

DAFTAR PUSTAKA

- Adeleke, A.O., Ahmad, A., Hossain, K., & Rafatullah M. (2019). Adsorption of Rhodamine B dye from aqueous solution onto acid treated banana peel: Response surface methodology, kinetics and isotherm studies. *PLoS ONE*. 14(5).
- Adyani, S.A. & Soleimani, E. (2019). Green synthesis of Ag/Fe₃O₄/rGO nanocomposites by Punica Granatum peel extract: Catalytic activity for reduction of organic pollutants. *International Journal of Hydrogen Energy*. 44(5). 2711-2730. ISSN 0360-3199.
- Ahmadi, R., Hosseini, M.H. & Masoudi, A. (2011). Avrami behavior of magnetite nanoparticles formation in co-precipitation process. *Journal of Mining and Metallurgy B: Metallurgy*. 47(2):211-218.
- Aji, M. P., Yulianto, A., & Bijaksana, S. (2019). Sintesis nanopartikel magnetit, maghemit dan hematit dari bahan lokal. *Jurnal Sains Materi Indonesia*. 8(1). 106-108.
- Al-Gheethi, A. A., Azhar, Q. M., Senthil Kumar, P., Yusuf, A. A., Al-Buriahi, A. K., Radin Mohamed, R. M. S., & Al-shaibani Muhanna Mohammed. (2022). Sustainable approaches for removing Rhodamine B dye using agricultural waste adsorbents: A review. *Chemosphere*. 132080.
- Antarnusa, G., Esmawan, A., Jayanti, P. D., Fitriani, S. R., Suherman, A., Palupi, E. K., & Umam, R. (2022). Synthesis of Fe₃O₄ at different reaction temperatures and investigation of its magnetic properties on giant magnetoresistance (GMR) sensors for bio-detection applications. *Journal of Magnetism and Magnetic Materials*, 563, 169903.
- Arista, D., Rachmawati, A., Ramadhani, N., Saputro, R.E., Taufiq, A. & Sunaryono. (2019). Antibacterial Performance of Fe₃O₄/PEG-4000 Prepared by

Coprecipitation Route. *IOP Conference Series: Materials Science and Engineering*. Institute of Physics Publishing.

- Bansal, K., Singh, J., & Dhaliwal, A. S. (2023). Green synthesis and characterization of superparamagnetic nanocomposite based on reduced graphene oxide/Fe₃O₄ prepared using leaf extract of *Azadirachta indica*. *Inorganic and Nano-Metal Chemistry*, 54(11), 1145–1153. <https://doi.org/10.1080/24701556.2023.2165688>
- Blundell, S. (2001). *Magnetism in condensed matter*. OUP Oxford.
- Chung, I.M., Park, I., Seung-Hyun, K., Thiruvengadam, M., & Rajakumar, G. (2016). Plant-Mediated Sythesis of Silver Nanoparticles: Their Characteristic Properties and Therapeutic Applications. *Nanoscale Research Letters*. 11(40).
- Choppin, G., Liljenzin, J. O., Rydberg, J., & Ekberg, C. (2013). *Radiochemistry and nuclear chemistry*. Academic Press.
- Dachriyanus. (2004). *Analisis Struktur Senyawa Organik Secara Spektroskopi Cetakan 1*. Padang: Danalas University Press.
- Devi, E.C. & Singh, S.D. (2021). Tracing the Magnetization Curves: a Review on Their Importance, Strategy, and Outcomes. *Journal of Superconductivity and Novel Magnetism*. 34. 15-25.
- Dwandaru, W.S.N., Wijaya, R.I.W., & Parwati L.D. (2019). *Nanomaterial Graphene Oxide: Sintesis dan Karakterisasinya*. Yogyakarta: UNY Press.
- Farahmandzadeh, F., Molaei, M., Salehi, S., & Molahosseini, E. (2024). Simultaneous and fast degradation of methylene blue, methylene orange, and Rhodamine B dyes by high-performance rGO/Fe₃O₄/ZnSe magnetic nanocomposites. *Colloid and Surfaces A: Physicochemical and Engineering Aspects*. 133229.
- Fernández-Merino, M.J., Guardia, L., Paredes, J.I., Villar-Rodil, S., Solís-Fernández, P., Martínez-Alonso, A., & Tascon, J.M.D. (2010). Vitamin C is an ideal substitute for hydrazine in the reduction of graphene oxide suspensions, *Journal of Physical Chemistry c*. 114. 6426–6432.

