

REFERENCES

REFERENCES

1. Chopra, K.L. and Das, S.R., Thin film solar cells, (Plenum, New York, 1983) P. 195.
2. Leaver, K.D. and Chapman, B.N., Thin films, (Wykeham, London, 1971) P. 1.
3. Chopra, K.L. and Kaur, I., Thin Film Device Applications (Plenum Press, New York, 1983) P. 2,34.
4. Hauser, O. and Biesalski., E., Cem. Ztg., 34, 1079 (1910).
5. Brückmann, G., Kolloid.Z., B 65, 1 (1933).
6. Kicinshi, F., Chem. and Ind., 17, 54 (1948).
7. Pick, H., Ann. Physik, 3, 255 (1948).
8. Wein, S., Glass Ind., No. 7, 359 (1959).
9. Kitaev, G.A., Uritskaya, A.A. and Morkushin, S.G., Russ. J.Phys. Chem., 39, 1101 (1965).
10. Kitaev, G.A., Uritskaya, A.A. and Morkushin, S.G., Kolloid. Zhur., 27, 1 (1965).
11. Tell, B.; Shay, J.L. and Kasper, H.M., Phys. Rev. B 4, 2463 (1971); B4, 4455 (1971).
12. Kazmerski, L.L.; Ayyagari, M.S. and Sanborn, G.A., J. Appl. Pyhs., 46, 4865 (1975).

13. Hahn H.; Frank G.; Klingler W.; Meyer A . and Storger G., Z.Anorg. Allgenz Chem., 271, 153 (1953).
14. Steven P. Grindle; Charles W. Smith and Steven D. Mittleman, Appl. Phys. Lett. 35, 24 (1979).
15. Wyckoff, R.N.G, Crystal Strucutres, Vol.2, Wiley-interscience, New York (1964) P. 336.
16. Shay, J.L. and Wernich, J.H., “ Ternary Chalcopyrite Semiconductor : Growth, Electronic Propeoerties and Applications (Pergamon, Oxford, 1975).
17. Jaffe, J.E. and Zynger, A., Phys. Rev. B 28, 5822 (1983), B 29, 1882 (1984).
18. Hwang,H.L.; Cheng C.L.; Liu L.M and Sun C.Y., Thin Solid Films 67, 83 (1980).
19. Hwang,H.L.; Tu C.C; Maa J.S. and Sun C.Y, Solar Energy Mater. 2, 433 (1980).
20. Kamoun,N.; Bennaceur R. and Frigerio J.M. J.Phys. III, 4,933 (1994) (Fr).
21. Tiwari A.N.; Pandya D.K. and Chopra K.L. Thin Solid Films 130, 217 (1985).
22. Belgacem S.; Amlouk M. and Bennaceur R., Rev. Phys. Appl. 25, 1213 (1990).

23. Bhattacharya R.N.; David Cahen and Gary Hodes., Sol. Energy mater. 10, 41 (1984).
24. Hodes G. and Cahen D., Sol. Cells, 16, 245 (1986).
25. Lokhande, Chandrakant D. and Hodes Gary, Sol. Cells, 21, 215 (1987).
26. Herrero J. and Ortega J., Sol. Energy mater., 20, 53 (1990).
27. Gorska M.; Beaulieu R.; Loferski J.J. and Roessler B., Sol Energy Mater., 1, 313 (1979).
28. Belgacem S.; Dachaoui M.; Kessler J. and Vedel J., Thin Solid Films, 167, 217 (1988).
29. Nomura Ryaki; Kanaya Kouichi and Matsuda Haruo, Chem. Lett., 11, 1849 (1988).
30. Bihri H.; Messaoudi C.; Sayah D.; Boyer A.; Mzerd A. and Abd-Lefdil M., Phys. Stat. Sol. (a), 129, 193 (1992).
31. Hwang H.L., Tseng B.H.; Sun C.Y. and Loferski J.J., Sol. Energy mater., 4, 67 (1980).
32. Gupta, Akhlesh ; Murthy, A. Surya N., J.Mater. Chem. 1, 929 (1991).
33. Polysolar, Inc (Garland , Tx USA) Report (1987) SERI / STR - 211 - 3127; order No. DE 87001168, 34 pp (Eng). Avail NTIS. From Energy Res. Abstr. (1987) 12 (18), Abstr. No. 36634.
34. Binsma J.J.M. and Vander Linden H.A., Thin Solid Films, 97, 237 (1982).

