

## DAFTAR PUSTAKA

- Abeywardena, M. R., Yashomala, M. A. D. H., Elkaduwe, R. K. W. H. M. K., Karunaratne, D. G. G. P., Pitawala, H. M. T. G. A., Rajapakse, R. M. G., Manipura, A., dan Mantilaka, M. M. M. G. P. G, 2021, Fabrication of water-repellent polyester textile via dip-coating of in-situ surface-modified superhydrophobic calcium carbonate from dolomite, *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 629. <https://doi.org/10.1016/j.colsurfa.2021.127397>
- Abriyani, E., Putri, N. S., Rosidah, R. S. N., dan Ismanita, S. S, 2022, Analisis Kafein Menggunakan Metode Uv-Vis: Tinjauan Literatur, *Jurnal Pendidikan Dan Konseling*, 4(6).
- Ali, H., dan Jana, N. R, 2018, Plasmonic photocatalysis: Complete degradation of bisphenol A by a gold nanoparticle-reduced graphene oxide composite under visible light, *Photochemical and Photobiological Sciences*, 17(5), 628–637. <https://doi.org/10.1039/c8pp00012c>
- Andriani, T., Agustin, F., Chadijah, S., Adawiah, S. R., dan Nur, A, 2022, Analisa Logam Berat Kadmium (Cd) dan Timbal (Pb) pada Kerang Hijau (*Perna viridis*) yang Beredar di Pelelangan Ikan Paotere Kota Makassar, *Chimica et Natura Acta*, 10(3), 112–116. <https://doi.org/10.24198/cna.v10.n3.42296>
- Aprilianingrum, F, 2016, *Optimasi dan Regenerasi Fotokatalis  $Ca_{1-x}Co_xTiO_3$  Pada Proses Degradasi Metilen Biru dengan Sinar UV*.
- Ardeansyah, D. I., dan Ermawati, F. U, 2019, Analisis Rietveld Serbuk  $FeTiO_3$  Hasil Preparasi dengan Metode Pencampuran Larutan, *Jurnal Inovasi Fisika Indonesia (IFI)*, 8(2), 44–49.
- Asadah, E., Hadisantoso, E. P., dan Soni Setiadji, D, 2022, Pengaruh Suhu Kalsinasi Terhadap Sintesis Kadmium Sulfida (CdS) Menggunakan Metode Presipitasi Untuk Penanganan Metilen Biru Secara Fotokatalisis, *Gunung Djati Conference Series*, 7.
- Aziz, I. T. A., dan Supriyono, 2024, Degradasi Fotokatalitik Senyawa Metilen Biru Dengan Katalis Titania Nanotube, *WARTA AKAB*, 48(1), 53–60.
- Brasington, T., Buhler, M., Christensen, E., Kelliher, T., Schwuchow, K., Williams, C., dan Wlekinski, J, 2017, *Efficiency and Effectiveness of Wastewater Treatment in the Removal of Endocrine Disruptors Estradiol, and Alkylphenol within the Whitewater Wastewater Treatment Facility*. <https://doi.org/10.13140/RG.2.2.31823.61606>

- Chen, P., Zhang, Y., Zhou, Y., dan Dong, F, 2021, Photoelectrocatalytic carbon dioxide reduction: Fundamental, advances and challenges, *Nano Materials Science*, 3(4), 344–367. <https://doi.org/10.1016/j.nanoms.2021.05.003>
- Dangi, R., dan Shakya, S, 2014, Preparation, Optimization and Characterization of PLGA Nanoparticle, *International Journal of Pharmaceutical and Life Sciences*, 4(7), 2810. – 2818.
- Darmawan, P. R, 2013, Pengaruh Ion  $NO_3^-$  - Terhadap Degradasi Methyl Orange Menggunakan Fotokatalis  $TiO_2$ -Bentonit.
- Darmawati, A., Soebahagiono, S., Purwanto, D. A., Dharmawangsa, J., dan Surabaya, D, 2016, Penentuan Kadar Parasetamol dan Kofein Secara Simultan Menggunakan Spektrofotometri UV (Suatu Model Untuk Pembelajaran), *Berkala Ilmiah Kimia Farmasi*, 5(2), 11–14.
