

References

References

- (1) Markvart, T.; "Solar Electricity", John Wiley & Sons Ltd., New York, 1994.
- (2) Iqbal, M.; "An Introduction to Solar Radiation", Academic Press, New York, 1983.
- (3) McVeigh, J.C.; "Sun Power", Pergamon Press, Oxford, 1983.
- (4) Spencer, D.F.; "Basic Photovoltaic Principles and Methods", Van Nostrand Reinhold Company: New York, 1984.
- (5) Granqvist, C.G.; Wittwer, V.; Solar Energy Materials & Solar Cells, 1998, 54, 39.
- (6) Comper, W.D.; Ford, W.T.; Kaneko, M.; Preston, B.N.; Tomoi, M.; Yamada, A.; in "Solar Energy Phase Transfer Catalysis-Transport Processes", Springer-Verlag, Berlin Heidelberg, 1984.
- (7) Brabec, C.J.; Sariciftci, N.S.; Hummelen, J.C.; Adv. Funct. Mater., 2001, 11, 15.
- (8) Swanson, R.M.; Prog. Photovolt. Res. Appl., 2000, 8, 93.
- (9) Weber, W.H.; Lambe, J. ; Appl. Opt., 1976, 15, 2299.
- (10) El-Bashir, S.M.; M. Sc. Thesis, "Preparation and characterization of a Fluorescent Solar Collector", Zagazig University, Benha branch, 2001.
- (11) Goetzberger, A.; Greubel, W.; Appl. Phys., 1977, 14, 123.
- (12) Melnik, I.S.; Rawicz, A.H.; Appl. Opt, 1997, 36, 9025.
- (13) Avnir, D.; Levy, D.; Reisfeld, R.; J. Phys. Chem., 1984, 88, 5956.

- (14) Sakka, S.; Yoko, T.; *Structure & Bonding*, 1992, 77, 89.
- (15) Reisfeld, R.; Shamrakov, D.; Jorgensen, C.; *Solar Energy Materials & Solar Cells*, 1994, 33, 417.
- (16) *Encyclopedia of Materials: Science & Technology*; "Optics of Sol-Gel Nanocomposites", Elsevier Science Ltd., 2000, 1.
- (17) Livage, J.; in "Applications of Organometallic Chemistry in the Preparation and Processing of Advanced Materials", NATO ASI, Series E: Applied Sciences, 1992, 297, 1.
- (18) Mansour, A.F.; El-Shaarawy, M.G.; El-Bashir, S.M.; El-Mansy, M.K.; Hammam, M.; *Polym. Int.*, 2002, 51, 393.
- (19) Mansour, A.F.; El-Shaarawy, M.G.; El-Bashir, S.M.; El-Mansy, M.K.; Hammam, M.; *Polym. Test.*, 2002, 21, 277.
- (20) El-Shaarawy, M.G.; Mansour, A.F.; El-Bashir, S.M.; El-Mansy, M.K.; Hammam, M.; *J. Appl. Polym. Sci.*, 2003, 88, 793.
- (21) Garwin, R.L.; *Rev. Sci. Instr.*, 1960, 311, 1010.
- (22) Bauer, G.; Greubel, W.; *Appl. Phys. Lett.*, 1977, 31, 4.
- (23) Swartz, B.A.; Cole, T.; Zewail, A.H.; *Opt. Lett.*, 1977, 1, 73.
- (24) Rapp, C.F. ; Boling, N.L.; *Proc.13th IEEE PV specialists conf.*, 1978, 690.
- (25) Reisfeld, R.; Newman, S.; *Nature*, 1978, 274, 144.
- (26) Reisfeld, R.; Kalisky, Y.; *Nature*, 1980, 283, 281.
- (27) Reisfeld, R.; Jorgensen, C.K.; *Structure & Bonding*, 1982, 49, 1.