35. Padam G.K. and Rao S.U.M., Sol. Energy Mater. 13, 297 (1986); 15, 227 (1987).
36. David Cahen, Sol. Energy Mater., 15 225 (1987).
37. Padam G.K.; Malhorta G.L. and Rao S.U.M., Phys. Stat. Sol. (a), 109, K 45 (1988).
38. Verhejen W.; Giling L. J. and Bloem J., Mater. Res. Bull. 14, 234 (1979).
39. Binsma J.J.M.; Giling L.J. and Vloem J., J. Cryst. Growth 50, 429 (1980).
40. Kazmerski L.L., Ayyagari M.S.; Sanborn G.A.; White F.R. and Merrill A.J., Thin Solid Films 37, 323 (1976).
41. Kazmerski, L.L. and Sanborn, G.A., J.Appl. Phys. 48, 3178 (1977).
42. Samaan A.N.Y.; Wasim S.M.; Hill A.E; Armoour D.G. and Tomlinson R.D., Phys. Stat. Sol. (a) 96, 317 (1986).
43. Wu Y.L.; Lim H.Y; Sun C.Y; Yang M.H. and Hwang H.L., Thin Solid Films 168, 113 (1989).
44. Nakanishi Kazumi; Kitakura Teruaki; Kobayashi Tetuya and Shimata Naoto, Denki Kagaku Oyobi Kogyo Butsurikagaku 57 (1989) 224 (Japar) (Abst.) .
45. Heavens O.S., “ Optical Properties of Thin Films :, Dover Publications, London, (1965).
46. Abe'les F. and The'ye M.L., Surf. Scie., 5, 325 (1966).

47. Nilsson P.O., Appl. Opt., 7, 435 (1968).
 48. Bennet J.M. and Booty M.J., Appl. Opt., 5, 41 (1966).
 49. Bennet J.M. and Booty M.J., J. Opt. Soc. Am., 60, 20 (1970).
 50. Tomlin S.G., J.Phys. D., 5, 847 (1972).
 51. Denton R.E., Campbell R.D. and Tomlin S.G., J.Phys. D., 852 (1972).
 52. Mulder B.J., Philips Res. Rep., 27, 315 (1972); Phys. Status Solidi A., 13, 79 (1972).
 53. Nestell J.E. and Christy R.W, Appl. Opt., 11, 643 (1972).
 54. Manificier J.C.; Gasiot J. and Fillard J.P., J.Phys. E, 9, 1002 (1976).
 55. Ward L., Nag A. and Dixon L.C., J.Phys. D., 2, 301 (1969).
 56. Fagen E.A., J.App. Phys., 50, 6505 (1979).
 57. Cisneros J.L., Thin Solid Films, 100, 155 (1983).
 58. Philips R.T., J.Phys. D., 16, 489 (1983).
 59. Arjona F., Thesis, Universidad Autónoma de Maderied, (1979).
 60. Wemple S. H. and Seman J.A., Appl. Opt., 12, 2947 (1973).
 61. Beckmann P. and Spizzichino A., " The Scattering of Electromagnetic Waves from Rough Sufaces ", Pergamon, Oxford (1963).
-

62. Elizalde E. and Rueda F., Thin Solid Films , 122, 45 (1984).
63. Boyd G.D.; Kasper H. and McFee J.H., IEEE J. Quan. Electron Qe- 7, 563 (1971).
64. Levine B.F., Phys. Rev. B 7, 2591 (1973).
65. Samanta L.K.; Ghosh D.K. and Bhar G.C., Phys. Rev. B 33, 4145 (1986).
35, 4519 (1987).
66. Shay J.L. and Tell B., Surface Scie., 37, 748 (1973).
67. Yamamoto N.; Miyauchi T., Bull. Osaka, Prefect. Ser. A, 23, 147 (1974).
68. Sum L.Y.; Kazmerski, L.L.; Clark A.H.; Ireland P.J. and Morton D.W.,
J.Vac. Scie. Technol., 15, 265 (1978).
69. Shay J.L.; Tell B.; Kasper H.M. and Schiavone L.M., Phys. Rev. B 5, 5003 (1972).
70. Tell B.; Shay J.L.; Kasper H.M. and Barns R.L., Phys. Rev. B 10, 1748 (1974).
71. Bodnar I.V. and Lukomski A.I., IZV. Akad. Nauk . S.S.S.R., Ser. Neorg. mater., 15, 1718 (1979).
72. Kazmerski L.L. and Shieh C.C., Thin Solid Films, 41, 35 (1977).
73. Boyrintser P.K.; Ufimtser V.B.; Kharakhorin F.F. and Kholina E.N., Fiz. Tekhn. Polyprovodn, 13, 161 (1979).