- Da Silva, M. R., Scalvi, L. V. A., Neto, V. S. L., dan Dall'Antonia, L. H, 2016, Dip-coating deposition of resistive  $BiVO_4$  thin film and evaluation of their photoelectrochemical parameters under distinct sources illumination, *Journal of Solid State Electrochemistry*, 20(6), 1527–1538. <https://doi.org/10.1007/s10008-016-3166-y>
- Delmifiana, B., dan Astuti, 2013, Pengaruh Sonikasi Terhadap Struktur dan Morfologi Nanopartikel Magnetik yang Disintesis Dengan Metode Kopresipitasi, *Jurnal Fisika Unand*, 2(3).
- Djawa, J. P. T., Dho Tawa, B., dan Wogo, H. E, 2018, Degradasi Zat Warna Azo Metil Orange Menggunakan Besi Valensi Nol, *Seminar Nasional Inovasi Dan Aplikasi Teknologi Di Industri*.
- Dong, P., Xi, X., Zhang, X., Hou, G., dan Guan, R, 2016, Template-free synthesis of monoclinic  $BiVO_4$  with porous structure and its high photocatalytic activity, *Materials*, 9(8). <https://doi.org/10.3390/ma9080685>
- Eremia, S. A. V., Chevalier-Lucia, D., Radu, G. L., dan Marty, J. L, 2008, Optimization of hydroxyl radical formation using  $TiO_2$  as photocatalyst by response surface methodology, *Talanta*, 77(2), 858–862. <https://doi.org/10.1016/j.talanta.2008.07.056>
- Fan, J., Guo, Y., Wang, J., dan Fan, M, 2009, Rapid decolorization of azo dye methyl orange in aqueous solution by nanoscale zerovalent iron particles, *Journal of Hazardous Materials*, 166(2–3), 904–910. <https://doi.org/10.1016/j.jhazmat.2008.11.091>

- Fraditasari, R., Wardhani, S., dan Khunur, M. M, 2015, Degradasi Methyl Orange Menggunakan Fotokatalis TiO<sub>2</sub>-N: Kajian Pengaruh Sinar dan Konsentrasi TiO<sub>2</sub>-N, *KIMIA.STUDENTJOURNAL*, 1(1), 606–612.
- Frista, N., Kurniawati, D., dan Dewata, I, 2024, Pengaruh Waktu Kontak dan Kecepatan Pengadukan dengan Metode Batch Terhadap Penyerapan Zat Warna Methyl Orange Pada Biji Kelengkeng, *Jurnal Pendidikan Tambusai*, 8(1).
- Giri, M., Singh, D., Lal, J., Jaggi, N., Singh, N., dan Jaiswal, R. M. P, 2012, Absorption and Fluorescence Spectra of Methyl Orange in Aqueous Solutions, *Atti Della "Fondazione Giorgio Ronchi,"* 68(2). <https://www.researchgate.net/publication/269036448>
- Goldstein, J. I., Newbury, D. E., Echlin, P., Joy, D. C., Lyman, C. E., Lifshin, E., Sawyer, L., dan Michael, J. R, 2003, *Scanning Electron Microscopy and X-Ray Microanalysis* (3rd ed.), Springer.