- (28) Reisfeld, R.; *Inorganica Chimica Acta*, 1984, 95, 69.
- (29) Reisfeld, R.; *Chem. Phys. Lett.*, 1985, 114, 306.
- (30) Reisfeld, R.; *Spectroscopy of Solid State Laser-Type Materials*, Plenum, New York, 1987, 343.
- (31) Reisfeld, R.; *Inorganica Chimica Acta*, 1987, 140, 345.
- (32) Reisfeld, R.; Brusilovsky, D.; Eyal, M.; Miron, E.; Brushtein, Z.; Ivri, J., *SPIE*, 1988, 1182, 230.
- (33) Reisfeld, R.; Eyal, M.; Chernyak, V.; Zusman, R.; *Solar Energy Materials*, 1988, 17, 439.
- (34) Reisfeld, R.; *J. Non-Cryst. Solids*, 1990, 124, 254.
- (35) Reisfeld, R.; Miniti, H.; Eyal, M.; *SPIE*, 1991, 1513, 360.
- (36) Reisfeld, R.; Chernyak, V.; Eyal, M.; *SPIE*, 1992, 1727, 299.
- (37) Reisfeld, R.; *Opt. Mat.*, 2001, 16, 1.
- (38) Goetzberger, A.; Heidler, K.; Wittwer, V.; Zastrow, A.; Baur, G.; Sah, E.; *Proc.2nd IEEE PV specialists conf.*, 1979, 515.
- (39) Batchelder, J.S.; Zewail, A.H.; Cole, T.; *Appl. Opt.*, 1979, 18, 3090.
- (40) Wittwer, V.; Heidler, K.; Zastrow, A.; Goetzberger, A.; *Proc. 3rd IEEE PV specialists conf.*; 1980, 1.
- (41) Goetzberger, A.; Wittwer, V.; *Solar Cells*, 1981, 4, 3.
- (42) Batchelder, J.S.; Zewail, A.H.; Cole, T.; *Appl. Opt.*, 1981, 20, 3733.
- (43) Heidler, K.; *Appl. Opt.*, 1981, 20, 773.

- (44) Olson, R.W.; Loring, R.F.; Fayer, M.D.; Appl. Opt.; 1981, 20, 2934.
- (45) Wittwer, v.; Heidler, K.; Zastrow, A.; Goetzberger, A.; J. Luminescence, 1981, 24/25, 873.
- (46) Herman, A.H. ; Solar Energy, 1982, 29, 29.
- (47) Drake, J.M.; Lesiecki, M.L.; Sansregret, J.; Thomas, W.R.L. ; Appl. Opt., 1982, 21, 16.
- (48) Lesiecki, M.L.; Drake, J.M.; Appl. Opt., 1982, 21, 557.
- (49) Zewail, A.H.; Batchelder, J.S.; in "Polymers in Solar Energy Utilization", ACS Symposium Series 220, American Chemical Society, Washington, 1983, 22, 331.
- (50) Lifante, G.; Cusso, F.; Meseguer, F.; Jaque, F.; Appl. Opt., 1983, 22, 3966.
- (51) Sansregret, J.; Drake, J.M.; Thomas, W.R.L.; Lesiecki, M.L.; Appl. Opt., 1983, 22, 573.
- (52) Carracosa, M.; Unamuno, S.; Lopez, A.F.; Appl. Opt., 1983, 22.
- (53) Smestad, G.; Hamill, P.; Appl. Opt., 1984, 23, 4394.
- (54) Roncali, J.; Garnier, F.; Solar Cells, 1984, 13, 133.
- (55) Roncali, J.; Garnier, F.; Appl. Opt., 1984, 23, 2809.
- (56) De Cardona, M.S.; Carracosa, M.; Meseguer, F.; Cusso, F.; Jaque, F.; Appl. Opt., 1985, 24, 2028.
- (57) De Cardona, M. S.; Carracosa, M.; Carracosa, M.; Cusso, M.F.; Jaque, F., Solar Cells, 1985, 15, 225.