- Grasse, E.K., Torcasio, M.H., & Smith, A.W. (2016). Teaching UV–Vis Spectroscopy with a 3D-Printable Smartphone Spectrophotometer. *Journal of Chemical Education*. 93. 146-151.
- Habibi, F., Seyyedi, M., & Ayati, B. (2022). Synthesis and Application of Reusable and and Magnetic rGO/Fe₃O₄ Nanocomposites in BR46 Removal from an Aqueous Solution; Future Prospects of an Efficient Adsorption Platform. *Journal of Materials and Environmental Science*. 13(8). 900-913.
- Hamid, M., Rianna, M., Rangkuli, W.R., Sembiring, T., & Sebayang, P. (2022). Study and characterization rGO/Fe₃O₄ in microstructure and magnetic properties. *South Africa Journal of Chemical Engineering*. 42. 280-282.
- Hariani, P. L., Faizal, M., & Setiabudidaya, D. (2013). Synthesis and properties of Fe₃O₄ nanoparticles by co-precipitation method to removal procion dye. *International Journal of Environmental Science and Development*, 4(3), 336.
- Harrington, G.F. & Santiso, J. (2021). Back-to-Basics tutorial: X-ray diffraction of thin films. *Journal of Electroceramics*. 47. 141-163.
- Hermawan, I. (2011). *Analisis dampak kebijakan makroekonomi terhadap perkembangan industri tekstil dan produk tekstil Indonesia*. Bank Indonesia: Jakarta.
- Ilyas, S., Abdullah, B., & Tahir, D. (2019). X-ray diffraction analysis of nanocomposite Fe₃O₄/activated carbon by Williamson–Hall and size-strain plot methods. *Nano-Structures & Nano-Objects*, 20, 100396.
- Imran, M., Alam, M.M., Hussain, S., Ali, M.A., Shkir, M., Mohammad, A., Ahmad, T., Kaushik, A., & Irshad, K. (2021). Highly photocatalytic active r-GO/Fe₃O₄ nanocomposites development for enhanced photocatalysis application: A facile low-cost preparation and characterization. *Ceramics International*. 47(6).
- Jubu, P.R., Yam, F.K., Igma, V.M., & Beh, K.P. (2020). Tauc-plot scale and extrapolation effect on bandgap estimation from UV–vis–NIR data – A case study of β-Ga₂O₃. *Journal of State Chemistry*. 121576.

- Khan, M. M., Khan, W., Ahamed, M., & Alhazaa, A. N. (2019). Investigation on the structure and physical properties of $\text{Fe}_3\text{O}_4/\text{rGO}$ nanocomposites and their photocatalytic application. *Materials Science in Semiconductor Processing*, 99, 44-53.
- Khan, U.S., Khattak, N.S., Rahman, A., & Khan, F. (2011). Historical Development of Magnetite Nanoparticles Synthesis. *Journal of Chemical Society Pakistan*. 33(6): 793-804.
- Kirupakar, B.R., Vishwanath, B.A., Sree, M.P., & Deenadayalan. (2016). Vibrating Sample Magnetometer and Its Application In Characterisation Of Magnetic Property Of The Anti Cancer Drug Magnetic Microspheres. *International Journal of Pharmaceutics & Drug Analysis*. 4(5):227-233.
- Koo, K.N., Ismail, A.F., Othman, M.H.D., Rahman, M.A., & Sheng, T.Z. (2019). Preparation and Characterization of Superparamagnetic Magnetite (Fe_3O_4) Nanoparticles: A Short Review. *Malaysian Journal of Fundamental and Applied Sciences*. 15(1): 23-31.
- Lee, T., Min, S. H., Gu, M., Jung, Y. K., Lee, W., Lee, J. U., ... & Kim, B. S. (2015). Layer-by-layer assembly for graphene-based multilayer nanocomposites: synthesis and applications. *Chemistry of Materials*, 27(11), 3785-3796.
- Leone, A., Spada, A., Battezzati, A., Schiraldi, A., Aristil, J., & Bertoli, S. Cultivation, genetic, ethnopharmacology, phytochemistry and pharmacology of *Moringa Oleifera* leaves. An Overview. *Int J Mol Sci*. 16(6). 12791-835.
- Li, X.M., Xu, G., Liu, Y. & He, T. (2011). Magnetic Fe_3O_4 nanoparticles: Synthesis and application in water treatment. *Nanoscience & Nanotechnology-Asia*. 1(1):14-24.
- Mabarroh, N., Alfansuri, T., Wibowo, N. A., Istiqomah, N. I., Tumbelaka, R. M., & Suharyadi, E. (2022). Detection of green-synthesized magnetite nanoparticles using spin-valve GMR-based sensor and their potential as magnetic labels. *Journal of Magnetism and Magnetic Materials*, 560, 169645.