74. Mora S.; Romeo N. and Tarricone L., Solid State Commun., 29, 155 (1979).
75. Chernyavski V.P.; Polygalov Yu.I. and Poplavnoi A.S., Ukr. Fiz.Zh., 17, 1535 (1972).
76. Gan J.N.; Tauc J.; Lambrecht V.G. and Robbins M., Phys. Rev. B 12, 5797 (1975).
77. Hengenholt R.L. and Pedrotti F.L., J. Appl. Phys. 46, 5202 (1975).
78. Rife J.C.; Dexter R.N.; Bridenbough P.M. and Veal B.W., Phys. Rev. B 16, 4491 (1977).
79. Horig W.; Neumann H. and Godmanis I., Solid State Commun. 36, 181 (1980).
80. Kisiel A.; Turowski M.; Czeppe T. and Giraiat W., Inst. Phys. Conf. Ser., 35, 259 (1977).
81. Neumann H.; Horig W.; Savelev V.; Lagzdonis J.; Schumann B. and Kühn G., Thin Solid Film, 79, 167 (1981).
82. Riede V.; Sobotta H.; Neumann H., Hoang Xuan Nguyen; Möller W. and Kühn G. Solid State commu., 28, 449 (1978).
83. El-Nahass M.M.; Soliman H.S.; El-Kadry N.; Morsy A.Y. and Yaghmour S., J. Mater. Scie. Lett. 7, 1050 (1988).
84. Syrbu N.N.; Khachaturova S.B.; Bodnar I.V. and Rabotinskii N.D. (USSR), Opt. Spektorsk., 66, 1187 (1989) Russ.

85. Loferski J.J., Meter. Scie. Eng., B 13, 271 (1992).
86. Quintero M.; Rincon C.; Tovar R., and Woolley J.C., J. Phys.; Condens. Matter., 4, 1281 (1992).
87. Casey H.C. Jr. and Panish M.B., Heterostructure Lasers, Parts A and B. Academic Press, New York (1978).
88. Chen W.S. and Michelson R.A., Proc. SPIE, 24 th Annual technical Symposium , San Diego, Calif., 28 July - 1 August (1980).
89. Penn D.R., Phys. Rev., 128, 2093 (1962).
90. Van Vechten J.A., Phys. Rev., 182, 891 (1969).
91. Ghosh D.K., Infrared Phys., 24, 43 (1984).
92. Mittleman S.D., Lofeski J.J. and Wold A., J. Appl. Phys., 48, 3878 (1977).
93. Palatnik L.S., Koshkin V.M. and Gal Chinestskii L.P., Fiz. Tverd. tela., 4, 2365 (1962).
94. Honeyman W.N., J.Phys. Chem. Solids, 30, 1935 (1969).
95. Chemla D.S. and Kupecek P.J., Optic. Commun., 3, 29 (1971).
96. Lerner L., J.Phys. Chem. Solids, 27,1, (1966).
97. Noblanc J, Loudette J., Duraffaurg G. and Robert Son D.S., Appl. Phys. Lett., 20, 257 (1972).