- (58) Strauss, E.; Seelert, W.; Keller, W.; Dammasche, H. ; Proc. SPIE, 1986, 653, 119.
- (59) Oksa, T.; Hamalainen, M.; Saarinen, P.; Harkonen, J., Proc. SPIE, 1986 653, 114.
- (60) Wilson, H. R.; Solar Energy Materials, 1987, 16, 223.
- (61) Mugnier, J.; Dordet, Y.; Pouget, J.; Valeur, B.; Rev. Phys. Appl., 1987, 22, 89.
- (62) Mugnier, J.; Dordet, Y.; Pouget, J.; Valeur, B.; Solar Energy Materials, 1987, 15, 65.
- (63) Neuroth, N.; Haspel, R.; Solar Energy Materials, 1987, 16, 235.
- (64) Brusilovsky, D.; Eyal, M.; Reisfeld, R.; Chem. Phys. Lett., 1988, 153, 203.
- (65) Seybold, G.; Wagenblast, G.; Dyes & Pigments, 1989, 11, 303.
- (66) Hinsch, A.; Zastrow, A.; Wittwer, V.; Solar Energy Materials & Solar Cells, 1990, 21, 151.
- (67) Kondepudi, R.; Srinivasan, S.; Solar Energy Materials & Solar Cells, 1990, 20, 257.
- (68) Kondepudi, R.; Srinivasan, S.; Indian J. of Pure & Appl. Phys., 1990, 28, 334.
- (69) Fara, V.L.; Popa, A.; Dorobanlu, I.A.; Grigorescu, R.; Renewable Energy, 1991, 1, 469.
- (70) Pandey, K.K.; Pant, T.C.; Solar Energy Materials & Solar Cells, 1991, 21, 327.

- (71) Fara, V.L.; Grigorescu, R; Demofte, C.; Proc. SPIE, 1992, 1727, 306.
- (72) Sakuta, K.; Sawata, S.; Tanimoto, M. ; Proc. 1st World Conf. on Photovoltaic Energy Conversion , IEEE, 1994, CN 43805, 1115.
- (73) Heilman, B.D.; Miaoulis. L.N.; Appl. Opt., 1994, 33, 6642.
- (74) Ion, R.M.; Fara, L.; Proc. Indian Acad. Sci., 1995, 107, 825.
- (75) Evenson, S.A.; Rawicz, A.H.; Appl. Opt., 1995, 34, 7231.
- (76) Evenson, S.A.; Rawicz, A.H.; Appl. Opt., 1995, 34, 7302.
- (77) El-Shahawy, M.A.; Mansour, A.F.; J. Material Science in electronics, 1996, 7, 174.
- (78) Soti, R.; Farkas, E.; Hilbert, M.; Farkas, Z.; Ketskemeti, I.; J. Luminescence, 1996, 68, 105.
- (79) Melnik, I.S.; Rawicz, A.H.; Appl. Opt., 1997, 36, 9025.
- (80) Bakr, N.A.; Mansour, A.F.; Hammam, M.; J. Appl. Polym. Sci., 1999, 74, 3316.
- (81) Maus, M.; Ph.D. Thesis, "Photoinduced Intramolecular Charge Transfer in Donor-Acceptor Biaryls and Resulting Applicational Aspects Regarding Fluorescent Probes and Solar Energy Conversion", Berlin University, 1998.
- (82) Swift, P.D.; Smith, G.B.; Franklin, J.B. ; Proc. SPIE , 1999, 3789, 21.
- (83) Barnham, K.; Marques, J.L.; Hassard, J.; O'Brien, P. ; Appl. Phys. Lett., 2000, 76, 1179.

- (84) Machida, K.; Li, H.; Ueda, D.; Inoue, S.; Adachi, G.; J. Luminescence, 2000, 87, 1257.
- (85) Chatten, A.J.; Barnham, K.W.J.; Buxton, B.F.; Ekins-Daukes, N.J.; Malik, M.A.; Proc. 3rd World Congress on Photovoltaic Energy Conversion (WPEC-3), Osaka, Japan, 2003.
- (86) Chatten, A.J.; Barnham, K.W.J.; Buxton, B.F.; Ekins-Daukes, N.J.; Malik, M.A.; Sol. Energy Mater. & Sol. Cells, 2003, 75, 363.
- (87) Van Sark, W.G.J.H.M.; Meijerink, A.; Schropp, R.E.I.; Van Roosmalen, J.A.M.; Lysen, E.H.; Sol. Energy Mater. & Sol. Cells, in press.
- (88) Richards, B.S.; Shalav, A.; Corkish, R. P.; (private communication) to be published. *in press* (J.J.J.)
- (89) Rosen, S.L.; "Fundamental Principles of Polymeric Materials", John Wiley & Sons, New York, 1993.
- (90) Harris, D.C.; "Quantitative Chemical Analysis", 5th Ed., W.H. Freeman Co., New York, 1999.
- (91) Willard, H.; Merrit, L.; Dean, J.; Settle, F. ; "Instrumental Methods of Analysis", D. Van Nostrand Company, New York, 1981.
- (92) Drexhage, K.H.; "Dye Lasers", Springer-Verlag, New York, 1990.
- (93) Fox. M.; "Optical Properties of Solids", Oxford University Press Inc., New York, 2001.
- (94) Cohen, M.H.; Fritzsche, H.; Ovshinsky, S.R.; Phys. Rev. Lett., 1969, 22, 1065.
- (95) Mott, N.F.; Phil. Mag., 1966, 13, 989.

