.
- (VONDERLINDE,D 74) von der Linde, D., A.M. Glass, and K.F. Rodgers. "Multi-photon Photorefractive Processes for Optical Storage in LiNbO₃." Applied Physics Letters. Vol. 25, No. 3, August 1, 1974, pp. 155-157. 9 refs.
- (VONGUTFELD,RJ 72) von Gutfeld, R.J., and P. Chaudhari. "Laser Writing and Erasing on Chalcogenide Films." Journal of Applied Physics. Vol. 43, No. 11, November 1972, pp. 4688-4692. 17 refs.
- (VOOS,H 80) Voos, Henry. "Implications of Holography for Information Systems." Journal of the American Society for Information Science. Vol. 31, No. 6, November 1980, pp. 449,451. 7 refs.
- (VOUMARD,C 77) Voumard, C., R. Salathe, and H. Weber. "Resonance Amplifier Model Describing Diode Lasers Coupled to Short External Resonators." Applied Physics. Vol. 12, No. 4, April 1977, pp. 369-378. 19 refs.
- (WALTER,GO 82) Walter, Gerald O. "Video Disc for the Storage of Office Documents and Engineering Graphics." Journal of Micrographics. Vol. 15, No. 1, January 1982, pp. 12-20. No refs.
- (WANG,S 71) Wang, Shyh, John D. Crow, and Manhar L. Shah. "Studies of Magneto-optic Effects for Thin-Film Optical-Waveguide Applications." IEEE Transactions on Magnetics. Vol. MAG-7, No. 3, September 1971, pp. 385-387. 8 refs.
- (WARING,RK 71) Waring, R.K., Jr. "CrO₂-Based Thermomagnetic Information Storage and Retrieval Systems." Journal of Applied Physics. Vol. 42, No. 4, March 15, 1971, pp. 1763-1768. 8 refs.
- (WARNAR,RB 79) Warnar, Robert B.J., Peter J. Calomeris, and Steve A. Recicar. "Computer Sciences and Technology: Computer Peripheral Memory System Forecast." National Bureau of Standards Special Publication. NBS SP 500-45, April 1979, 136p. 286 refs.
- (WARNER,AW 72) Warner, A. W., D.L. White, and W.A. Bonner. "Acousto-Optic Light Deflectors Using Optical Activity in Paratellurite." Journal of Applied Physics. Vol. 43, No. 11, November 1972, pp. 4489-4495. 10 refs.

- (WASHKO,S 76) Washko, S., J. Gerboc, and J. Orehotzky. "Magnetic and Crystallographic Properties of SmCo Base Ternary Alloys." IEEE Transactions on Magnetism. Vol. MAG-12, No. 6, November 1976, pp. 974-976. 6 refs.
- (WATKINS,JW 81) Watkins, J.W., N.A. Boudreaux, and T.H. Otten. "Large Archival Mass Memory System Using Optical Diskettes." Optical Engineering. Vol. 20, No. 3, May-June 1981, pp. 399-403. No refs.
- (WEAVER,JE 81) Weaver, J.E. and T.K. Gaylord. "Evaluation Experiments on Holographic Storage of Binary Data in Electro-Optic Crystals." Optical Engineering. Vol. 20, No.3, May-June 1981, pp. 404-411. 16 refs.
- (WEAVER,SE 80) Weaver, S.E., B.W. Binns, and L.M. Ralston. "Transparent Electrophotographic Film Evaluations for High Performance Data Recording." Jamberdino, Albert A., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Scanning and Recording for Advanced Image and Data Handling; April 8-9, 1980; Washington, D.C. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1980; Vol. 222: pp. 54-63. 7 refs.
- (WEITZMAN,C 70) Weitzman, Cay. "Optical Technologies for Future Computer System Design." Computer Design. Vol. 9, No. 4, April 1970, pp. 169-175. 21 refs.
- (WHITE,RM 80) White, Robert M. "Disk-Storage Technology." Scientific American. Vol. 243, No. 2, August 1980, pp. 138-148. No refs.
- (WHITMAN,RL 69) Whitman, R.L., and A. Korpel. "Probing of Acoustic Surface Perturbations by Coherent Light." Applied Optics. Vol. 8, No. 8, August 1969, pp. 1567-1576. 8 refs.
- (WIEDER,H 71A) Wieder, H., and H. Werlich. "Characteristics of GaAs Laser arrays Designed for Beam Addressable Memories." IBM Journal of Research and Development. Vol. 15, No. 7, July 1971, pp. 272-277. 9 refs.
- (WIEDER,H 71B) Wieder, H., S.S. Lavenberg, G.J. Fan, and R.A. Burn. "A Study of Thermomagnetic Remanence Writing on EuO." Journal of Applied Physics. Vol. 42, No. 9, August 1971, pp. 3458-3462. 2 refs.
- (WIEDER,H 73A) Wieder, Harold. "Superresolution in Optical Data Storage." Applied Physics Letters. Vol. 22, No. 10, May 15, 1973. pp.487-489. 4 refs.

- (WIEDER,H 73B) Wieder,Harold, and Robert A. Burn. "Effect of Internal Demagnetizing Fields on the Thermomagnetic Writing Process in MnAlGe Films." IEEE Transactions on Magnetics. Vol. MAG-9, No. 3, September 1973, pp. 471-474. 5 refs.
- (WIEDER,H 73C) Wieder, Harold, and Robert A. Burn. "Direct Comparison of Thermal and Magnetic Profiles in 'Curie Point' Writing on MnGaGe Films." Graham, C.D., Jr., and J.J. Rhyne, eds. AIP Conference Proceedings: Magnetism and Magnetic Materials-1972; Denver, Colorado. New York: American Institute of Physics; 1973; p. 1434. (Abstract). No refs.
- (WILLIAMS,HJ 51) Williams, H.J., F.G. Foster, and E.A. Wood. "Observation of Magnetic Domains by the Kerr Effect." Physical Review. Vol. 82, No. 1, April 1951, pp. 119-120. 3 refs.
- (WILLIAMS,HJ 57A) Williams, H.J., R.C. Sherwood, and O.L. Boothby. "Magnetostriiction and Magnetic Anisotropy of MnBi." Journal of Applied Physics. Vol. 28, No. 4, April 1957, pp. 445-447. 8 refs.
- (WILLIAMS,HJ 57B) Williams, H.J., R.C. Sherwood, F.G. Foster, and E.M. Kelley. "Magnetic Writing on Thin Films of MnBi." Journal of Applied Physics. Vol. 28, No. 10, October 1957, pp. 1181-1184. 9 refs.
- (WILLIAMS,HJ 58) Williams, H.J., and R.C. Sherwood. "Motion Pictures of Magnetic Writing on Thin Films of MnBi." Journal of Applied Physics. Vol. 29. No. 3, March 1958, p. 296. No refs.
- (WITTKE,JP 76) Wittke, J. P., I. Gorog, and A. H. Firester. "CW Semiconductor Injection Lasers in Information Handling Systems." Optical Engineering. Vol. 15, No. 2, March/April 1976, pp. 128-129. 5 refs.
- (WROBEL,JJ 82) Wrobel, J.J., A.B. Marchant, and D.G. Howe. "Laser Marking of Thin Organic Films." Applied Physics Letters. Vol. 40, No. 11, June 1, 1982, pp. 928-930. 9 refs.
- (WU,CK 79) Wu, Che-Kuang. "Photodichroic Silicate Glass Surface." Jamberdino, Albert A., ed. Proceedings of the Society of Photo-Optical Instrumentation Engineers: Laser Recording and Information Handling; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 200: pp.39-50. 9 refs.

