DAFTAR PUSTAKA

1. Sánchez-de-Armas, R., Oviedo López, J., A. San-Miguel, M., Sanz, J.F., Ordejón, P., and Pruneda, M. (2010): *Real-Time TD-DFT Simulations in Dye Sensitized Solar Cells: The Electronic Absorption Spectrum of Alizarin Supported on TiO2 Nanoclusters*., Journal of Chemical Theory and Computation, 6, pp: 2856–2865.
2. Setiadji, S., et.al. 2015. Studi Komputasi Senyawa Dopamin dan Dopamin-$Ti(OH)_2$ untuk Aplikasi Sel Surya Tersensitasi Zat Warna: Vol 9. No 2.
3. Harianto, B. 2014. Studi Awal Fabrikasi *Dye Sensitized Solar Cell* (DSSC) Berbasis Pemeka Erithrosine. *Tesis*. Program Studi Magister Kimia. Fakultas Matematika dan Ilmu Pengetahuan Alam. Institut Teknologi Bandung: Bandung.
4. Mathew, S., et.al. 2014. Dye Sensitized Solar Cells with 13% Efficiency Achieved Through the Molecular Engineering of Porphyrin Sensitizers. *Nature Chemistry*: 242-7.
5. S., 2019. Modifikasi Teoritik Siandin sebagai Sensitizer pada Dye Sensitized Solar Cell (DSSC) Menggunakan Gugus Penarik Elektron Asam Rodaninasetat. *Jurnal Kimia dan Pendidikan Kimia,* 4(1), pp. 34-41.
6. Imelda. 2016. Penggunaan Zat Warna Organik untuk Meningkatkan Performa Peralatan Solar Cell Menggunakan Metoda *Density Functional Theory* (DFT). *Lantanida Journal*: Vol 4. No 1.
7. Ainurraziqin, M. I., Sudarlin & Artsanti, P., 2018. Kajian Teoritis Pengaruh Gugus Trifenilamin dan Sianoasetat Pada Sianidin Sebagai Senyawa Dye Sel Surya Tersensitasi. *Indonesian Journal of Materials Chemistry,* 1(1), pp. 1-8.
8. Abrori, M., et.al. 2017. Pemanfaatan *Solar Cell* Sebagai Sumber Energi Alternatif dan Media Pembelajaran Praktikum Siswa Di Pondok Pesantren “Nurul Iman” Sorogenen Timbulharjo, Sewon, Bantul, Yogyakarta Menuju Pondok Mandiri Energi: Vol 1. No 1. 17-26.
9. Prianto, B. *Pemodelan kimia komputasi*. 2010. Penelitian Bidang Material: Dirgantara Lapan.
10. Pangestuti, D.L., Gunawan., Haris, A. 2008. Pembuatan *Dye Sensitized Solar Cell* (DSSC) dengan sensitizer Antosianin dari buah Buni (*Antidesma bunius L*). Jurnal Kimia.f
11. Valencia, S.; Marin, J. M.; Restrepo, G.: Study of the Bandgap of Synthesized Titanium Dioxide Nanoparticules using the Sol-Gel Method and a Hydrothermal Treatment. *The open material science journal,* 2010, 4, 9-14.
12. Krishnan, K.G; Kumar, C.U; Lim. W.M; Mai, C.W; Thanikachalam, P.V; Ramalingan, C, Novel cyanoacetamide integrated phenothiazines: syinthesis, characterization, computational studies and in vitro antioxidant and anticancer evaluation, *J.of mol.struc*, 2020, 1-10.
13. Atkins, P.W, *Kimia Fisika,* jilid 2, edisi keempat, Oxford, 1989, 47-48.
14. Patil, D.S., et.al. 2018. Linear Correlation between DSSC efficiency, intramolecular charge transfer characteristics, and NLO properties – DFT approach. *Computational dan Theorical Chemistry.*: 75-83.