- (96) Mott, N.F.; Davis, E.A.; "Electronic Processes in Non-Crystalline Materials", Clarendon Press, Oxford, 1979.
- (97) Mott, N.F.; Phil. Mag., 1972, 26, 505.
- (98) Street, R.A.; Mott, N.F.; Phys. Rev. Lett., 1975, 35, 1293.
- (99) Hill, R.M.; Phil. Mag., 1971, 24, 1307.
- (100) Pankove, J.I.; "Optical Processes in Semiconductors", Dover Publications Inc., New York, 1971.
- (101) Urbach, F.; Phys. Rev., 1953, 92, 1324.
- (102) Bardeen, J.; Phys. Rev., 1949, 75, 169.
- (103) Lakowicz, J.R.; "Principles of Fluorescence Spectroscopy", 2nd Ed. Kluwer Academic, Plenum Press, New York, 1999.
- (104) Rabek, J.F.; "Experimental Methods in Polymer Chemistry", John Wiley & Sons, New York, 1980.
- (105) "An Introduction to Fluorescence Spectroscopy", Perkin Elmer Inc., UK, 2000
- (106) Forgues, S.F.; Lavabre, D., J.; Chem. Edu., 1999, 76, 1260.
- (107) Schäfer, F.P. ; "Dye Lasers", Springer-Verlag, New York, 1990.
- (108) Sakka, S.; Yoko, T.; structure & Bonding, 1992, 77, 89.
- (109) Heavens, O.S.; "Optical Properties of Thin Solid Films", Dover Publications Inc., New York, USA, 1991.
- (110) Collins, E.A.; Bares, J.; Billmeyer, F.W.; "Experimental Journal in Polymer Science", Wiley, New York, 1973.

- (111) Sigma-Aldrich, Fumed Silica, Technical Bulletin, 2004, available from URL <http://www.Sigma-Aldrich.com>.
- (112) Mirabella, F.M.; "Modern Techniques in Applied Molecular Spectroscopy", John Wiley & Sons, USA, 1998.
- (113) Zidan, H.M.; Abu El-Nader, M.; Physica B, in press.
- (114) Reisfeld, R.; Eyal, M.; Chernyak, V.; Proc. SPIE, 1991, 1590, 215.
- (115) Bindhu, C.V.; Harilal, S.S.; Analytical Sciences; 2001, 17, 141.
- (116) Tauc, J.; "Amorphous and liquid semiconductors", vol.159, Plenum Press, New York, 1974.
- (117) Jenkins, F.A.; White, H.E.; "fundamentals of optics", 4th ED, McGraw-Hill Inc., USA, 1976.
- (118) Nikolov, I.D.; Ivanov, C.D.; Appl. Opt., 2000, 39, 2067.
- (119) Bakr, N.A.; El-Hadidy, H.; Hammam, M.; Migahed, M.D.; Thin Solid Films, 2003, 424, 296.
- (120) Van Duijnen, P. Th.; Swart, M.; Phys. Chem. A, 1998, 102, 2399.
- (121) Prêtre, Ph.; Wu, L.M.; Knoesen, A.; J. Opt. Soc. Am. B., 1998, 15, 359.
- (122) Soti, R.; Farkas, E.; Hilbert, M.; Farkas, Z.; Ketskemety, I.; J. Luminescence, 1995, 63, 251.
- (123) Reisfeld, R.; Structure & Bonding, 22, 1975, 123.
- (124) Fisher, D.P.G.; Metcalf, D.H.; Hopkins, T.A.; Pugh, V.J.; Chisdes, S.J.; Kankare, J.; Richardson, F.S.; Inorg. Chem., 1998, 37, 3026.