- (YAMADA,K 82) Yamada, Koichi, Isao Watanabe, and Takahiro Kubo. "Investigations of Holes Machined by Laser Beam on Al and Cr Thin Films." *Journal of Applied Physics*. Vol. 53, No. 4, April 1982, pp. 3231-3236. 16 refs.
- (YEH,P 79) Yeh, Pochi. "Electro-Optic Tunable Filter Structures." Tracy, John, ed. *Proceedings of the Society of Photo-Optical Instrumentation Engineers: Active Optical Devices*; August 27-28, 1979; San Diego, California. Bellingham, Washington: Society of Photo-Optical Instrumentation Engineers; 1979; Vol. 202: pp. 2-15. 41 refs.
- (YOSHII,S 74) Yoshii, S., and K. Egashira. "Preparation and Thermomagnetic Properties of Ti-Doped MnBi Thin Films." *IEEE Transactions on Magnetics*. Vol. MAG-10, No. 3, September 1974, pp. 597-590. 7 refs.
- (YOUNG,CG 69) Young, C. Gilbert. "Glass Lasers," *Proceedings of the IEEE*. Vol. 57, No. 7, July 1969, pp. 1267-1289. 246 refs.
- (ZAKY,SG 72) Zaky, Safwat G. "Dynamic Response of Faraday Rotation." *IEEE Transactions on Magnetics*. Vol. MAG-8, No. 3, September 1972, pp. 528-530. 8 refs.
- (ZERNIKE,F 78) Zernike, F. "Performance of a Prototype Optical Disk Recorder." *Proceedings of the Technical Program: Electro-Optical/Laser 78 Conference and Exposition*; September 19-21, 1978; Boston, Massachusetts. Chicago, Illinois: Industrial and Scientific Conference Management; 1979; pp. 396-398. No refs.
- (ZOOK,JD 72) Zook, J.D., and T.C. Lee. "Geometrical Interpretation of Gaussian Beam Optics." *Applied Optics*. Vol. 11, No. 10, October 1972, pp. 2140-2145. 10 refs.
- (ZOOK,JD 74) Zook, J. David. "Light Beam Deflector Performance: A Comparative Analysis." *Applied Optics*. Vol. 13, No. 4, April 1974, pp. 875-887. 40 refs.

5.3 PATENT LITERATURE

- (USP ALBERTSON,CP 64) Albertson, Charles p., inventor; Grumman Aircraft Engineering Corporation, assignee. "Apparatus for Determining Thickness During Chemical Milling." U.S. patent 3,147,169. September 1, 1964. 4p. Cl. 156-345. 5 U.S. patents cited.
- (USP BEAN,LF 73) Bean, Lloyd F., inventor; Xerox Corporation, assignee. "Frost Imaging System." U.S. patent 3,764,311. October 9, 1973. 13p. Int. Cl. B41m 5/18, 5/20; G03g 13/12. 9 U.S. patents cited. 1 Foreign patent cited. 1 other reference.
- (USP BECKER,CH 69) Becker, Carl H., inventor; Precision Instrument Company, assignee. "Laser Recording Apparatus." U.S. patent 3,474,457. October 21, 1969. 9p. Int. Cl. G01d 15/10. 2 U.S. patents cited. 1 other reference.
- (USP BECKER,CH 72A) Becker, Carl H., inventor. "Laser Recording System Using Photomagnetically Magnetizable Storage Medium." U.S. patent 3,651,281. March 21, 1972. 9p. Int. Cl. G11b 7/24. 4 U.S. patents cited. 2 other references.
- (USP BECKER,CH 72B) Becker, Carl H., Harold R. Dell, Keith E. McFarland, Herman Wong, inventors; Chase Manhattan Capitol Corporation, assignee. "Laser Recording Medium." U.S. patent 3,665,483. May 23, 1972. 5p. Int. Cl. G01d 15/34. 10 U.S. patents cited.
- (USP BELL,AE 78) Bell, Alan Edward, Robert Alfred Bartolini, and Allen Bloom, inventors; RCA Corporation, assignee. "Overcoat Structure for Optical Video Disc." U.S. Patent 4,101,907. July 18, 1978. 6p. Int. Cl². G01D 15/34; G01D 15/10. 9 U.S. patents cited.
- (USP BELL,AE 80A) Bell, Alan E. and Robert A. Bartolini, inventors; RCA Corporation, assignee. "Recorder and Antireflective Record Blank Having an Optically Passive Transparent Layer." U.S. Patent 4,195,312. March 25, 1980. 5p. Int. Cl². G01D 15/34; G11B 7/00; H04N 5/76. 4 U.S. patents cited. 1 other reference.
- (USP BELL,AE 80B) Bell, Alan E. and Robert A. Bartolini, inventors; RCA Corporation, assignee. "Antireflective Information Record Having an Optically Passive Transparent Layer." U.S. Patent 4,195,313. March 25, 1980. 5p. Int. Cl². H04N 5/76; G11B 7/24. 5 U.S. patents cited. 1 other reference.
- (USP BELL,AE 80C) Bell, Alan E., inventor; RCA Corporation, assignee. "Optical Anti-Reflective Information Record." U.S. Patent 4,216,501. August 5, 1980. 6p. Int. Cl². H04N 5/76; G11B 7/24; G01D 15/34. 7 U.S. patents cited. 1 other reference.