- Gomes, A. J., Lunardi, C. N., Rocha, F. S., dan Patience, G. S, 2019, Experimental methods in chemical engineering: Fluorescence emission spectroscopy, In *Canadian Journal of Chemical Engineering*, 97(8), 2168–2175, Wiley-Liss Inc. <https://doi.org/10.1002/cjce.23506>
- Hadi, H. M., dan Wahab, H. S, 2015, Visible Light Photocatalytic Decolourization of Methyl Orange Using N-Doped TiO<sub>2</sub> Nanoparticles, *Journal of Al-Nahrain University-Science*, 18(3), 1–9. <https://doi.org/10.22401/JNUS.18.3.01>
- Hanie, N., Meriatna, M., Zulmiardi, Z., dan Ginting, Z, 2023, Analisa dan Kinetika Adsorpsi Zat Warna Metil Orange Menggunakan Adsorben Cangkang Kemiri, *Jurnal Teknologi Kimia Unimal*, 12(2), 239. <https://doi.org/10.29103/jtku.v12i2.13529>
- Han, J., Li, K., Cheng, H., dan Zhang, L, 2017, A green desulfurization technique: Utilization of flue gas SO<sub>2</sub> to produce H<sub>2</sub> via a photoelectrochemical process based on Mo-doped BiVO<sub>4</sub>, *Frontiers in Chemistry*, 5(DEC). <https://doi.org/10.3389/fchem.2017.00114>
- Hassaan, M. A., El-Nemr, M. A., Elkatory, M. R., Ragab, S., Niculescu, V. C., dan El Nemr, A, 2023, Principles of Photocatalysts and Their Different Applications: A Review, In *Topics in Current Chemistry*, 381(6), Springer Science and Business Media Deutschland GmbH. <https://doi.org/10.1007/s41061-023-00444-7>
- Husna, N., Sanjaya, H., Budiman, S., dan Mulia, M, 2024, Pengaruh Suhu Kalsinasi Pada Sintesis dan Karakterisi SnO<sub>2</sub> Menggunakan Metode Sol-gel, *Jurnal Pendidikan Tambusai*, 8(2), 29170–29173.

- Ishibashi, K.-I., Fujishima, A., Watanabe, T., dan Hashimoto, K., 2000, Quantum yields of active oxidative species formed on TiO<sub>2</sub> photocatalyst, In *Journal of Photochemistry and Photobiology A: Chemistry*, 134.
- Ismail, F., dan Kanitha, D., 2020, Identifikasi dan Penetapan Kadar Pentoxyfillin Dalam Sediaan Tablet Secara Spektrofotometri Fourier Transform Infrared (FT-IR) dan Spektrofotometri UV-Visibel, *Jurnal Farmagazine*, 7(2), 7. <https://doi.org/10.47653/farm.v7i2.523>
- Jia, Q., Iwashina, K., dan Kudo, A., 2012, *Facile fabrication of an efficient BiVO<sub>4</sub> thin film electrode for water splitting under visible light irradiation*, 109(29). <https://doi.org/10.1073/pnas.1204623109/-/DCSupplemental>
- Jin, B., Cho, Y., Park, C., Jeong, J., Kim, S., Jin, J., Kim, W., Wang, L., Lu, S., Zhang, S., Oh, S. H., dan Zhang, K., 2022, A two-photon tandem black phosphorus quantum dot-sensitized BiVO<sub>4</sub> photoanode for solar water splitting, *Energy and Environmental Science*, 15(2), 672–679.
- Jumardin, Maddu, A., Santoso, K., dan Isnaeni, 2022, Karakteristik Sifat Optik Nanopartikel Karbon (Carbon Dots) Dengan Metode UV-Vis DRS (Ultra Violet-Visible Diffuse Reflectance Spectroscopy), *JURNAL FISIKA DAN TERAPANNYA*, 9(1), 1–15. <https://doi.org/10.24252/jft.v9i2.28815>
- Khatter, J., dan Chauhan, R. P., 2020, Effect of temperature on properties of cadmium sulfide nanostructures synthesized by solvothermal method, *Journal of Materials Science: Materials in Electronics*, 31(3), 2676–2685. <https://doi.org/10.1007/s10854-019-02807-7>
- Korjenic, A., dan Raja, K. S., 2019, Electrochemical Stability of Fluorine Doped Tin Oxide (FTO) Coating at Different pH Conditions, *Journal of The Electrochemical Society*, 166(6), C169–C184. <https://doi.org/10.1149/2.0811906jes>
- Kumar Gupta, V., dan Karar, P. K., 2011, Optimization of Process Variables for the Preparation of Chitosanalginate Nanoparticles, *International Journal of Pharmacy and Pharmaceutical Sciences*, 3(2).