15. Hongbo, W.; Qian, L.; Dejiang, L.; Runzhou, Su.; Jinglin, L.; Yuanzuo, L.: Computational Prediction of Electronic and Photovoltaic Properties of Anthracene-Based Organic Dyes for Dye-Sensitized Solar Cells. International Journal of Photoenergy 2018, 1-17.

16. Beu, T. A., Bende, A. & Farcaş, A. A., 2020. Calculations of electron transfer in the tris[4-(2-thienyl)phenyl]amine–C70 donor-acceptor system. *Chemical Physics Letters,* Volume 754, p. 137654.
17. Imelda., et.al. 2017. Rekayasa Struktur Donor pada Zat Warna Organik Tipe D-π-A dengan Kerangka Tiofen pada Dye Sensitized Solar Cell (DSSC) Menggunakan Metode Ab-initio. *Jurnal Kimia Unand*: Vol 6. No 1.
18. Tan, Y.Y., Wei, H.T., Sergei, M. 2014. Computational design of small organic dye with strong visible absorption by controlled quinoidization of the thiopene unit. *Chemical Physics Letters.*: 593, 14-19.
19. Khosravi, M., et.al. 2019. Evaluation of DFT methods to calculate structure and partial atomic charges for zeolite N. *Computational Material Science*.
20. Lian, X., Zhao, Z. & Cheng, D., 2017. Recent progress on triphenylaminematerials: synthesis, properties, and applications. *MOLECULAR CRYSTALS AND LIQUID CRYSTALS,* Volume 648, pp. 223-235.
21. Pati, P.B., Yang, W., Zade, S.S. 2017. New dyes for DSSC containing triphenylamine bsased extended donor: Synthesis, photophysical properties and device performance. *Molecular and Biomolecular Spectroscopy*: Vol 178, 106-113.
22. Imelda.; Emriadi.; Aziz, H.; Santoni, A.; Utami, N.: The Modification of Cyanidin Based Dyes to Improve the Performance of Dye-Sensitized Solar Cells (DSSCs). *Rasayan Journal of Chemistry*, 2020, 13, 1, 121-130.
23. Utami, Novitri. Modifikasi Zat Warna Kerangka Sianidin untuk Meningkatkan Performa *Dye Sensitized Solar Cells* (DSSCs) menggunakan metode DFT. *Skripsi*. Fakultas Matematika dan Ilmu Pengetahuan Alam. Universitas Andalas. Padang. 2019.
24. Obotowo, I. N.; Obot, I. B.; Ekpe, U. J.: Organic Sensitizers for Dye-Sensitized Solar Cell (DSSC): Properties from Computation, Progress and Future Perspectives. *Journal of Molecular Structure* 2016, 1122, 80–87.
25. Sanusia, K.; Fatomia, N. O.; Borisadeb, A. O.; Yilmazc, Y.; Ceyland, Ü.; Fashinae, A.: An Approximate Procedure for Profiling Dye Molecules with Potentials as Sensitizers in Solar Cell Application: A DFT/TD-DFT Approach. *Chemical Physics Letters* 2019, 723, 111-117.
26. Seo, D.; Park, K. W.; Kim, J.; Hong, J.; Kwak, K.: DFT Computational Investigation of Tuning the Electron Donating Ability in Metal-Free Organic Dyes Featuring a Thienylethynyl Spacer for Dye Sensitized Solar Cells. *Computational and Theoretical Chemistry* 2016, 1081,30–37.
27. Amkassou, A; Zgou, H. New dyes for DSSC containing thienylen-phenylene: a theoretical investigation. *material today proceeding: ICMES 2018.* 2019, 569-578.
28. He, L. J., Jie , C., Bai, F. Q. & Ran , J., 2017. Fine-tuning p-spacer for high efficiency performance DSSC: A theoretical exploration with D-phi-A based organic dye. *Dyes and Pigments,* Volume 141, pp. 251-261.
29. Saoti,T, *Kimia Anorganik*, Terjemahan oleh Ismunandar, Iwanami Publishing company, 2009.