- (USP BELL,AE 80D) Bell, Alan E., inventor; RCA Corporation, assignee. "Playback Information Record Using Phase Cancellation for Reading." U.S. Patent 4,233,626. November 11, 1980. 5p. Int. C1². H04N 5/76; G11B 7/24; G01D 15/34. 10 U.S. patents cited. 3 other references.
- (USP BELL,AE 81) Bell, Alan E., Robert A. Bartolini, Allen Bloom, and William J. Burke, inventors; RCA Corporation, assignee. "Thin Protective Overcoat Layer for Optical Video Disc." U.S. patent 4,300,143. November 10, 1981. 6p. Int. C1³. G01D 15/34. 14 U.S. patents cited. 2 Foreign patents cited. 1 other reference.
- (USP BLEIMAN,LW 76) Bleiman, Lewis W., inventor; Pertec Corporation, assignee. "Disk Positioning Means for a Flexible Magnetic Disk Drive Apparatus." U.S. patent 3,940,793. February 24, 1976. 5p. Int. C1². G11B 5/016; G11B 25/04. 1 U.S. patent cited. 1 Foreign patent cited.
- (USP BLOOM,A 77A) Bloom, Allen, Robert Alfred Bartolini, and Alan Edward Bell, inventors; RCA Corporation, assignee. "Ablative Optical Recording Medium." U.S. patent 4,023,185. May 10, 1977. 6p. Int. C1². G01D 15/34. 4 U.S. patents cited.
- (USP BLOOM,A 77B) Bloom, Allen and Ling Kong Hung, inventors; RCA Corporation, assignee. "Electro-Optic Device." U.S. patent 4,032,470. June 28, 1977. 6p. Int C1². C09K 3/34; G02F 1/13. 11 U.S. patents cited.
- (USP BLOOM,A 79) Bloom, Allen, inventor; RCA Corporation, assignee. "Electro-Optic Device." U.S. Patent 4,141,627. February 27, 1979. 5p. Int. C1². C09K 3/34; C02F 1/13. 11 U.S. patents cited. 1 Foreign patent cited. 4 other references.
- (USP BLOOM,A 80A) Bloom, Allen and Robert A. Bartolini, inventors; RCA Corporation, assignee. "Ablatable Medium for Optical Recording." U.S. Patent 4,218,689. August 19, 1980. 5p. Int. C1². G01D 15/34. 9 U.S. patents cited. 1 Foreign patent cited. 1 other reference.
- (USP BLOOM,A 80B) Bloom, Allen, William J. Burke, and Daniel L. Ross, inventors; RCA Corporation, assignee. "Optical Recording Medium." U.S. Patent 4,219,826. August 26, 1980. 5p. Int. C1². G01D 15/34. 5 U.S. patents cited. 2 other references.
- (USP BLOOM,A 80C) Bloom, Allen and William J. Burke, inventors; RCA Corporation, assignee. "Ablative Optical Recording Medium." U.S. Patent 4,241,355. 5p. Int. C1³. G01D 15/34. 3 U.S. patents cited.

- (USP BLOOM,A 80D) Bloom, Allen and Robert A. Bartolini, inventors; RCA Corporation, assignee. "Ablative Optical Recording Medium." U.S. Patent 4,242,689. December 30, 1980. 6p. Int. C1³. G01D 15/34. 2 U.S. patents cited.
- (USP BOULDIN,EW 81A) Bouldin, Eric W., and Jerome Drexler, inventors; Drexler Technology Corporation, assignee. "Reflective Data Storage Medium Made by Silver Diffusion Transfer." U.S. patent 4,278,756. July 14, 1981. 17 p. Int. C1.³ G03C 1/02; G03C 5/32; G01D 15/24; G01D 15/26. 12 U.S. patents cited. 2 other references.
- (USP BOULDIN,EW 81B) Bouldin, Eric W., and Jerome Drexler, inventors; Drexler Technology Corporation, assignee. "Reflective Data Storage Medium Made by Silver Diffusion Transfer in Silver-Halide Emulsion Incorporating Nuclei." U.S. patent 4,298,684. November 3, 1981. 14 p. Int. C1.³ G03C 5/54; G02B27/22. 8 U.S. patents cited.
- (USP BOULDIN,EW 81C) Bouldin, Eric W., and Jerome Drexler, inventors; Drexler Technology Corporation, assignee. "Method for Photographic Replication of Information on an Optical Data Storage Medium." U.S. patent 4,304,848. December 8, 1981. 12 p. Int. C1.³ G03C 1/76; G03C 5/26; G03C 5/54; G01D 15/14.
- (USP BRAAT,JJ 76) Braat, Josephus Johannes Maria Braat, inventor; U.S. Philips Corporation, assignee. "Record Carrier on which a Television Signal is Stored." U.S. patent 3,962,720. June 8, 1976. 14 p. Int. C1.² H04N 5/76; H04N 9/00. 3 U.S. patents cited.
- (USP BRADFORD,RS 69) Bradford, Robert S., inventor; Minnesota Mining and Manufacturing Company, assignee. "Recording System." U.S. patent 3,423,524. January 21, 1969. 10p. Int. C1. H04n 5/88. 2 U.S. patents cited.
- (USP BRAUDY,RS 76) Braudy, Robert Stewart and Hamilton Harvey Roberts, Jr., inventors; RCA Corporation, assignee. "Transfer Recording Process." U.S. patent 3,978,247. August 31, 1976. 5p. Int. C1². D06P 1/00. 4 U.S. patents cited. 1 other reference.
- (USP BRINCKMAN,EM 69) Brinckman, Eric Maris, inventor; Gevaert-Agfa, assignee. "Thermographic Method for Producing Thermostable Prints." U.S. patent 3,476,578. November 4, 1969. 7p. U.S. C1. X.R. 117-138.8; 117-155; 117-157; 250-65. 7 U.S. patents cited.

- (USP BROADBENT,KD 75) Broadbent, Kent D., inventor; MCA Disco-Vision, Inc., assignee. "Extended Play Videodisc Recording System." U.S. patent 3,908,076. September 23, 1975. 11p. Int. C12. H04N 5/86. 4 U.S. patents cited.
- (USP BRODSKY,MH 73) Brodsky, Marc H., inventor; International Business Machines Corporation, assignee. "Image Recording on Tetrahedrally Coordinated Amorphous Films." U.S. patent 3,716,844. February 13, 1973. 5p. Int. C1. G11c 13/02; G11c 13/04; G01d 15/14. 5 U.S. patents cited. 1 other reference.
- (USP BRYER,PS 77) Bryer, Philip Stuart, inventor; PreSci, Inc., assignee. "Disk Positioning and Ejection Device in a Disk Drive." U.S. Patent 4,040,107. August 2, 1977. 8p. Int. C12. G11B 17/04. 2 U.S. patents cited.
- (USP CASTELLANO,JA 71) Castellano, Joseph A., inventor; RCA Corporation, assignee. "Electro-Optic Light Modulator." U.S. patent 3,597,044. August 3, 1971. 7p. Int. C1. G02f 1/34. 1 U.S. patent cited.
- (USP CLUNIS,K 66) Clunis, Kenneth, inventor; Minnesota Mining and Manufacturing Company, assignee. "Spatial Coherent Reproducing System." U.S. patent 3,287,563. November 22, 1966. 7p. C1. 250-219. 5 U.S. patents cited. 2 other references.
- (USP CLUNIS,K 69) Clunis, Kenneth, inventor; Minnesota Mining and Manufacturing Company, assignee. "Thermoplastic Recording." U.S. patent 3,427,628. February 11, 1969. 10p. U.S. C1. X.R. 346-77;340-173;178-6.6. 4 U.S. patents cited.
- (USP CREDELLE,TL 79) Credelle, Thomas L., William J. Hannan, and Fred W. Spong, inventors; RCA Corporation, assignee. "Broadening the Spatial Frequency Pass Band of a Thermoplastic Layer." U.S. Patent 4,137,077. January 30, 1979. 4p. Int. C12. G03G 16/00. 5 U.S. patents cited. 1 Foreign patent cited.
- (USP DALZIEL,WL 75) Dalziel, Warren L., inventor; Shugart Associates, assignee. "Flexible Disk Drive Cartridge Loading Apparatus." U.S. patent 3,890,643. June 17, 1975. 7p. Int. C1. G11b 17/04; G11b 5/82. 2 U.S. patents cited.
- (USP DELANG,H 78) DeLang, Hendrik, and Gijsbertus Bouwhuis, inventors; U.S. Philips Corporation, assignee. "Record Carrier on which Information is Stored in an Optically Readable Structure." U.S. patent 4,084,185. April 11, 1978. 8 p. Int. C1.2 H04N 5/76; G11B 23/00. 8 U.S. patents cited.