- Lamdab, U., Wetchakun, K., Phanichphant, S., Kangwansupamonkon, W., dan Wetchakun, N., 2016, InVO<sub>4</sub>–BiVO<sub>4</sub> composite films with enhanced visible light performance for photodegradation of methylene blue, *Catalysis Today*, 278, 291–302. <https://doi.org/10.1016/j.cattod.2015.11.037>
- Leng, Y., 2013, X-ray Diffraction Methods, In *Materials characterization: introduction to microscopic and spectroscopic methods* (2nd ed., p. 376), Wiley-VCH.

- Lewerenz, H. J., Heine, C., Skorupska, K., Szabo, N., Hannappel, T., Vo-Dinh, T., Campbell, S. A., Klemm, H. W., dan Muñoz, A. G., 2010, Photoelectrocatalysis: Principles, nanoemitter applications and routes to bio-inspired systems, In *Energy and Environmental Science*, 3(6), pp. 748–760. <https://doi.org/10.1039/b915922n>
- Lidia, I., dan Mursal, P., 2018, Karakterisasi XRD dan SEM Pada Material Nanopartikel Serta Peran Material Dalam Drug Delivery System, *Pharma Xplore: Jurnal Sains Dan Ilmu Farmasi*, 3(2).
- Lin, X. H., Lee, S. N., Zhang, W., dan Li, S. F. Y., 2016, Photocatalytic degradation of terephthalic acid on sulfated titania particles and identification of fluorescent intermediates, *Journal of Hazardous Materials*, 303, 64–75. <https://doi.org/10.1016/j.jhazmat.2015.10.025>
- Linxiang, L., Abe, Y., Nagasawa, Y., Kudo, R., Usui, N., Imai, K., Mashino, T., Mochizuki, M., dan Miyata, N., 2004, An HPLC assay of hydroxyl radicals by the hydroxylation reaction of terephthalic acid, *Biomedical Chromatography*, 18(7), 470–474. <https://doi.org/10.1002/bmc.339>
- Liu, J., An, T., Chen, Z., Wang, Z., Zhou, H., Fan, T., Zhang, D., dan Antonietti, M., 2017, Carbon nitride nanosheets as visible light photocatalytic initiators and crosslinkers for hydrogels with thermoresponsive turbidity, *Journal of Materials Chemistry A*, 5(19), 8933–8938. <https://doi.org/10.1039/c7ta02923c>
- Madjid, A., Nitsae, M., Atikah, dan Sabarudin, A., 2015, Pengaruh Penambahan Tripolyfosfat Pada kitosan Beads Untuk Adsorpsi Methyl Orange, *Jurnal MIPA*, 38(2), 144–149. <http://journal.unnes.ac.id/nju/index.php/JM>
- Mansha, M. S., Iqbal, T., Farooq, M., Riaz, K. N., Afsheen, S., Sultan, M. S., Al-Zaqri, N., Warad, I., dan Masood, A., 2023, Facile hydrothermal synthesis of BiVO<sub>4</sub> nanomaterials for degradation of industrial waste, *Heliyon*, 9(5). <https://doi.org/10.1016/j.heliyon.2023.e15978>
- Masta, N., 2020, *Buku Materi Pembelajaran Scanning Electron Microscopy*, 21, Patra Widya: Seri Penerbitan Penelitian Sejarah dan Budaya.
- McMichael, S., Fernández-Ibáñez, P., dan Byrne, J. A., 2021, A review of photoelectrocatalytic reactors for water and wastewater treatment. In *Water (Switzerland)*, 13(9), MDPI AG. <https://doi.org/10.3390/w13091198>
- Moradi, Z., Jahromi, S. Z., dan Ghaedi, M., 2021, Design of active photocatalysts and visible light photocatalysis, *Interface Science and Technology*, 32, 557–623.

