

DAFTAR PUSTAKA

- Adesanmi, B. M., Hung, Y. T., Paul, H. H., & Huhnke, C. R. (2022). Comparison Of Dye Wastewater Treatment Methods: A Review. *GSC Advanced Research And Reviews*, 10(2), 126-137.
- Ahmed A. A. Ali, Abidin Talib Z., And Hussein M. Z. B. (2012). ESR Spectra And Thermal Diffusivity Of ZnAl Layered Double Hydroxide. *Journal Of Physics And Chemistry Of Solids*, 73(1), 124–128.
- Alauhdin, M., Eden, W. T., & Alighiri, D. (2021). Aplikasi Spektroskopi Inframerah untuk Analisis Tanaman dan Obat Herbal. *Inovasi Sains dan Kesehatan*, 4-4.
- Alfaruqi, M. H. (2008). Pengaruh Konsentrasi Hidrogen Klorida (HCl) Dan Temperatur Perlakuan Hidrotermal Terhadap Kristalinitas Material Mesopori Silika SBA-15 [Skripsi]. Jakarta : Universitas Indonesia.
- Anastopoulos, I., Pashalidis, I., Orfanos, A. G., Manariotis, I. D., Tatarchuk, T., Sellaoui, L., ... & Núñez-Delgado, A. (2020). Removal Of Caffeine, Nicotine And Amoxicillin From (Waste) Waters By Various Adsorbents. A Review. *Journal Of Environmental Management*, 261, 110236.
- Apriyanti, H., Candra, I. N., & Elvinawati. (2018). Karakterisasi Isoterm Adsorpsi dari Ion Logam Besi (Fe) pada Tanah di Kota Bengkulu. *Jurnal Pendidikan dan Ilmu Kimia*. 2(1). 14–19.
- Asha, S., Hentry, C., Bindhu, M. R., Al-Mohaimed, A. M., Abdelgawwad, M. R., & Elshikh, M. S. (2021). Improved Photocatalytic Activity For Degradation Of Textile Dyeing Waste Water And Thiazine Dyes Using Pbwo₄ Nanoparticles Synthesized By Co-Precipitation Method. *Environmental Research*, 200, 111721.
- Astuti, W. (2018). *Adsorpsi Menggunakan Material Berbasis Lignoselulosa*. Semarang: Unnes Press.
- Aulia, M., Sari, F. I. P., & Asriza, R. O. (2021). Synthesis Of Mg/Al Hydrotalsite-Magnetite As CN-Ion Adsorbent On Wastewater Tapioca Industry. *Stannum: Jurnal Sains Dan Terapan Kimia*, 3(2), 69-75.
- Bini, M., & Monteforte, F. (2018). Layered double hydroxides (LDHs): versatile and powerful hosts for different applications. *J. Anal. Pharm. Res.*, 7(1), 00206.
- Bouteraa, S., Saiah, F. B. D., Hamouda, S., & Bettahar, N. (2020). Zn-M-CO₃ Layered double hydroxides (M= Fe, Cr, or Al): synthesis, characterization, and removal of aqueous indigo carmine. *Bull Chem React Eng Catal*, 15, 43-54.
- Chang, J. S., & Lin, C. Y. (2001). Decolorization Kinetics Of A Recombinant Escherichia Coli Strain Harboring Azo-Dye-Decolorizing Determinants From Rhodococcus Sp. *Biotechnology Letters*, 23(8), 631-636.