- Mahardhika, L. J., Kusumah, H. P., Jayanti, P. D., Tumbelaka, R. M., Ardiyanti, H., Istiqomah, N. I., ... & Suharyadi, E. (2024). Photodegradation enhancement of organic dyes using magnetically separable and reusable Fe₃O₄/rGO nanocomposites green-synthesized utilizing plant leaves extract. *Case Studies in Chemical and Environmental Engineering*, 10, 100915.
- Makula, P., Pacia, M., & Macyk, W. (2018). How To Correctly Determine the Band Gap Energy of Modified Semiconductor Photocatalysts Based on UV-Vis Spectra. *The Journal of Physical Chemistry Letters*. 9(23).
- Meng, H., Zhang, Z., Zhao, F., Qiu, T. & Yang, J. (2013). Orthogonal optimization design for preparation of Fe₃O₄ nanoparticles via chemical coprecipitation. *Applied Surface Science*. 280:679-685.
- Mishra, K. P., & Gogate, P. R. (2010). Intensification of degradation of Rhodamine B using hydrodynamic cavitation in the presence of additives. *Separation and Purification Technology*. 75(3). 385–391.
- Mondal, P., Anweshan, A., and Purkait, M. K. (2020). Green Synthesis and Environmental Application of Iron-Based Nanomaterials and Nanocomposite: A Review. *Chemosphere* 259, 127509. doi:10.1016/j.chemosphere.2020.127509.
- Nalle F.C., Wahid R, Wulandari I.O, & Sabarudin A. (2019). Synthesis and Characterization of Magnetic Fe₃O₄ Nanoparticles Using Oleic Acid as Stabilizing Agent. *Rayasan Journal of Chemistry*. 12(1).
- Pimenta Tienne, L. G., Candido, L. D. S., Macena da Cruz, B. D. S., Gondim, F. F., Ribeiro, M. P., Simao, R. A., ... & Monteiro, S. N. (2022). Reduced graphene oxide synthesized by a new modified Hummer's method for enhancing thermal and crystallinity properties of Poly (vinylidene fluoride). *JOURNAL OF MATERIALS RESEARCH AND TECHNOLOGY-JMR&T*, 18, 4871-4893.
- Pulipati, S., Babu, P.S., & Narasu, M.L. (2014). Pytochemical and Pharmacological potential of *Amaranthus Viridis L.* *International Journal of Phytomedicine*. 6(3). 322-326.

- Raguram, T., Rajni, K. S., Kanchana, D., José, S. E., Granados-Tavera, K., Cárdenas-Jirón, G., ... & Meher, S. R. (2024). Exploring structural and optical properties of iodine-doped TiO₂ nanoparticles in Rhodamine-B dye degradation: Experimental and theoretical investigation. *Chemosphere*, 364, 143183.
- Rai, M., Alka, Y., & Aniket, G. (2008). Current trends in phytosynthesis of metal nanoparticles. *Review in Biotechnology*. 28(4). 277–284.
- Sakti, R.B., Subagio A., & Sutanto H. (2013). Sintesis Lapisan Tipis Nanokomposit TiO₂/CNT Menggunakan Metode Sol Gel dan Aplikasinya untuk Fotodegradasi Zat Warna Azo Orange 3R. *Youngster Physics Journal*. 1(3) : 41-48.
- Setiawan, A., Sari, E. K., Mahardhika, L. J., Jayanti, P. D., Rini, N. P., Istiqomah, N. I., ... & Suharyadi, E. (2025). Magnetically separable and reusable Fe₃O₄/rGO photocatalyst synthesized through green approach for heavy metal ion reduction application. *Diamond and Related Materials*, 151, 111779.
- Shafiee, A., Ghadiri, E., Kassis, J., Williams, D., & Atala, A. (2020). Energy Band Gap Investigation of Biomaterials: A Comprehensive Material Approach for Biocompatibility of Medical Electronic Devices. *Micromachines*. 11(105).
- Sharma, J., Sharma, S., Bhatt, U., & Soni V. (2022). Toxic effects of Rhodamine B on antioxidant system and photosynthesis of *Hydrilla verticillata*. *Journal of Hazardous Materials Letters*. 100069.
- Stohs, S. & Hartman, M. (2015). Review of the safety and efficacy of *Moringa oleifera*. *Phytother Res*. 29(6). 796-804.
- Sutanto, H. & Wibowo, S. (2015). *Semikonduktor Fotokatalis Seng Oksida dan Titania (Sintesis, Deposisi dan Aplikasi)*. Semarang: Penerbit Telescope.
- Tanaka, Y. & Van Ke, N. (2007). *Edible Wild Plants of Vietnam: The Bountiful Garden*. Thailand: Orchid Press.
- Tiloke, C., Anand, K., Gengan R.M., & Chuturgoon, A.A. (2018). *Moringa Oleifera* and their phytonanoparticles: potential antiproliferative agents against cancer. *Biomed Pharmacother*.108. 457-466.