References

- (125) Villata, L.S.; Wolcan, E.; Feliz, M.R.; Capparelli, A.L.; J. Phys. Chem. A, 1999, 103, 5661.
- (126) Bian, L.; Qian, X.; Yin, J.; Zhu, Z.; Lu, Q.; Mat. Sci. & Eng., 2003, B100, 53.
- (127) Li, X.; King, T.A.; Vitras, F.P.; J. Non-Cryst. Solids, 1994, 170, 243.
- (128) Vitras, F.P.; Li, X.; King, T.A.; J. Sol-Gel Sci. & Tech., 1996, 7, 203.
- (129) Agnihotry, S.A.; Ahmad, S.; Gupta, D.; Ahmad, S.; Electrochimica Acta; 2004, 49, 2343.
- (130) Lewis, W.K.; Lombard, S.M.; Broughton, G.; " Industrial Chemistry of Colloidal & Amorphous Materials", MACMILLAN Co., New York, 1943.
- (131) Tareev, B.; " Physics of Dielectric Materials", Mir:Moscow, 1979.
- (132) Rao, A.P.; Rao, A.V.; Mat. Chem. & Phys., 2001, 68, 260.
- (133) Suratwala, T.; Gardlund, Z.; Davidson, K.; Uhlmann; D. R.; Chem. Mater., 1998, 10, 190.
- (134) Suratwala, T.; Gardlund, Z.; Davidson, K.; Uhlmann; D. R.; Chem. Mater., 1998, 10, 199.
- (135) Li, H.; Inoue, S.; Ueda, D.; Machida, K.; Adachi, G.; Bull. Chem. Soc. Jpn., 2000, 73, 251.
- (136) Knobbe, E.T.; Dunn, B.; Fuqua, D.; Nishida, F.; Appl. Opt., 1990, 29, 2729.
- (137) Kashiwagi, T.; Morgan, A.B.; Antonucci, J.M.; Vanlandingham, M.R.; Harris, R.H.; Awad, W.H.; Shields, J.R.; J. Appl. Polym. Sci., 2003, 89, 2072.

References

- (138) L.Taiz and E.Zeiger, Plant Physiology, 2nd Ed. Sinauer Associates Inc., Massachusetts, USA, 1998.
- (139) Giacomelli, G.A., HortTechnology, 1999, 3, 50.
- (140) Novoplansky, A.; Sachs, T.; Cohen, D.; Bar, R.; Bodenheimer, J.; Reisfeld, R.; Solar Energy Mat., 1990, 21, 17.
- (141) Wilson, S.B.; Rajapakse, N.C.; J. Appl. Horticulture, 2001, 3, 71.
- (142) Gravisse, P. ; French Patent, 1981, No. 2511840.
- (143) Lawlor, D.W.; "Photosynthesis: Metabolism, Control and Physiology", Longman, 1987.
- (144) El-Shaarawy, M.G.; El-Bashir, S.M.; Hammam, M.; El-Mansy, M.K.; (in preparation).
- (145) Druehl, L. ; Pacific Seaweeds, Harbour publishing, Maderia park, B.C., Canada, 2000.
- (146) Biofacts Sheet ; "Pigments in Plants" ; 2000, 63, 1.
- (147) El-Shaarawy, M.G.; El-Bashir, S.M.; Hammam, M.; El-Mansy, M.K.; (to be published).
- (148) Rabab, H.A.; Fathy, A. Bull National Inst. of Astronomy & Geophysics, Egypt, 2003. Serial. A.
- (149) Buresch, M.; "Photovoltaic Energy Systems", McGraw Hill, New York, 1983.
- (150) Yahya, H.; " ALLAH's Artistry in Colour" , 2002 , Harun Yahya Int., available from , info@harunyahya.com.