98. Tell B., Shary J. and Kasper H., J.Appl. Phys., 43, 2469 (1972).
99. Bridenbaugh P.M. and Miglirato P., Appl. Phys. lett., 26, 459 (1975).
100. Look D.C. and Manthuruthil J.C., J.Phys. Chem. Solids, 37, 173 (1976).
101. Loferski J.J., J. Appl. Phys., 27, 777, (1956).
102. Shay J.L., Buehler E. and Wernich J.H., Phys. rev. Letters, 24, 1301 (1970).
103. Rowe J.E. and Shay J.L., Phys. Rev. B 3, 451 (1971).
104. Song K.S., J. Phys. (Paris), 28, 195 (1967); J.Phys. Chem. Solids, 28, 2003 (1967).
105. Koster G.F., Dimmock J.O., Wheeler R.G., and Stotz H., Properties of the thirty. Two point Groups (MIT U.P., Cambridge, Mass (1963).
106. Shay J.L. and Kasper H.M., Phys. rev. Lett., 29, 1162 (1972).
107. Hsu T.M., Change H.Y., Hwang H.L. and Lee S.Y., Ternary and Multinary Compounds : proceedings of the 7th International Conference, edited by Deb S.K. and Zunger A. (Mater . Res. Soc., Pittsburgh, PA (1987) P. 93,99.
108. Hsu T.M., J.Appl. Phys., 59, 2538 (1986).
109. Hsu T.M. and Lin J.H., Phys. Rev. B 37, 4106 (1988).
110. Masse G., Lahou N., and Butti C., J.Phys. Chem. Solids, 42, 449 (1981).

111. Hsu T.M., Lee J.S. and Hwang H.L., J.Appl. Phys., 68, 283 (1990).
112. Pamplin B.R. and Feiglson R.S., Thin Solid Films, 60, 141 (1977).
113. Kleinfeld M. and Wiemhöfer H.D., Ber. Bunsenges. Phys. Chem. 90, 711 (1986).
114. Binsma J.J.M., J.Phys. Chem. Solids, 44, 237 (1983); Thesis , Nijmegen (1981).
115. Cole K.S. and Cole R.H., J. Chem. Phys., 9, 341 (1949).
116. Ravaine D. and Souquent J.L., J.de Chemie. Physique, 11, 693 (1974).
117. Schouler E., Hammou A., and Kleitz M., Mater. Res. Bull., 71, 693 (1976).
118. Davidson D.W., and Cole R.H., J.Chem. Phys., 18, 1417 (1951).
119. Bruce P.G. and West A.R., J.Electrochemical Soc., 130, 662 (1983).
120. Eid A.H.; Mahmoud S. and Salman F., Egypt. J. Sol., 15, 77 (1992).
121. Bruce P.G., and West A.R., J. Solid State Chem., 44, 354 (1982).
122. Hodge I.M., Ingram M.D., and West A.R., J.Electroanal. Chem., 74, 125 (1976).
123. " Electrodeposition of alloy", " Principles and Practice" , Brenner A., Vol.1 (1963) Academic Press N.Y.

124. Chandra S., Pandey R.K., and Agrawal R.C., J.Phys. D : Appl. Phys., 13, 1757 (1980).
125. " Thin Film Technology ", Berry W.R., Hall M.P. and Van Nostr T.M.D., Compan N.C., N.Y. (1968).
126. " Introduction to Interferometry ", Tolansky S., Longman Green and Co., London, 2 nd. edition p. 157 (1973).
127. " Elements of x-ray Diffraction", Cullity B.D., 2 nd. edition, Addison-Wesley Publishing Company, Inc. U.S.A., (1978).
128. Abrahams S.C., and Bernstein J.L., J. Chem. Phys., 59, 5415 (1973).
129. Becker K.D., and Sigurd Wagner, Phys. Rev. B 27, 5240 (1983).
130. Hwang H.L., Sun C.Y., Leu C.Y., Chung C.L., and Tu C.C., Rev. de Phys. Appl., 13, 745 (1978).
131. Roessler D.M., Brit. J. Appl. Phys., 16, 1119 (1965).
132. " Semiconductor opto-Electronics " Moss T.S., Burrell G.J., and Ellis B., Butterworth and Co. (Publishers) Ltd, (1973).
133. Zalar S.M., J.Electrochemical Society 113, 230 (1966).
134. Mayadas A.F. and Shatzkes M., Phys. Rev. B 1, 1382 (1970) .
135. " Luminescence of inorganic Solids, Shionoya S., edited by Goldberg P. (Academic , New York, 1966) P. 205,286.

136. Varshni Y.P., Physica, 34, 149 (1967).
137. Tell B. and Kasper H.M., J.Appl. Phys., 44, 4488 (1973).
138. Petritz, R.L., Phys. Rev. 104, 1508 (1956).
139. Neugebauer C.A. and Webb M.B.J.Appl. Phys., 33, 74 (1962).
140. " Semiconductor Physics " P.S.Kireev., Translated from the Russian by Mark samokhvalov Mir Publishers, Moscow (1975).