5.3 PATENT LITERATURE

5.3 PATENT LITERATURE

- (USP DICKOPP,G 72) Dickopp, Gerhard, Helmut Betsch, and Eduard Schuller, inventors; Licentia Patent-Verwaltungs-GmbH, assignee. "Playback System with Radiation Guide Member Having a Slide Portion Extending into the Groove." U.S. patent 3,654,401. April 4, 1972. 8p. Int. Cl. G11b 3/34; H04r 23/00. 6 U.S. patents cited.
- (USP DIXON,GD 72) Dixon, George D., and Luciano C. Scala, inventors; Westinghouse Electric Corporation, assignee. "Cholesteric Liquid Crystal Stabilizers for Detector Elements." U.S. patent 3,656,909. April 18, 1972. 10p. Int. Cl. C09k 1/00; G01n 31/22; G02f 1/00. 1 Foreign patent cited.
- (USP DOVE,JF 65) Dove, John F., inventor. "Data Storage and Retrieval System." U.S. patent 3,226,696. December 28, 1965. 6 p. Int. Cl. G11c 11/42. 9 U.S. patents cited. This patent was reissued on May 26, 1970. Re. 26,901.
- (USP DREXLER,J 81A) Drexler, Jerome, and Eric W. Bouldin, inventors; Drexler Technology Corporation, assignee. "Data Storage Medium Having Reflective Particulate Silver Layer." U.S. patent 4,269,917. May 26, 1981. 16p. Int. Cl.³ G03C 1/02; G03C 5/32; G01D 15/24; G01D 15/26. 8 U.S. patents cited.
- (USP DREXLER,J 81B) Drexler, Jerome, and Eric W. Bouldin, inventors; Drexler Technology Corporation, assignee. "Process for Making a Reflective Data Storage Medium." U.S. patent 4,278,758. July 14, 1981. 16 p. Int. Cl.³ G03C 1/76; G02B 27/22; G03C 1/48; G03C 5/24. 11 U.S. patents cited. 3 other references.
- (USP DREXLER,J 81C) Drexler, Jerome, and Carl R. Betz, inventors; Drexler Technology Corporation, assignee. "Gelatin-Epoxy Sheet Materials." U.S. patent 4,279,989. July 21, 1981. 7p. Int. Cl.³ G03C 1/78. 3 U.S. patents cited.
- (USP DREXLER,J 81D) Drexler, Jerome, and Eric W. Bouldin, inventors; Drexler Technology Corporation, assignee. "Broadband Reflective Laser Recording and Data Storage Medium with Absorptive Underlayer." U.S. patent 4,284,716. August 18, 1981. 15 p. Int. Cl.³ G03C 1/84; G03C 1/76; G02B 27/22; G03C 5/24. 12 U.S. patents cited. 2 other references.
- (USP DREXLER,J 82A) Drexler, Jerome, and Eric W. Bouldin, inventors; Drexler Technology Corporation, assignee. "Method for Making a Broadband Reflective Laser Recording and Data Storage Medium with Absorptive Underlayer." U.S. patent 4,312,938. January 26, 1982. 15 p. Int. Cl.³ G03C 5/24; G03C 5/54. 17 U.S. patents cited. 2 other references.

- (USP DREXLER,J 82B) Drexler, Jerome, inventor; Drexler Technology Corporation, assignee. "Laser Pyrographic Reflective Recording Layer in a Carbon Containing Absorptive Matrix." U.S. patent 4,314,260. February 2, 1982. 8 p. Int. Cl.³ G01D 15/10; G01D 15/34. 13 U.S. patents cited. 1 other reference.
- (USP DREXLER,J 82C) Drexler, Jerome, inventor; Drexler Technology Corporation, assignee. "Optical Data Storage and Recording Medium Having a Replaceable Protective Cover Plate." U.S. patent 4,319,252. March 9, 1982. 5 p. Int. Cl.³ G01D 15/34. 11 U.S. patents cited.
- (USP DREXLER,J 82D) Drexler, Jerome, inventor; Drexler Technology Corporation, assignee. "Method for Making Gelatin Epoxy Sheet Materials." U.S. patent 4,321,102. March 23, 1982. 7 p. Int. Cl.³ G03C 1/78. 7 U.S. patents cited.
- (USP DREYER,JF 51) Dreyer, John F., inventor; "Dichroic Light-Polarizing Sheet Materials and the Like and the Formation and Use Thereof." U.S. patent 2,544,659. March 13, 1951. 7p. Cl. 88-65. 11 U.S. patents cited. 1 other reference.
- (USP ELLIOT,JE 76) Elliot, James E., inventor; MCA Discovision, Inc., assignee. "Video Disc Player with Movable Mirror for Directing Light Beam onto Reflective Disc." U.S. patent 3,944,727. March 16, 1976. 10p. Int. Cl.² G11B 21/10; G11B 7/08; H04N 5/76. 6 U.S. patents cited.
- (USP ERICKSON,AM 72) Erickson, Allen M., inventor; The United States of America as represented by the Secretary of the Navy, assignee. "Laser Pulse Time Modulation Q-Switch." U.S. patent 3,660,777. May 2, 1972. 4p. Int. Cl. H01s 3/11. 2 U.S. patents cited.
- (USP FECHTER,HG 73A) Fechter, Henry G., inventor; Teletype Corporation, assignee. "Laser Recording Medium." U.S. patent 3,740,761. June 19, 1973. 6p. Int. Cl. G01d 15/34. 5 U.S. patents cited. 1 other reference.
- (USP FECHTER,HG 73B) Fechter, Henry G., inventor; Teletype Corporation, assignee. "Laser Writing." U.S. patent 3,747,117. July 17, 1973. 5p. Int. Cl. G01d 15/34. 9 U.S. patents cited.
- (USP FEINLEIB,J 73) Feinleib, Julius, inventor; Energy Conversion, Inc., assignee. "Data Storage System with Coarse and Fine Directing Means." U.S. patent 3,737,877. June 5, 1973. 7p. Int. Cl. G11c 13/04; G01d 15/14; G02b 5/08. 13 U.S. patents cited. 2 other references.

