

DAFTAR PUSTAKA

- Ameta, R., Ameta, S.C., 2014, *Photocatalysis Principles and Applications*, CRC Press, Boca Raton.
- Aravind, A., Jayaraj, M., Kumar, M., Ramseh, C., 2012, Optical and Magnetic Properties of Copper Doped ZnO Nanorods Prepared by Hydrothermal Method, *Journal of Material Science*, Vol. 24, Hal. 106–112.
- Arianto, E., Ruslan, A., Umayah, U., Lestari, A., Baharudin, I., Adinugroho, E., 2016, *Sistem Pengelolaan Air Limbah Domestik - Setempat Tangki Septik Dengan Up-Flow Filter*, Kementerian Pekerjaan Umum dan Perumahan Rakyat, Jakarta.
- Ashwini, A., Saravanan, L., Sabari, V., Astalakshmi, M., Kanagathara, N., 2023, Effect of Cu Doping with Varying pH on Photocatalytic Activity of ZnO Nanoparticles for the Removal of Organic Pollutants, *Inorganic Chemistry Communications*, Vol. 155, Hal. 1387–7003, DOI: 10.1016/j.inoche.2023.111137.
- Babikier, M., Wang, D., Wang, J., Li, Q., Sun, J., Yan, Y., Yu, Q., Jiao, S., 2014, Cu-doped ZnO Nanorod Arrays: The Effects of Copper Precursor and Concentration, *Nanoscale Research Letters*, Vol. 9, Hal. 1–9, DOI: 10.1186/1556-276X-9-199.
- Callister, W.D., Rethwisch, D.G., 2013, *Materials Science and Engineering*, WILEY, United States.
- Caro, C.A. De, Claudia, H., 2015, *UV / VIS Spectrophotometry Fundamentals and Application*, Mettler-Toledo.
- Cullity, B.D., Stock, S.R., 2014, *Pearson New International Edition*, Edisi ketiga, British Library Cataloguing-in-Publication Data, Pearson, London.
- Dachriyanus, 2004, *Analisis Struktur Senyawa Organik Secara Spektroskopi*, LPTIK Universitas Andalas, Padang.
- Dias, R.J., Aragade, P.D., Bansod, K.U., Ghorpade, K.U., 2023, *Laboratory Manual of Social Pharmacy*, Trinity Publishing House, Satara.
- Direktorat Jenderal Pengendalian Pencemaran dan Kerusakan Lingkungan, 2022, *Laporan Kinerja Direktorat Pengendalian Pencemaran Air*, Indonesia.
- Ghozali, A., 2021, Pengaruh Konsentrasi Molar Double Layer ZnO/ZnO:Ag terhadap Sifat Optis dan Kristalinitasnya, *Skripsi Sarjana*, Departemen Fisika, Universitas Islam Negeri Walisongo, Indonesia.
- Han, Y., Guo, J., Luo, Q., Ma, C.Q., 2023, Solution-Processable Zinc Oxide for

- Printed Photovoltaics: Progress, Challenges, and Prospect, *Advanced Energy and Sustainability Research*, Vol. 4, DOI: 10.1002/aesr.202200179.
- Kandasamy, S., Prema, R.S., 2015, Methods of Synthesis of Nanoparticles and its Applications, *Journal of Chemical and Pharmaceutical Research*, Vol. 7, Hal. 278–285.
- Kasap, S.O., 2018, *Priniples of Electronic Materials and Devices*, Edisi Keempat, McGraw-Hill Education, New York.
- Khan, Ibrahim, Saeed, K., Khan, Idrees, 2019, Nanoparticles: Properties, Applications and Toxicities, *Arabian Journal of Chemistry*, Vol. 12, Hal. 908–931, DOI: 10.1016/j.arabjc.2017.05.011.
- Khranovskyy, V., Grossner, U., Nilsen, O., Lazorenko, V., Lashkarev, G. V., Svensson, B.G., Yakimova, R., 2006, Structural and Morphological Properties of ZnO:Ga Thin Films, *Thin Solid Films*, Vol. 515, Hal. 472–476, DOI: 10.1016/j.tsf.2005.12.269.
- Lee, H.J., Kim, B.S., Cho, C.R., Jeong, S.Y., 2004, A Study of Magnetic and Optical Properties of Cu-Doped ZnO, *Physica Status Solidi (B) Basic Research*, Vol. 241, Hal. 1533–1536, DOI: 10.1002/pssb.200304614.
- Leng, Y., 2013, *Materials Characterization Introduction to Microscopic and Spectroscopic Methods*, Edisi Kedua, Wiley-VCH, Hongkong.
- Liu, G., Niu, P., Sun, C., Smith, S.C., Chen, Z., Lu, G.Q., Cheng, H.M., 2010, Unique Electronic Structure Induced High Photoreactivity of Sulfur-Doped Graphitic C₃N₄, *Journal of the American Chemical Society*, Vol. 132, Hal. 11642–11648, DOI: 10.1021/ja103798k.
- Mahyuddin, Tumpu, M., Tamim, T., Mansyur, Lapian, F.E., Bungin, E.R., Nurdin, A., Johra, 2023, *Pengelolaan Air Limbah*, Tohar Media, Makassar.
- Masta, N., 2020, *Buku Materi Pembelajaran Scanning Electron Microscopy*, Universitas Kristen Indonesia, Jakarta.
- Menteri Lingkungan Hidup dan Kehutan Republik Indonesia, 2021, *Tata cara Penerbitan Persetujuan Teknis Surat Kelayakan Operasional Bidang Pengendalian Pencemaran Lingkungan*, No. 5, Indonesia.
- Muhtadi, A., Leidonald, R., 2022, *Limnologi*, Merdeka Kreasi, Medan.
- Naito, M., Yokoyama, T., Hosokaa, K., Nogi, K., 2018, *Nanoparticle Technology Handbook*, Edisi Ketiga, Elsevier, Amsterdam.
- Neamen, D.A., 2012, *Semiconductor Physics and Devices*, Edisi Keempat, McGraw-Hill, New York.