- Moy, A. J., dan Tunnell, J. W, 2016, Diffuse Reflectance Spectroscopy and Imaging, In *Imaging in Dermatology* (pp. 203–215), Elsevier Inc. <https://doi.org/10.1016/B978-0-12-802838-4.00017-0>
- Panthoko, N. E. C., Septiningrum, F., Yuwono, A. H., Nurhidayah, E., Maulana, F. A., Sofyan, N., Dhaneswara, D., Lalasari, L. H., Arini, T., Andriyah, L., Firdiyono, F., Ardianto, Y. W., dan Pawan, R. W, 2023, Synthesis of Tin Oxide Nanocrystallites with Various Calcination Temperatures using Co-Precipitation Method with Local Tin Chloride Precursor, *Metalurgi*, 38(1), 9. <https://doi.org/10.55981/metalurgi.2023.687>
- Pookmanee, P., Paosorn, S., dan Phanichphant, S, 2010, Chemical synthesis and characterization of bismuth vanadate powder, *Advanced Materials Research*, 93–94, 153–156. <https://doi.org/10.4028/www.scientific.net/AMR.93-94.153>
- Prasatya, A. N., dan Susanti, D, 2013, Pengaruh Temperatur Kalsinasi pada Kaca FTO yang di-coating ZnO terhadap Efisiensi DSSC (Dye Sensitized Solar Cell) yang Menggunakan Dye dari Buah Terung Belanda (*Solanum betaceum*), *JURNAL TEKNIK POMITS*, 2.
- Riapanitra, A., Setyaningtyas, T., dan Haryadinaru, G. H, 2024, Photodegradation of Methylene Blue Dye Using BiVO<sub>4</sub>/g-C<sub>3</sub>N<sub>4</sub> Composites under Visible Light Irradiation, *Jurnal Kimia Sains Dan Aplikasi*, 27(8), 363–370. <https://doi.org/10.14710/jksa.27.8.363-370>
- Rusli, R, 2022, Circulating UV-vis spectrophotometry using curcumin reagent to measure borax in wet noodles, *International Journal on Obygn and Health Sciences*, 1(1), 17–23.
- Sabeni, A., Fahdiran, R., dan Sugihartono, I, 2022, Review Metode Pseudopotensial Untuk Analisis Band Gap Semikonduktor, *Prosiding Seminar Nasional Fisika (E-Journal) SNF2022*, 10. <https://doi.org/10.21009/03.SNF2022>
- Sahdiah, H., dan Kurniawan, R, 2023, Optimasi Tegangan Akselerasi pada Scanning Electron Microscope – Energy Dispersive X-Ray Spectroscopy (SEM-EDX) untuk Pengamatan Morfologi Sampel Biologi, *Jurnal Sains, Dan Edukasi Sains*, 6(2), 117–123. <https://doi.org/10.24246/juses.v6i2p117-123>
- Sharma, R., Bisen, D. P., Shukla, U., dan Sharma, B. G, 2012, X-ray diffraction: a powerful method of characterizing nanomaterials, *Recent Research in Science and Technology*, 4(8), 77–79. <http://recent-science.com/>

- Sharma, S., Dutta, V., Raizada, P., Hosseini-Bandegharai, A., Singh, P., dan Nguyen, V. H., 2020, Tailoring cadmium sulfide-based photocatalytic nanomaterials for water decontamination: a review, In *Environmental Chemistry Letters*, 19(1), 271–306, Springer Science and Business Media Deutschland GmbH. <https://doi.org/10.1007/s10311-020-01066-x>
- Shen, Y., Wang, X., Zuo, G., Li, F., dan Meng, Y., 2015, Influence of heat treatment on photocatalytic performance of BiVO<sub>4</sub> synthesized by hydrothermal method, *High Temperature Materials and Processes*, 2015, 853–856. <https://doi.org/10.1515/htmp-2015-0070>
- Shi, L., Zhuo, S., Abulikemu, M., Mettela, G., Palaniselvam, T., Rasul, S., Tang, B., Yan, B., Saleh, N. B., dan Wang, P., 2018, Annealing temperature effects on photoelectrochemical performance of bismuth vanadate thin film photoelectrodes, *RSC Advances*, 8(51), 29179–29188. <https://doi.org/10.1039/c8ra04887h>
