

DAFTAR PUSTAKA

- Abdullah, M., & Virgus, Y. Nirmin & Khairurrijal.(2008). Review: Sintesis Nanomaterial. *Jurnal Nanosains & Nanoteknologi*, 1(2).
- Aisyah, S. N. (2017). SINTESIS, KARAKTERISASI NANOKOMPOSIT Ag-Fe₃O₄ DAN UJI AWAL POTENSINYA SEBAGAI ANTIBAKTERI. SKRIPSI Jurusan Kimia-Fakultas MIPA UM.
- Anbarasu, M., Anandan, M., Chinnasamy, E., Gopinath, V., & Balamurugan, K. (2015). Synthesis and characterization of polyethylene glycol (PEG) coated Fe₃O₄ nanoparticles by chemical co-precipitation method for biomedical applications. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, 135, 536-539.
- Baykal, A., Senel, M., Unal, B., Karaoğlu, E., Sözeri, H., & Toprak, M. S. (2013). Acid functionalized multiwall carbon nanotube/magnetite (MWCNT)-COOH/Fe₃O₄ hybrid: synthesis, characterization and conductivity evaluation. *Journal of Inorganic and Organometallic Polymers and Materials*, 23(3), 726-735.
- Berger, P., Adelman, N. B., Beckman, K. J., Campbell, D. J., Ellis, A. B., & Lisensky, G. C. (1999). Preparation and properties of an aqueous ferrofluid. *Journal of Chemical Education*, 76(7), 943.
- Bhaumik, M., Maity, A., Srinivasu, V. V., & Onyango, M. S. (2011). Enhanced removal of Cr (VI) from aqueous solution using polypyrrole/Fe₃O₄ magnetic nanocomposite. *Journal of Hazardous Materials*, 190(1-3), 381-390.
- Bukit, N., Frida, E., Simamora, P., & Sinaga, T. (2015). SYNTHESIS OF FE₃O₄ NANOPARTICLES OF IRON SAND COPRECIPITATION METHOD WITH POLYETHYLENE GLYCOL 6000. *Jurnal Chemistry and Materials Research*, 7(07), 110-115.
- Coey, J. M. (2010). Magnetism and magnetic materials. Cambridge University Press.
- Feng, B., Hong, R. Y., Wang, L. S., Guo, L., Li, H. Z., Ding, J., ... & Wei, D. G. (2008). Synthesis of Fe₃O₄/APTES/PEG diacid functionalized magnetic nanoparticles for MR imaging. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 328(1-3), 52-59.
- Fitriani, P. (2014). Sintesis Nanokomposit Fe₃O₄/Zeolit Dengan Metode Pemanasan Microwave dan Pengujian Sifat Katalitiknya Pada Penurunan

Viskositas Minyak Berat. *Research and Development on Nanotechnology in Indonesia*, 1(1), 23.

- Gao, G., Qiu, P., Qian, Q., Zhou, N., Wang, K., Song, H., ... & Cui, D. (2013). PEG-200-assisted hydrothermal method for the controlled-synthesis of highly dispersed hollow Fe₃O₄ nanoparticles. *Journal of Alloys and Compounds*, 574, 340-344.
- Hu, Y., Guo, T., Ye, X., Li, Q., Guo, M., Liu, H., & Wu, Z. (2013). Dye adsorption by resins: effect of ionic strength on hydrophobic and electrostatic interactions. *Chemical engineering journal*, 228, 392-397.
- Kashyout, A. B., Soliman, H. M. A., Hassan, H. S., & Abousehly, A. M. (2010). Fabrication of ZnO and ZnO: Sb nanoparticles for gas sensor applications. *Journal of Nanomaterials*, 2010, 20.
- Kristianingrum, S. (2006). Metode alternatif untuk mengurangi pencemaran logam berat dalam lingkungan. In *Prosiding Seminar Nasional Kimia* (2006). FMIPA UNY. Yogyakarta.
- Laksono, E. W. (2002). Analisis Daya Adsorpsi Suatu Adsorben. Fakultas MIPA. Universitas Sumatera Utara.
- Li, Y. H., Ding, J., Luan, Z., Di, Z., Zhu, Y., Xu, C., ... & Wei, B. (2003). Competitive adsorption of Pb²⁺, Cu²⁺ and Cd²⁺ ions from aqueous solutions by multiwalled carbon nanotubes. *Carbon*, 41(14), 2787-2792.
- Liang, X., Shi, H., Jia, X., Yang, Y., & Liu, X. (2011). Dispersibility, shape and magnetic properties of nano-Fe₃O₄ particles. *Mater. Sci. Appl*, 2(11), 1644-1653.
- Liu, J., Ni, J., Zhao, Y., Wang, H., & Gao, L. (2013). Grapecluster-like Fe₃O₄@C/CNT nanostructures with stable Li-storage capability. *Journal of Materials Chemistry A*, 1(41), 12879-12884.
- Mairoza, A., & Astuti, A. (2016). Sintesis Nanopartikel Fe₃O₄ dari Batuan Besi Menggunakan Asam Laurat sebagai Zat Aditif. *Jurnal Fisika Unand*, 5(3), 283-286.
- Melati, A., Sulistyawati, E., & Nugraheni, I. (2017). Adsorpsi Limbah Pb Menggunakan Aplikasi Carbon Nano Tube Terintegrasi Dengan Sistem Lahan Basah Bantaran Sungai Gajah Wong. *Sainstek: Jurnal Sains dan Teknologi*, 8(2), 104-112.
- Merdekani, S., & Jatinangor, F. J. K. U. (2013). Sintesis Partikel Nanokomposit Fe₃O₄/SiO₂ dengan Metode Kopresipitasi. *Pros. Semin. Nas. Sains Dan Teknol. Nukl. PTNBRBATAN*.