5.3 PATENT LITERATURE

5.3 PATENT LITERATURE

- (USP FLANAGAN,WC 63) Flanagan, William C., inventor; Eastman Kodak Company, assignee. "Piezoelectric Actuating Element." U.S. patent 3,110,824. November 12, 1963. 5p. Cl. 310-8.5. 2 U.S. patents cited.
- (USP FURAHASHI,A 74) Furahashi, Akira, inventor; Canon Kabushiki Haisha, assignee. "Recording Medium Having Concealed Information as Input for Electronic Computer." U.S. patent 3,829,662. August 13, 1974. 12p. Int. Cl. G06k 7/12; G06k 19/06; G01n 21/30; H04q 3/72. 8 U.S. patents cited.
- (USP GILSON,AP 81) Gilson, Alan P., and Bohdan W. Siryj, inventors; RCA Corporation, assignee. "Protective Cartridge for Optical Disk." U.S. Patent 4,273,342. June 16, 1981. 9p. Int. Cl³. G11B 17/00; G11B 5/48. 5 U.S. patents cited.
- (USP GLORIOSO,CA 76) Glorioso, Charles A., inventor; Teletype Corporation, assignee. "Astigmatizer for Laser Recording and Reproducing System." U.S. patent 3,983,317. September 28, 1976. 9p. Int. Cl². G11B 7/18; H04N 5/76. 6 U.S. patents cited. 1 other reference.
- (USP GOLDMACHER,JE 72) Goldmacher, Joel E. and George H. Heilmeier, inventors; RCA Corporation, assignee. "Liquid Crystal Display Element Having Storage." U.S. patent 3,703,331. November 21, 1972. 6p. Int. Cl. G02f 1/16. 1 U.S. patent cited.
- (USP GOLDSCHMIDT,AM 79) Goldschmidt, Arthur M. and Lee V. Hedlund, inventors; RCA Corporation, assignee. "Tracking Servo System for Video Disc Player/Recorder." U.S. Patent 4,160,270. July 3, 1979. 8p. Int. Cl². H04N 5/76; G11B 17/00; G11B 21/10. 9 U.S. patents cited.
- (USP GOODMAN,LA 78) Goodman, Lawrence Alan, Aaron William Levine, and Dietrich Meyerhofer, inventors; RCA Corporation, assignee. "Electro-Optic Device." U.S. Patent 4,120,567. October 17, 1978. 5p. Int. Cl². C09K 3/34; G02F 1/13. 7 U.S. patents cited. 4 Foreign patents cited.
- (USP GORDON,JG 79) Gordon,II, Joseph G. and Glenn T. Sincerbox, inventors; International Business Machines Corporation, assignee. "Amplitude Modulation of Light Beam." U.S. patent 4,165,155. August 21, 1979. 4p. Int Cl². G05D 25/00. 11 U.S. patents cited.
- (USP GOROG,I 77) Gorog, Istvan and Joseph Dale Knox, inventors; RCA Corporation, assignee. "Acousto-Optic Modulated Laser." U.S. Patent 4,019,155. April 19, 1977. 3p. Int. Cl². H01S 3/10. 1 U.S. patent cited.

- (USP GRAF,P 74) Graf, Peter and Dieter Roess, inventors; Siemens Aktiengesellschaft, assignee. "Storage Medium, Method for Recording Information Thereon, and Apparatus for Retrieving the Information Therefrom." U.S. patent 3,838,401. September 24, 1974. 6p. Int. Cl. G11c 13/04; G11c 11/46. 4 U.S. patents cited.
- (USP GREGG,DP 67) Gregg, David Paul, inventor; Gauss Electrophysics, Incorporated, assignee. "Transparent Recording Disc." U.S. patent 3,430,966. March 4, 1969. 3p. U.S. Cl. X.R. 346-137; 178-6.7; 179-100.4. 9 U.S. patents cited.
- (USP GREGG,DP 70) Gregg, David Paul, and Keith O. Johnson, inventors; MCA Technology, Inc., assignee. "Video Signal Transducer Having Servo Controlled Flexible Fiber Optic Track Centering." U.S. patent 3,530,258. September 22, 1970. 13p. Int. Cl. G11b 7/00; H04n 5/86, 1/24. 3U.S. patent Cited. 1 Foreign patent cited.
- (USP GREVE,PF 79) Greve, Peter F., and William G. Opheij, inventors; U.S. Philips Corporation, assignee. "Apparatus for Reading an Optical Radiation-Reflecting Record Carrier Including a Narrow Focus Control Beam." U.S. patent 4,135,207. January 16, 1979. 6 p. Int. Cl.² H04M 5/76; G11B 7/12. 6 U.S. patents cited.
- (USP HAAS,WE 74A) Haas, Werner E. L., inventor; Xerox Corporation, assignee. "Liquid Crystal Imaging System Having Optical Storage Capabilities." U.S. patent 3,806,230. April 23, 1974. 10p. Int. Cl. G02f 1/16. 3 U.S. patents Cited. 1 other reference.
- (USP HAAS,WE 74B) Haas, Werner E. L., James E. Adams, Jr., and John B. Flannery, Jr., inventors; Xerox Corporation, assignee. "Liquid Crystal Imaging System." U.S. patent 3,842,275. October 15, 1974. 9p. Int. Cl. G01t 1/16. 2 U.S. patents cited. 1 other reference.
- (USP HAMISCH,H 71) Hamisch, Hansjoachim, inventor; Robert Bosch GmbH, assignee. "Scanning Apparatus with Automatic Beam Centering." U.S. patent 3,567,855. March 2, 1971. 7p. Int. Cl. H04n 5/82; G05b 1/06; G11b 7/00. 1 U.S. patent cited.
- (USP HASKAL,H 72) Haskal, Haim, inventor; Honeywell, Inc., assignee. "Apparatus for Controlling a Beam of Coherent Electromagnetic Waves." U.S. patent 3,705,758. December 12, 1972. 6p. Int. Cl. G02f 1/28; H01s 3/00; G01d 9/42. 2 U.S. patents cited.

- (USP HATCHETT,MR 78) Hatchett, Michael R. and Leonard J. Rigbey, inventors; International Business Machines Corporation, assignee. "Record Disk Cartridge." U.S. patent 4,131,199. December 26, 1978. 8p. Int. Cl². B65D 85/02; B65D 85/30; G11B 23/04. 4 U.S. patents cited.
- (USP HEILMEIER,GH 72) Heilmeier, George H. and Joel E. Goldmacher, inventors; RCA Corporation, assignee. "Liquid Crystal Light Valve Containing a Mixture of Nematic and Cholesteric Materials in which the Light Scattering Effect is Reduced when an Electric Field is Applied." U.S. patent 3,650,603. March 21, 1972. 6p. Int. Cl. G02f 1/16. 1 U.S. patent cited. 1 other reference.
- (USP HERMANN,G 73) Herrmann, Gunther, inventor; Photocircuits Division of Kollmorgen Corporation, assignee. "Method and Means for Measuring the Deposition Rate in Metallic Plating Baths." U.S. patent 3,719,565. March 6, 1973. 7p. Int. Cl. G01a 27/00. 4 U.S. patents cited.
- (USP HERRMANN,G 78) Herrmann, Gunther, inventor; Kollmorgen Technologies Corporation, assignee. "Process for Controlling Metal Thickness, and Deposition and Degradation Rates." U.S. Patent 4,073,964. February 14, 1978. 5p. Int. Cl². G01N 23/203. 5 U.S. patents cited. 1 other reference.
- (USP HEURTLEY,JC 72) Heurtley, John C., inventor; Xerox Corporation, assignee. "Method of Organized Thermoplastic Xerography and Photoreceptor Structure Therefor." U.S. patent 3,698,893. 13p. Int. Cl. G03g 13/22; B41m 5/20. 7 U.S. patents cited.
- (USP HILL,B 78) Hill, Bernhard, Rudiger Pepperl, and Johann Kruger, inventors; U.S. Philips Corporation, assignee. "Optical Storage Disk System with Disk Track Guide Sectors." U.S. patent 4,094,013. June 6, 1978. 18p. Int. Cl². G11B 7/00; G11B 21/10; G11C 13/08. 7 U.S. patents cited.
- (USP HIRUTA,K 70) Hiruta, Katsuya, inventor; Nippon Electric Company, Limited, assignee. "Magnetic Disc Memory Housing Device." U.S. patent 3,529,301. September 15, 1970. 8p. Int. Cl. G11b 5/82; G11b 17/00; G11b 23/04. 2 U.S. patents cited.
- (USP IH,CC 72) Ih, Charles Chung Sen and Michael Jay Lurie, inventors; RCA Corporation, assignee. "Recording of a Continuous Tone Focused Image on a Diffraction Grating." U.S. patent 3,669,673. 4p. Int. Cl. G03c 5/00. 3 U.S. patents cited. 1 other reference.