- Ningsih, S.K.W., 2016, *Sintesis Anorganik*, Penambahan Natrium Benzoat Dan Kalium Sorbat (Antiinversi) Dan Kecepatan Pengadukan Sebagai Upaya Penghambatan Reaksi Inversi Pada Nira Tebu, UNP PRESS, Padang.
- Nouailhat, A., 2010, *An Introduction to Nanoscience and Nanotechnology*, ISTE Ltd & John Wiley & Sons, London & Hoboken.
- Ofiye, C., Puryanti, D., 2022, Penentuan Kualitas Air Muara Sungai Batang Arau Melalui Pengujian Total Dissolved Solid (TDS), Total Suspended Solid (TSS), dan Kandungan Logam Berat, *Jurnal Fisika Unand*, Vol. 11, Hal. 278–284, DOI: 10.25077/jfu.11.3.278-284.2022.
- Rangkuti, R.M., Harsono, H., Ghufro, M., 2018, Studi Karakterisasi Sintesis Nano Partikel ZnO Menggunakan Metode Koprinsipitasi dengan Varian Konsentrasi Doping Cu, *Setrum*, Vol. 7, Hal. 197–204.
- Rehman, S., Ullah, R., Butt, A.M., Gohar, N.D., 2009, Strategies of Making TiO₂ and ZnO Visible Light Active, *Journal of Hazardous Materials*, Vol. 170, Hal. 560–569, DOI: 10.1016/j.jhazmat.2009.05.064.
- Rosyidah, N., 2016, Synthesis of Zn 1-x Al x O using Coprecipitation Method and Characterization of Electrical Properties, *Tesis Master*, Institut Teknologi Sepuluh Nopember.
- Sahu, M.K., 2019, Semiconductor Nanoparticles Theory and Applications, *International Journal of Applied Engineering Research*, Vol. 14, Hal. 491–494.
- Setiabudi, A., Hardian, R., Mudzakir, A., 2012, *Karakterisasi Material Prinsip dan Aplikasinya dalam Penelitian Kimia*, Edisi Pertama, UPI PRESS, Bandung.
- Shah, R., Khan, D., Al-Anazi, A., Ahmad, W., Ullah, I., Shah, S.N., Khan, J.A., 2025, Non-metal Doped ZnO and TiO₂ Photocatalysts for Visible Light Active Degradation of Pharmaceuticals and Hydrogen Production : A review, *Applied Catalysis O: Open*, Hal. 1–87, DOI: <https://doi.org/10.1016/j.apcato.2025.207043>.
- Sowjanya, B., King, P., Vangalapati, M., Myneni, V.R., 2023, Copper-Doped Zinc Oxide Nanoparticles: Synthesis, Characterization, and Application for Adsorptive Removal of Toxic Azo Dye, *International Journal of Chemical Engineering*, Vol. 2023, DOI: 10.1155/2023/8640288.
- Spoiala, A., Ilie, C.I., Trusca, R.D., Oprea, O.C., Surdu, V.A., Vasile, B.S., Ficai, A., Ficai, D., Andronescu, E., Dit, L.M., 2021, Zinc Oxide Nanoparticles for Water Purification, *Materials*, Vol. 14, Hal. 1–34, DOI: 10.3390/ma14164747.
- Vaseem, M., Umar, A., Hahn, Y., 2015, ZnO Nanoparticles : Growth, Properties,

and Applications, *Metal Oxide Nanostructures and Their Applications*, American Scientific Publishers, Amerika Serikat.

Wang, F., Liu, X., 2011, Rare Earth Doped Upconversion Nanophosphors”, *Comprehensive nanoscience and technology*, Vol. 1, Hal. 607–635.

Warono, D., Syamsudin, 2013, Unjuk Kerja Spektrofotometer Analisa Zat Aktif Ketoprofen, *Konversi*, Vol. 2, Hal. 60.

Waseda, Y., Matsubara, E., Shinoda, K., 2011, *X-Ray Diffraction Crystallography*, Springer, New York.

Water Quality, 2024, PPM and TDS in Water-The Best Levels for Pure, Healthy Drinking Water, *Water Quality United Arab Emirates*. <https://waterquality.ae/ppm-and-tds-in-water/> (diakses 18-Juni-2025).

Wulandari, M., Astuti, A., Muldarisnur, M., 2018, Sintesis Nanopartikel TiO₂-SiO₂ Berpori Sebagai Fotokatalis untuk Penjernihan Air Limbah Rumah Tangga, *Jurnal Fisika Unand*, Vol. 7, Hal. 33–38, DOI: 10.25077/jfu.7.1.33-38.2018.

Xiao, Q., Huang, S., Zhang, J., Xiao, C., Tan, X., 2008, Sonochemical Synthesis of ZnO Nanosheet, *Journal of Alloys and Compounds*, Vol. 459, Hal. 2–7, DOI: 10.1016/j.jallcom.2007.05.026.