- Mishra, A. K., & Ramaprabhu, S. (2011). Nano magnetite decorated multiwalled carbon nanotubes: a robust nanomaterial for enhanced carbon dioxide adsorption. *Energy & Environmental Science*, 4(3), 889-895.
- Moazzen, M., Khaneghah, A. M., Shariatifar, N., Ahmadloo, M., Eş, I., Baghani, A. N., ... & Rastkari, N. (2018). Multi-walled carbon nanotubes modified with iron oxide and silver nanoparticles (MWCNT-Fe₃O₄/Ag) as a novel adsorbent for determining PAEs in carbonated soft drinks using magnetic SPE-GC/MS method. *Arabian Journal of Chemistry*.
- Nasution, E. L. Y. (2014). Sintesis Nanokomposit PAni/Fe₃O₄ Sebagai Penyerap Magnetik Pada Gelombang Mikro. *Jurnal Fisika Unand*, 1(1).
- Negara, I. M. S., Wijaya, K., & Sugiharto, E. (2008). Preparasi dan Karakterisasi Komposit Kromium Oksida-Montmorillonit. *Jurnal Kimia*, 2(2), 93.
- Nengsi, S. W., Budiman, A., & Puryanti, D. (2016). Karakterisasi Struktur Kristal dan Sifat Magnetik Maghemit (γ -Fe₂O₃) yang Dioksidasi dari Magnetit (Fe₃O₄) dari Pasir Besi Batang Sukam Kabupaten Sijunjung Sumatera Barat dengan Variasi Waktu Oksidasi. *Jurnal Fisika Unand*, 5(3), 248-251.
- Nuzully, S., Kato, T., & Suharyadi, E. (2014). Pengaruh Konsentrasi Polyethylene glycol (PEG) pada Sifat Kemagnetan Nanopartikel Magnetik PEG-Coated Fe₃O₄ (Halaman 35 sd 40). *Jurnal Fisika Indonesia*, 17(51).
- Pawar, R. R., Bajaj, H. C., & Lee, S. M. (2016). Activated bentonite as a low-cost adsorbent for the removal of Cu (II) and Pb (II) from aqueous solutions: Batch and column studies. *Journal of industrial and engineering chemistry*, 34, 213-223.
- Prasetyono, E. (2015). Kemampuan Kompos Dalam Menurunkan Kandungan Logam Berat Timbal (Pb) Pada Media Budidaya Ikan. *Jurnal Akuatika*, 6(1).
- Pratama, O. I., & Izzati, R. F. (2017). Sintesis Fe₃O₄ dengan Metode Elektrokimia sebagai Elektrokatalis pada Metal-Air Batteries (Doctoral dissertation, Institut Teknologi Sepuluh Nopember).
- Purnama, S., Muflikhah, M., & Purwanto, S. (2018). PENGARUH SUHU ANNEALING TERHADAPSTRUKTUR BESI-CARBON NANOTUBE. *Jurnal Sains Materi Indonesia*, 17(4), 160.
- Purwanto, A. (2014). Pembuatan Nanopartikel Seng Oksida (ZnO) menggunakan proses Flame Assisted Spray Pyrolysis (FASP). *EQUILIBRIUM Journal of Chemical Engineering*, 13(1).