- (USP JANSSEN,PJ 74) Janssen, Peter Johannes Michiel, inventor;
U.S. Philips Corporation, assignee. "Servo System
for Reading from a Disc-Shaped Record Carrier Containing
Signals Coded in Optical Form."
U.S. patent 3,854,015. December 10, 1974. 9p.
Int. Cl. G11b 7/00; H04n 5/84. 2 U.S. patents cited.
1 other reference.
- (USP JOHNS,DH 62) Johns, Don H., inventor; American Can Company,
assignee. "Method of and Apparatus for Measuring Coating
Amounts." U.S. patent 3,019,336. January 30, 1962. 6p.
Cl. 250-43.5. 3 U.S. patents cited. 1 other reference.
- (USP JVIRBLIS,AE 71) Jvirblis, Alex E., inventor; Xerox Corporation,
assignee. "Production of Latent Periodic Memory Patterns
in Frostable Films." U.S. patent 3,560,206. February 2,
1971. 5p. Int. Cl. B41m 5/18. 1 U.S. patent cited.
- (USP KALT,CG 75) Kalt, Charles G., inventor. "Electrostatic Display
Device with Variable Reflectivity." U.S. patent 3,897,997.
August 5, 1975. 10p. Int. Cl. G02f 1/28. 4 U.S. patents
cited.
- (USP KASAI,M 78) Kasai, Masanao, Youko Oihawa, Hiroshi Ito, and
Hiroshi Matsuno, inventors; Canon Kabushiki Kaisha, assignee.
"Recording Member and Process for Recording." U.S. Patent
4,069,487. January 17, 1978. 11p. Int. Cl². G01G 15/34.
8 U.S. patents cited.
- (USP KIDO,K 77) Kido, Keishiro, Satoru Honjo, and Masamichi Sato,
inventors; Fuji Photo Film Company, Ltd., assignee.
"Recording Material." U.S. Patent 4,032,691. June 28, 1977.
7p. Int. Cl². B32B 3/26. 5 U.S. patents cited.
- (USP KLEINKNECHT,HP 79) Kleinknecht, Hans P. and James Kane, inventors;
RCA Corporation, assignee. "Optically Monitoring the
Thickness of a Depositing Layer." U.S. Patent 4,141,780.
February 27, 1979. 5p. Int. Cl². H01L 21/306. 3 U.S.
patents cited.
- (USP KLEUTERS,WJ 79) Kleuters, Wilhelm J., Gerard E. van Rosmalen,
Martinus P.M. Bierhoff, and Kornelis A. Iremink, inventors;
U.S. Philips Corporation, assignee. "Objective Mount for
Video Disc Player." U.S. patent 4,135,206. January 16,
1979. 6p. Int. Cl². H04N 5/76; G11B 7/12. 4 U.S.
patents cited.
- (USP KOHL,L 78A) Kohl, Lambert, Richard Schneider, and Karl Uhl,
inventors; BASF Aktiengesellschaft, assignee. "Magazine for
a Plurality of Recording Media." U.S. Patent 4,101,027.
July 18, 1978. 6p. Int. Cl². G11B 5/48; B65D 85/30. 7 U.S.
patents cited. 1 Foreign patent cited.

5.3 PATENT LITERATURE

5.3 PATENT LITERATURE

- (USP KOHL,L 78B) Kohl, Lambert, Richard Schneider, and Karl Uhl, inventors; BASF Aktiengesellschaft, assignee. "Change-Over Mechanism for Recording Media, Especially for Floppy Disks." U.S. Patent 4,127,882. November 28, 1978. 19p. Int. C1². G11B 17/12. 3 U.S. patents cited.
- (USP KORPEL,A 70) Korpel, Adrianus, inventor; Zenith Radio Corporation, assignee. "Television Picture Recording and Replay System." U.S. patent 3,534,166. October 13, 1970. 8p. Int. C1. H04n 5/86. 8 U.S. patents cited.
- (USP KORPEL,A 76) Korpel, Adrianus, inventor; Zenith Radio Corporation, assignee. "Video Disc." U.S. patent 3,931,459. January 6, 1976. 6p. Int. C1². G11B 7/24; H04N 1/00; H04N 3/02. 2 U.S. patents cited. 2 other references.
- (USP KRAMER,P 77) Kramer, Pieter, Klaas Compaan, and Robert Franz Karl Forsthuber, inventors; U.S. Philips Corporation, assignee. "Video Disc with Phase Structure." U.S. Patent 4,041,530. August 9, 1977. 7p. Int. C1². H04N 5/76; G11B 7/24; G11B 23/00. 7 U.S. patents cited.
- (USP LAKERVELD,HG 77) Lakerveld, Herman Gerard, Gerard Eduard van Rosmalen, Kornelis Bulthuis, and Johannes Petrus Sinjou, inventors; U.S. Philips Corporation, assignee. "Playing Apparatus, In Particular a Video Player for Playing a Record which is Made of a Transparent Material and Provided with a Central Hole." U.S. patent 4,060,248. November 29, 1977. 7 p. Int. C1.² G11B 7/24; H04N 1/28. 5 U.S. patents cited.
- (USP LAKERVELD,HG 78) Lakerveld, Herman Gerard, and Gerard Eduard van Rosmalen, inventors; U.S. Philips Corporation, assignee. "Pivoting Mirror Device." U.S. patent 4,073,567. February 14, 1978. 6 p. Int. C1.² G02B 27/17. 8 U.S. patents cited. 1 Foreign patent cited.
- (USP LEEDOM,MA 76) Leedom, Marvin Allan and John Clifford Bleazey, inventors; RCA Corporation, assignee. "Disc Record Groove Skipper." U.S. Patent 3,993,863. November 23, 1976. 7p. Int. C1². H04N 5/76. 6 U.S. patent cited. 2 other references.
- (USP LEHUREAU,JC 75) Lehureau, Jean Claude and Claude Bricot, inventors; Thompson-Brandt, assignee. "Reading Out and Tracking a Recorded Diffractive Trace with an Elongated Read Out Spot." U.S. patent 3,913,076. October 14, 1975. 11p. Int. C1². G11C 13/04; G11B 17/00. 3 U.S. patents cited. 2 other references.