- Tumbelaka, R. M., Istiqomah, N. I., Kato, T., Oshima, D., & Suharyadi, E. (2022). High reusability of green-synthesized Fe₃O₄/TiO₂ photocatalyst nanoparticles for efficient degradation of methylene blue dye. *Materials Today Communications*, 33, 104450.
- Vinothkannan, M., Karthikeyan C., Kumar, G.G., Kim, A.R., & Yoo, D.J. (2015). One-pot green synthesis of reduced graphene oxide (RGO)/Fe₃O₄ nanocomposites and its catalytic activity toward methylene blue dye degradation. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*. 136(B). 256-264. ISSN 1386-1425.
- Venkateswarlu, S., Kumar, B.N., Prasad, C.H., Venkateswarlu, P., & Jyothi, N.V.V. (2014). Bio-inspired green synthesis of Fe₃O₄ spherical magnetic nanoparticles using *Syzygium cumini* seed extract. *Physica B*. 449. 67-71.
- Wahajuddin, N., & Arora, S. (2012). Superparamagnetic iron oxide nanoparticles: magnetic nanoplatforms as drug carriers. *International journal of nanomedicine*, 3445-3471.
- Wu, M., Shi, J. J., Zhang, M., Ding, Y. M., Wang, H., Cen, Y. L., & Lu, J. (2018). Enhancement of photoluminescence and hole mobility in 1- to 5-layer InSe due to the top valence-band inversion: strain effect. *Nanoscale*, 10(24), 11441–11451.
- Yang, J., Xia, X., He, K., Zhang, M., Qin, S., Luo, M., & Wu, L. (2021). Green Synthesis of reduced graphene oxide (RGO) using the plant extract of *Salvia spinosa* and evaluation of photothermal effect on pancreatic cancer cells. *Journal of Molecular Structure*. 131064.
- Yew Y.P., Shameli K., Miyake, M., Khairudin M.B.B.A., Mohamad S.E.B., Naiki, T., & Lee, K.X. (2018). Green Biosynthesis of Super-paramagnetic Magnetite Fe₃O₄ Nanoparticles and Biomedical Applications in Targeted Anticancer Drug Delivery System: a Review. *Arabian Journal of Chemistry*.
- Zhao, S., Chen, C., Ding, J., Yang, S., Zhang, Y., & Ren, N. (2022). One-pot hydrothermal fabrication of BiVO₄/Fe₃O₄/rGO composite photocatalyst for the

simulated solar light-driven degradation of Rhodamine B. *Front. Environ. Sci. Eng.* 16(3).

- Zhou, F., Yan, C., Liang, T., Sun, Q., & Wang, H. (2018). Photocatalytic degradation of Orange G using sepiolite-TiO₂ nanocomposites: Optimization of physicochemical parameters and kinetics studies. *Chemical Engineering Science*, 183, 231-239.
- Zhao, X., Bian, F., Sun, L., Cai, L., Li, L., & Zhao, Y. (2020). Microfluidic generation of nanomaterials for biomedical applications. *Small*, 16(9), 1901943.
- Zurnansyah, Jayanti, P. D., Mahardhika, L. J., Kusumah, H. P., Ardiyanti, H., Wibowo, N. A., Istiqomah, N. I., Asri, N. S., Angel, J., & Suharyadi, E. (2024). Real-time biomolecule detection using GMR chip-based sensor with green-synthesized Fe₃O₄/rGO nanocomposites as magnetic labels. *Sensors and Actuators A: Physical*, 375, 115493.