- Purwanto, S., & Dani, M. (2017). STRUKTURMIKRO DAN SIFAT MAGNET PASIR BESI PASCA ULTRASONIFIKASI. *Jurnal Sains Materi Indonesia*, 19(1), 14-18.
- Qu, S., Wang, J., Kong, J., Yang, P., & Chen, G. (2007). Magnetic loading of carbon nanotube/nano-Fe₃O₄ composite for electrochemical sensing. *Talanta*, 71(3), 1096-1102.
- Rahmahida, N. A., Salimin, Z., & Junaidi, J. (2013). Proses Pengolahan Logam Berat Khrom Pada Limbah Cair Penyamakan Kulit Dengan Eps Terimobilisasi. *Jurnal Teknik Lingkungan*, 2(2), 1-7.
- Raj, J., Raina, A., & Dogra, T. D. (2013). Direct determination of zinc, cadmium, lead, copper metal in tap water of Delhi (India) by anodic stripping voltammetry technique. In *E3S Web of conferences* (Vol. 1, p. 09009). EDP Sciences.
- Sadegh, H., Shahryari-ghoshekandi, R., & Kazemi, M. (2014). Study in synthesis and characterization of carbon nanotubes decorated by magnetic iron oxide nanoparticles. *International Nano Letters*, 4(4), 129-135.
- Saragih, C. S. (2016). SINTESIS NANOPARTICLES MAGNETIK FE₃O₄ DENGAN COATING PEG 6000 MENGGUNAKAN METODE KOPRESIPITASI SEBAGAI ADSORBEN MATERIAL (Doctoral dissertation, UNIMED).
- Sari, R., & Abraha, K. (2012). Simulasi Pengaruh Ketebalan Lapisan Nanopartikel Magnetik (Fe₃O₄) terhadap Respon Biosensor Berbasis Surface Plasmon resonance (SPR) untuk Deteksi DNA. *Prosiding Pertemuan Ilmiah XXVI HFI*.
- Seifi, M., Hekmatara, H., & Askari, M. B. (2017). Preparation and study of the electrical, magnetic and thermal properties of Fe₃O₄ coated carbon nanotubes. *Chinese Journal of Physics*, 55(4), 1319-1328.
- Setiadi, E. A., Sebayang, P., Ginting, M., Sari, A. Y., Kurniawan, C., Saragih, C. S., & Simamora, P. (2016, November). The synthesization of Fe₃O₄ magnetic nanoparticles based on natural iron sand by co-precipitation method for the used of the adsorption of Cu and Pb ions. In *Journal of Physics: Conference Series* (Vol. 776, No. 1, p. 012020). IOP Publishing.
- Sholihah, L. K. (2010). Sintesis dan karakteristik partikel nano fe₃o₄ yang berasal dari Pasir besi dan Fe₃O₄ bahan komersial (Aldrich). Institut Teknologi Sepuluh Nopember-Surabaya.

- Simamora, P., Saragih, C. S., Hasibuan, D. P., & Rajagukguk, J. (2018). Synthesis of nanoparticles Fe₃O₄/PEG/PPy-based on natural iron sand. *Materials Today: Proceedings*, 5(7), 14970-14974.
- Susilo, H., Putra, A., & Astuti, A. (2016). Pengaruh Konsentrasi NaOH pada Sintesis Nanosilika dari Sinter Silika Mata Air Panas Sentral, Solok Selatan, Sumatera Barat dengan Metode Kopresipitasi. *Jurnal Fisika Unand*, 5(4), 334-338.
- Suwattanamala, A., Bandis, N., Tedsree, K., & Issro, C. (2017). Synthesis, characterization and adsorption properties of Fe₃O₄/MWCNT magnetic nanocomposites. *Materials Today: Proceedings*, 4(5), 6567-6575.
- Terashi, Y., Purwanto, A., Wang, W. N., Iskandar, F., & Okuyama, K. (2008). Role of urea addition in the preparation of tetragonal BaTiO₃ nanoparticles using flame-assisted spray pyrolysis. *Journal of the European Ceramic Society*, 28(13), 2573-2580.
- Widodo, B. S., & Harlia, I. S. SINTESIS KOMPOSIT POLIMER KONDUKTIF POLIPIROL (PPy)/SELULOSA BAKTERI DENGAN METODE SPRAY DAN RENDAM. *Jurnal Kimia Khatulistiwa*, 7(1).
- Wu, Y., Wei, Y., Wang, J., Jiang, K., & Fan, S. (2013). Conformal Fe₃O₄ sheath on aligned carbon nanotube scaffolds as high-performance anodes for lithium ion batteries. *Nano letters*, 13(2), 818-823.
- Yang, L., Hu, J., Dong, A., & Yang, D. (2014). Novel Fe₃O₄-CNTs nanocomposite for Li-ion batteries with enhanced electrochemical performance. *Electrochimica Acta*, 144, 235-242.
- Yang, R. B., Reddy, P. M., Chang, C. J., Chen, P. A., Chen, J. K., & Chang, C. C. (2016). Synthesis and characterization of Fe₃O₄/polypyrrole/carbon nanotube composites with tunable microwave absorption properties: role of carbon nanotube and polypyrrole content. *Chemical Engineering Journal*, 285, 497-507.
- Zhao, W., Wang, Y., & Wang, A. (2017). Nonlinear Optical Properties of Novel Polypyrrole Derivatives Bearing Different Aromatic Segments. *Materials Sciences and Applications*, 8(11), 774.
- Zhou, D., Kim, D. G., & Ko, S. O. (2015). Heavy metal adsorption with biogenic manganese oxides generated by *Pseudomonas putida* strain MnB1. *Journal of Industrial and Engineering Chemistry*, 24, 132-139.