- (USP LEMERER,JP 75) Le Merer, Jean Pierre, Francois Le Carvenee, Jean Pierre Lacotte, Roland Mallisin, Claude Puech, and Claude Tinet, inventors; Thomson-CSF, assignee. "Reproducing Device for the Optical Reading Out of a Record Carrying an Embossed Print." U.S. patent 3,909,608. September 30, 1975. 7p. Int. C1². G06K 11/02; G11B 7/00. 3 U.S. patents cited.
- (USP LINDBERG,CA 68) Lindberg, Charles A., Jr., inventor; Data Disc Incorporated, assignee. "Magnetic Recording Disc Cartridge." U.S. patent 3,416,150. December 10, 1968. 20p. U.S. Cl. X.R. 179-100.2; 274-4; 274-41.4. 2 U.S. patents cited.
- (USP LIPPITS,GJ 81) Lippits, Gerardus J.M., Arnoldus J.M. van den Broek, and Rinse Dijkstra, inventors; U.S. Philips Corporation, assignee. "Optically Readable Information Disc." U.S. patent 4,272,574. June 9, 1981. 6 p. Int. C1.³ G11B 7/24. 3 U.S. patents cited. 1 Foreign patent cited.
- (USP LISSNER,RW 76) Lissner, Rudolf W. and Richard B. Mulvaney, inventors; International Business Machines Corporation, assignee. "Magnetic Disk Storage Apparatus." U.S. patent 3,973,273. August 3, 1976. 22p. Int. C1² G11B 5/48; G11B 21/08. 1 U.S. patent cited.
- (USP LOU,DY 75) Lou, David Yuan Kong, Hugh Alexander Watson, and Ronald Howard Willens, inventors; Bell Telephone Laboratories, Inc., assignee. "Metal Film Recording Media for Laser Writing." U.S. patent 3,911,444. October 7, 1975. 5p. Int. C1². G01D 15/34. 3 U.S. patents cited. 1 other reference.
- (USP MASSE,PR 74) Masse, Phillip R., William J. Pendy, and William S. Wentink, inventors; International Business Machines Corporation, assignee. "Loading and Unloading Mechanism for Flexible Magnetic Disks." U.S. patent 3,846,836. November 5, 1974. 14p. Int. Cl. G11b 17/00. 4 U.S. patents cited.
- (USP MAYDAN,D 73) Maydan, Dan, Melvin Irwin Cohen, and Eugene Kerwin, inventors; Bell Telephone Laboratories, Inc., assignee. "Recording and Display Method and Apparatus." U.S. patent 3,720,784. March 13, 1973. 13p. Int. Cl. G11b 7/00; G11b 11/02. 7 U.S. patents cited.
- (USP MEIER-MALETZ,M 70) Meier-Maletz, Max, inventor; Intersound Limited, assignee. "Foil-Shaped Sound Record and Method of Making Same." U.S. patent 3,535,182. October 20, 1970. 8p. Int. Cl. B31f 1/00; B32b 31/22. 3 U.S. patents cited.

- (USP MORI,M 75) Mori, Masafumi, inventor; Tokyo Shibaura Electric Company, Limited, assignee. "Optical Signal Reproducing Apparatus." U.S. patent 3,860,766. January 14, 1975. 8p. Int. Cl. G11b 7/00; H04n 5/76; G11b 3/00. 8 U.S. patents cited.
- (USP OHNUKI,K 74) Ohnuki, Katuhiro, Kazuhiro Sato, Shin Miyajinia, and Hideo Suyama, inventors; Victor Company of Japan, Ltd., assignee. "Curved Piezoelectric Elements." U.S. patent 3,816,774. June 11, 1974. 17p. Int. Cl. H04r 17/00. 3 U.S. patents Cited.
- (USP OHTA,T 76) Ohta, Takeo and Mutsuo Takenaga, inventors; Matsushita Electric Industrial Co., Ltd., assignee. "Optical Information Storage Material and Method of Making It." U.S. patent 3,971,874. July 27, 1976. 8p. Int. Cl². C23C 3/04; G01D 15/34. 9 U.S. patents cited. 1 Foreign patent cited.
- (USP PEPPERL,R 78) Pepperl, Rudiger, Johann Kruger, and Bernard Hill, inventors; U.S. Philips Corporaton, assignee. "Optical Multi-Channel Digital Disc Storage System." U.S. patent 4,094,010. June 6, 1978. 15 p. Int. Cl.² G11B 21/10; G11B 7/00. 6 U.S. patents cited. 1 Foreign patent cited.
- (USP PHILLIPS,W 79) Phillips, William, inventor; RCA Corporation, assignee. "Surface Acoustic Wave Device with Reduced Spurious Responses." U.S. Patent 4,142,163. February 27, 1979. 4p. Int. Cl². H03H 9/26; H03H 9/30; H03H 9/32; H01L 41/18. 1 U.S. patent cited.
- (USP PICKER,A 69) Picker, Amos, inventor; Hughes Aircraft Company, assignee. "Piezoelectric Laser Beam Deflector." U.S. patent 3,442,570. May 6, 1969. 5p. Int Cl. G02f 1/34. 2 U.S. patents cited.
- (USP PRADERVAND,M 76) Pradervand, Michel, inventor; RCA Corporation, assignee. "Center Hole Formation in an Information Storing Disc." U.S. Patent 3,938,810. March 12, 1976. 6p. Int. Cl². G11B 17/06. 7 U.S. patents cited. 1 Foreign patent cited.
- (USP RADIMER,KJ 69) Radimer, Kenneth J., inventor; FMC Corporation, assignee. "Process and Apparatus for Controlling Metal Etching Operation." U.S. patent 3,476,242. October 28, 1969. 8p. U.S. Cl. X.R. 134-10; 134-41; 134-56;156-345. 6 U.S. patents cited.
- (USP RADIMER,KJ 70) Radimer, Kenneth J., inventor; FMC Corporation, assignee. "Process for Controlling Metal Etching Operation." U.S. patent 3,503,817. March 31, 1970. 3p. U.S. Cl. X.R. 156-345. 6 U.S. patents cited.