- Sun, X., dan Lei, Y., 2017, Fluorescent carbon dots and their sensing applications, In *TrAC - Trends in Analytical Chemistry*, 89, 163–180, Elsevier B.V. <https://doi.org/10.1016/j.trac.2017.02.001>
- Su, Q., Zhu, L., Zhang, M., Li, Y., Liu, S., Lin, J., Song, F., Zhang, W., Zhu, S., dan Pan, J., 2021, Construction of a Bioinspired Hierarchical BiVO<sub>4</sub>/BiOCl Heterojunction and Its Enhanced Photocatalytic Activity for Phenol Degradation, *ACS Applied Materials and Interfaces*, 13(28), 32906–32915. <https://doi.org/10.1021/acsami.1c05117>
- Thandiyappan, B., Lingasamy, R. K., Kandasamy, V. K., dan Susaimanickam, J. D. V., 2024, Response surface methodology (RSM)-based machining parameter optimization for minimization of burr in CNC turning of materials, *Revista Materia*, 29(3). <https://doi.org/10.1590/1517-7076-RMAT-2024-0262>
- Varmaziar, M., Amooey, A. A., dan Ghasemi, S., 2024, BiVO<sub>4</sub>/gC<sub>3</sub>N<sub>4</sub> Nanocomposite Doped with Sulfur as a Photocatalyst for Metil oranye Degradation under Visible Light Irradiation, *Diamond and Related Materials*, 149(11).
- Wahyuni, E., Darsikin, dan Saehana, S., 2022, Fabrikasi Kaca Fluorine Doped-Tin Oxide (FTO) Menggunakan Teknik Spray Pyrolysis, *Jurnal Pendidikan Fisika Tadulako*, 10(2), 32–39. <http://jurnal.fkip.untad.ac.id/index.php/jpft>
- Wu, J., Zhao, Y., Li, K., Muhammad, S., Ju, M., Liu, L., Huang, Y., Wang, B., Ding, W., Shen, B., dan Huang, H., 2022, Fluorogenic toolbox for facile detecting of hydroxyl radicals: From designing principles to

- diagnostics applications, In *TrAC - Trends in Analytical Chemistry*, 157, Elsevier B.V. <https://doi.org/10.1016/j.trac.2022.116734>
- Yang, K., Venkataraman, M., Wiener, J., dan Militky, J, 2023, Photoluminescence PCMs and their potential for thermal adaptive textiles, In *Multifunctional Phase Change Materials: Fundamentals, Properties and Applications* (pp. 255–277). Woodhead Publishing.
- Yuningrat, N. W., Retug, N., dan Gunamantha, I. M, 2016, Fotodegradasi Methyl Orange Dalam Reaktor Fixed Bed Batu Apung-Semen, *Jurnal Sains Dan Teknologi*, 5(1), 2303–3142.
- Zhang, Y., Zhao, X., Wang, H., Fu, S., Lv, X., He, Q., Liu, R., Ji, F., dan Xu, X, 2022, Effect of Temperature on the Adhesion and Bactericidal Activities of Ag<sup>+</sup>-Doped BiVO<sub>4</sub> Ceramic Tiles, *Inorganics*, 10(5). <https://doi.org/10.3390/inorganics10050061>
- Zhang, Z., dan Yates, J. T, 2012, Band bending in semiconductors: Chemical and physical consequences at surfaces and interfaces, In *Chemical Reviews*, 112(10), 5520–5551. <https://doi.org/10.1021/cr3000626>
- Zhao, H., Wei, X., Pei, Y., dan Han, W, 2024, Enhancing Photoelectrocatalytic Efficiency of BiVO<sub>4</sub> Photoanodes by Crystal Orientation Control, *Nanomaterials*, 14(23). <https://doi.org/10.3390/nano14231870>
- Zhong, K., Gao, H., Feng, J., Zhang, Y., dan Lai, K, 2019, Facile synthesis of Z-scheme Se/BiVO<sub>4</sub> heterojunction with enhanced visible-light-driven photocatalytic performance, *Journal of Materials Science*, 54(15), 10632–10643. <https://doi.org/10.1007/s10853-019-03634-1>