

REFERENCES

- Abdou, E.M., Hafez, H.S., Bakir, E., and Abdel-Mottaleb, M.S.A., 2013, Photostability of lowcost dye-sensitized solar cells based on natural and synthetic dyes, *Spectrochim. Acta. A. Mol. Biomol. Spectrosc.*, 202-207.
- Basheer, B., Mathew, D., George, B.K., and Nair, C.P.R., 2014, An Overview on the spectrum of sensitizers: The Heart of Dye-Sensitized Solar Cells, *Solar Energy*, 11, 257-288.
- Branisa, J., Jenisova, Z., Porubska, M., Jomova, K., and Valko, M., 2014, Spectrophotometric Determination of Chlorophylls and Carotenoids. An Effect Of Sonication and Sample Processing, *J. Microbio. Biotech. Food. Sci.*, 3, 61-64.
- Cakar, S., and Ozakar, M., 2016, Fe-tannic acid Complex Dye as Photosensitizer for Different Morphological ZnO based DSSCs., *Spectrochim. Acta. A. Mol. Biomol. Spectrosc.*, 163, 79-88
- Dwitasari, L., 2014, Co-Sentization of Xanthophyllin Chlorophyllin-Sensitized Solar Cell, *Undergraduate Thesis*, Chemistry Department Faculty of Mathematics and Natural Science Universitas Gadjah Mada, Yogyakarta.
- Grätzel, M., 2001, Photochemical Cells, *Nature*, 414, 308
- Gratzel, M., 2004, Conversion of Sunlight to Electric Power by Nanocrystalline Dye Sensitized Solar Cells, *IEEE Trans. Electron. Dev.*, 31.
- Gong, J., Liang, J., and Sumathy, K., 2012, Review on dye-sensitized solar cells (DSSCs): Fundamental Concepts and novel materials. *Renew. Sustainable Energy Rev.*, 16, 5848-5860.
- Gomez-Ortiz, N. M., Vazquez-Maldonado, I. A., Perez-Espadas, A. R., and Mena-Rejon, G. J., 2010. Dye-sensitized Solar Cells with Natural Dyes Extracted from Achiote Seeds. *Sol. Energ. Mat. Sol. Cells*, Volume 94, pp. 40-44.
- Hagfeldt, A., Boschloo, G., Sun, L., Kloo, L., and Pettersson, H., 2010., Dye-Sensitized Solar Cells, *Chem. Rev.*, 110(11), 6595-6663.
- Halme, J., 2002, *Dye-Sensitized Nanostructured and Organic Photovoltaic Cells: Technical Review and Preliminary Test*, Master Rhesus, Department of Engineering Physics and Mathematics, Helsinki University of Technology, Finlandia.

- Hao, S., Wu, J., Huang, Y., and Lin, J., 2006, Natural Dyes as Photosensitizers for Dye-Sensitized Solar Cell, *Solar Energy*, 80, 209-214.
- Harbone, J. B., 1996, *Metode Fitokimia: Penuntun Cara Modern Menganalisis Tumbuhan*, ITB, Bandung.
- Iqbal, Y., Rhee, I. and Bae, H., 2014. Characterization of Oleic acid-coated-Iron oxide Nanoparticles Synthesized by Coprecipitation Method. *New Phys. Sae Mulli*, 64(3), pp. 344-348.
- Montenegro, M. A., Rios, A., Nazareno, M. A., Mercadante, A. Z., and Borsarelli, C. D., 2004, model studies on the photosensitized isomerization of bixin, *J. Agri. Food Chem.*, 52, 367-373.
- Moustafa, M. H., 2005, Equilibrium Studies of Captopril and its Biological Iron(II) and Zinc(II) Binary Complexes, *Ass. Univ. Bull. Environ. Res.*, 8, 103-114.
- Nakade, S., 2001, Effects of Lithium Ion Density on Electron Transport in Nanoporous TiO₂ electrodes, *J. Phys. Chem. B.*, Issue 105, p. 9160.
- Nkurunziza, E., 2014, Indirect Nanoplasmonic Sensing Study of Z907 Dye Molecules Interacting with TiO₂ for Dye Sensitized Solar Cell Applications, *Master Thesis*, Department of applied Physics Chalmers University of Technology, Goteburg.
- Pavia, D. L., Lampman, G. M. and Vyvyan, J. R., 2001, *Introduction to Spectroscopy*, 4th ed., Bellingham, Washington.
- Preston, H. D., and Rickad, M. D., 1980, Extraction and Chemistry of Annatto, *Food Chem.*, 5, 47-56.
- Rahmalia, W., Fabre, J. F., Usman, T. and Mouloungui, Z., 2014, Aprotic Solvents Effect on The UV-Visible Absorbtion Spectra of Bixin, *Spectrochim. Acta. A. Mol. Biomol. Spectrosc.*, Volume 131, pp. 455-460.
- Ratna, H.N., 2013, Synthesis and Characterization of Iron Complexes Hexasulfanilatoiron(II) dihydrate, *Undergraduate Thesis*, Prodi Kimia FMIPA Universitas Sebelas Maret, Solo
- Rios, A., Mercadante, A., and Borsailleli, C, 2007, Triplet State Energy of The Carotenoid Bixin Determined by Photoacoustic Colorimetry, *Dyes Pigm.*, 74, 561-565.

- Rodriguez, D., 2001, *A Guide to Carotenoid Analysis in Food*, Life Science Institute Press, Washington D.C.
- Sasri, R., 2014, Natural Dyes Extracted from Achiote Seeds as Photosensitizer on TiO₂ Nanofibers Photoanode for Solar Cells, *Master Thesis*, Chemistry Department Faculty of Mathematics and Natural Science UGM, Yogyakarta.
- Silverstein, R. M., Bassler, G. C., and Morrill, T. C., 1986, *Spectrometric Identification of Organic Compounds*, 7th ed. John Wiley and Sons Inc, Danvers.
- Tosoniani, S., Ruiz, C. J., Rios, A., Frias, E., and Eichler, J. F., 2013, Synthesis, Characterization, and Stability of Iron(III) Complex ions possessing phenanthroline-based ligands, *J. Inorg. Chem.*, 3(1), 7-13.
- Vogel, and, Svehla, G., 1985. *Qualitative Inorganic Analysis*, 5th ed, Longman Publishing Group, London.
- Yamazaki, E., Murayama, M., Nishikawa N, H. N. and Kurita, S., 2007, Utilization of Natural Carotenoid as photosensitizer for Dye Sensitized Solar Cell, *Solar Energy*, 81, 512-516.