- (USP RENNICK, JL 75) Rennick, John L., inventor; Zenith Radio Corporation, assignee. "Stop Frame for Optical Playback System." U.S. patent 3,911,211. October 7, 1975. 7p. Int. C12. H04N 5/76; G11B 17/00. 1 U.S. patent cited. 1 other reference.
- (USP ROSS, DL 73) Ross, Daniel Louis, inventor; RCA Corporation, assignee. "Photochromic Display and Storage Device and Method of Operation Thereof." U.S. patent 3,715,212. February 6, 1973. 6p. Int. C1. G03c 5/24; G03c 1/72. 3 U.S. patents cited.
- (USP SHENG, P 79) Sheng, Ping and Arthur H. Firester, inventors; RCA Corporation, assignee. "Optical Playback System Having Increased Depth-of-Field." U.S. Patent 4,179,708. December 18, 1979. 6p. Int. C12. G11B 7/00. 3 U.S. patents cited. 1 other reference.
- (USP SHILL, KE 71) Shill, Karl E., inventor; The Singer Company, assignee. "Memory Disc Cartridge with Loading Mechanism." U.S. patent 3,593,327. July 13, 1971. 9p. Int. C1. G11b 23/04. 6 U.S. patents cited.
- (USP SILVERMAN, D 73) Silverman, Daniel, inventor. "Random Access Multiple Disc Optical Information Storage System." U.S. patent 3,774,172. November 20, 1973. 8p. Int. C1. G11c 5/04; G11c 13/04. 10 U.S. patents cited.
- (USP SOMERS, LE 68) Somers, Lewis E., inventor; General Electric Company, assignee. "Thermal Modulation Thermoplastic Recording." U.S. patent 3,406,405. October 15, 1968. 7p. C1. 346-1. 5 U.S. patents cited.
- (USP SPONG, FW 78) Spong, Fred William, inventor; RCA Corporation, assignee. "Multilayer Optical Record." U.S. Patent 4,097,895. June 27, 1978. 8p. Int. C12. H04N 5/76; G11B 7/24; G01D 15/34. 9 U.S. patents cited. 1 other reference.
- (USP SPONG, FW 80) Spong, Fred W., inventor; RCA Corporation, assignee. "Optical Record Playback Apparatus Employing Light Frequency at which Alternate Regions of Record Track Exhibit Anti-Reflection Condition." U.S. Patent 4,219,848. August 26, 1980. 6p. Int. C12. H04N 5/76; G11B 7/00. 7 U.S. patents cited. 2 Foreign patents cited. 1 other reference.
- (USP STAEBLER, DL 80) Staebler, David L., inventor; RCA Corporation, assignee. "Updatable Optical Storage Medium." U.S. Patent 4,202,928. May 13, 1980. 4p. Int. C12. B32B 17/06; G01D 15/34. 3 U.S. patents cited. 1 other reference.

5.3 PATENT LITERATURE

5.3 PATENT LITERATURE

- (USP STERLING,HF 72) Sterling, Henley Frank and Richard Charles George Swann, inventors; International Standard Electric Corporation, assignee. "Method of Forming Silicon Dioxide Coatings in an Electric Discharge." U.S. patent 3,655,438. April 11, 1972. 5p. Int. Cl. H01b 1/04; B44d 1/34; B44d 1/02. 6 U.S. patents cited.
- (USP STEWART,WC 77) Stewart, Wilber Clarence, inventor; RCA Corporation, assignee. "Videodisc Playback System." U.S. Patent 4,065,786. December 27, 1977. 9p. Int. Cl². H04N 5/76. 10 U.S. patents cited.
- (USP TAKAHARA,I 76) Takahara, Ichiro, Tadshiko Yabu, and Takashi Miwa, inventors; Sanyo Electric Company, Limited, assignee. "Automatic Flexible Record Feeding Device." U.S. patent 3,931,640. January 6, 1976. 9p. Int. Cl². G11B 17/04; G11B 5/012; G11B 5/80. 4 U.S. patents cited.
- (USP TAKEDA,Y 77) Takeda, Yasutsugu, Hishashi Nakamura, Yoshito Tsunoda, Toshihisa Tsukada, and Toshimitsu Miyauchi, inventors; Hitachi, Limited, assignee. "Apparatus for Optically Reconstructing Information." U.S. patent 4,051,528. September 27, 1977. 6p. Int. Cl². H04N 5/86. 6 U.S. patents cited.
- (USP TODA,M 80) Toda, Minoru and Susumu Osaka, inventors; RCA Corporation, assignee. "Light Control Device Using a Bimorph Element." U.S. Patent 4,234,245. November 18, 1980. 18p. Int. Cl³. G05D 25/02; G09F 3/04; G09F 9/37. 10 U.S. patents cited. 2 other references.
- (USP URBACH,JC 78) Urbach, John C. and David Cheng, inventors; Xerox Corporation, assignee. "Motion Blur Compensation for Moving Media Optical Data Recording System." U.S. Patent 4,130,898. December 19, 1978. 7p. Int. Cl². G11C 13/08; G11C 7/00. 2 U.S. patents cited.
- (USP VANBUUL,MC 78) van Buul, Marinus Cornelis Willem, Jan August Marcel Hofman, Leendert Johan van de Polder, and Sing Liong Tan, inventors; U.S. Philips Corporation, assignee. "Method of, and Apparatus for, Manufacturing a Video Record." U.S. patent 4,090,218. May 16, 1978. 25 p. Int. Cl². H04N 5/14; H04N 5/76; H04N 5/14. 3 U.S. patents cited.
- (USP VANROSMALLEN,GE 77) van Rosmalen, Gerard Eduard, inventor; U.S. Philips Corporation, assignee. "Tracking Mirror Device for a Video Disc Player." U.S. patent 4,063,287. December 13, 1977. 8 p. Int. Cl². H04N 5/76; H04N 1/24. 4 U.S. patents cited.

- (USP VANROSMALLEN,GE 78) van Rosmalen, Gerard Eduard, inventor; U.S. Philips Corporation, assignee. "Automatic Dithering Optical Focusing System Using an Oscillating Mirror in the Path of the Radiating Beam." U.S. patent 4,074,312. February 14, 1978. 8 p. Int. C1.² G11B 11/00. 10 U.S. patents cited.
- (USP WATSON,WH 76) Watson, William H., inventor; Zenith Radio Corporation, assignee. "Video Disc with Multiturn Undulating Storage Track." U.S. patent 3,931,460. January 6, 1976. 7p. Int. C1.². G11B 7/24; H04N 1/00, H04N 3/02. 3 U.S. patents cited. 1 other reference.
- (USP WHITMAN,RL 75) Whitman, Robert L., inventor; Zenith Radio Corporation, assignee. "Slit Detector for Optical Detector System." U.S. patent 3,919,562. November 11, 1975. 8p. Int. C1.². G06K 7/10. 6 U.S. patents cited.
- (USP WHITTEMORE,MJ 72) Whittemore, Maurice James, Jr., inventor; RCA Corporation, assignee. "Recorder and Playback Apparatus for Pulse Width Modulated Record." U.S. patent 3,688,025. August 29, 1972. 8p. Int. C1. G11b 11/18; H04n 5/86. 4 U.S. patents cited.
- (USP WILBER,CS 77) Wilber, Clarence Stewart, inventor; RCA Corporation, assignee. "Videodisc Playback System." U.S. patent 4,065,786. December, 27, 1977. 9 p. Int. C1.² H04N 5/76. 10 U.S. patents cited.
- (USP WILLENS,RH 76) Willens, Ronald Howard, inventor; Bell Telephone Laboratories, Incorporated, assignee. "Metal Film Recording Media for Laser Writing." U.S. Patent 4,000,492. December 28, 1976. 5p. Int. C1.². G01D 15/34. 4 U.S. patents cited. 1 other reference.
- (USP WOLFF,K 71) Wolff, Karin, and Hansjoachim Hamisch, inventors; Robert Bosch G.m.b.H, assignee. "Vaporizable Recording Medium." U.S. patent 3,560,994. February 2, 1971. 3p. Int. C1. G01d 15/34. 4 U.S. patents cited.

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