- Chen, C., Gunawan, P., & Xu, R. (2011). Self-assembled Fe₃O₄-layered double hydroxide colloidal nanohybrids with excellent performance for treatment of organic dyes in water. *Journal of Materials Chemistry*, 21(4), 1218-1225.
- Chen, F., Wu, X., Bu, R., & Yang, F. (2017). Co-Fe hydrotalcites for efficient removal of dye pollutants via synergistic adsorption and degradation. *RSC advances*, 7(66), 41945-41954.
- Cho, D. K., Jeon, C. W., & Park, I. K. (2018). Growth And Optical Band Gap Of CdAl-Layered Double Hydroxide Thin Structures On Rigid Substrate. *Journal Of Alloys And Compounds*, 737, 725-730.
- Clark, Jim. (2017). *A Double Beam Absorption Spectrometer*. [Online] <https://chem.libretexts.org/@go/page/3744>, diakses pada 22 Desember 2022.
- Conde MA, Liwaire CLS, Tchakounte AN, Ntinkam CAS, Nzugue DLE, Kede CM. (2020). Removal of methyl orange (MO) by chitosan modified by zero valent iron, *Int J Eng Res Technol*. 9(7), 1542–1549
- Dachriyanus. (2004). *Analisis Struktur Senyawa Organik Secara Spektrofotometri*. Padang: Andalas University Press.
- Dhamayanti, Y., Wijaya, K., & Tahir, I. (2005). Fotodegradasi Zat Warna Methyl Orange Menggunakan Fe₂O₃-Montmorillonit Dan Sinar Ultraviolet. In *Prosiding Seminar Nasional DIES Ke 50 FMIPA UGM* (Pp. 22-29).
- Drici-Setti, N., Lelli, P., & Jouini, N. (2020). LDH-Co-Fe-Acetate: A New Efficient Sorbent For Azoic Dye Removal And Elaboration By Hydrolysis In Polyol, Characterization, Adsorption, And Anionic Exchange Of Direct Red 2 As A Model Anionic Dye. *Materials*, 13(14), 3183.
- Eby, G. N. (2016). *Principles of environmental geochemistry*. Waveland Press.
- El Khanchaoui, A., Sajieddine, M., Mansori, M., & Essoumhi, A. (2022). Anionic dye adsorption on ZnAl hydrotalcite-type and regeneration studies based on “memory effect”. *International Journal of Environmental Analytical Chemistry*, 102(15), 3542-3560.
- Fillaeli, A., Siswani, E. D., Kristianingrum, S., Sulistyani, S., & Pratiwi, A. D. (2019). Adsorpsi Multilogam untuk Penurunan Kadar Cu, Fe, Ni dan Zn Menggunakan Arang Aktif Daun Pandan Laut. *Jurnal Sains Dasar*, 8(2), 64-69.
- Fitriansyah, A., Amir, H., & Elvinawati, E. (2021). Karakterisasi adsorben karbon aktif dari sabut pinang (Areca catechu) terhadap kapasitas adsorpsi zat warna indigosol blue 04-B. *Alotrop*, 5(1), 42-54.
- Frost, R.L., Musumeci, A.W., Klopogge, J.T., Weier, M.L., Adebajo, M.O. And Martens, W. (2006). Thermal Decomposition Of Synthetic Hydrotalcites Reevesite And Pyroaurite. *J. Thermal Anal. Calorimetry*, 86(1), 205-209.
- Fu, J., Chen, Z., Wang, M., Liu, S., Zhang, J., Zhang, J., ... & Xu, Q. (2015). Adsorption Of Methylene Blue By A High-Efficiency Adsorbent

- (Polydopamine Microspheres): Kinetics, Isotherm, Thermodynamics And Mechanism Analysis. *Chemical Engineering Journal*, 259, 53-61.
- Gaini, L. E., M. Lakraimi, E. Sebbar, A. Meghea, And M. Bakasse. (2009). Removal Of Indigo Carmine Dye From Water To Mg–Al–CO₃-Calcined Layered Double Hydroxides. *Journal Of Hazardous Materials*, 161(2-3); 627–632.
- Ghaedi, M., Hajjati, S., Mahmudi, Z., Tyagi, I., Agarwal, S., Maity, A., & Gupta, V. K. (2015). Modeling Of Competitive Ultrasonic Assisted Removal Of The Dyes–Methylene Blue And Safranin-O Using Fe₃O₄ Nanoparticles. *Chemical Engineering Journal*, 268, 28-37.
- Gidado, S.M., Akanyeti, I., (2020). Comparison Of Remazol Brilliant Blue Reactive Adsorption On Pristine And Calcined ZnAl, MgAl, ZnMgAl Layered Double Hydroxides. *Water Air Soil Pollut*, 231(4), 1-18.
- Ginting, F. D. (2008). Pengujian Alat Pendingin Sistem Adsorpsi Dua Adsorber Dengan Menggunakan Metanol 1000mL Sebagai Refrigeran. *Jurusan Teknik Mesin Fakultas Teknik. Universitas Indonesia, Jakarta*.
- Gonawala, K. H., & Mehta, M. J. (2014). Removal Of Color From Different Dye Wastewater By Using Ferric Oxide As An Adsorbent. *Int J Eng Res Appl*, 4(5), 102-109.
- Haque, M. M., Haque, M. A., Mosharaf, M. K., & Marcus, P. K. (2021). Decolorization, Degradation And Detoxification Of Carcinogenic Sulfonated Azo Dye Methyl Orange By Newly Developed Biofilm Consortia. *Saudi Journal Of Biological Sciences*, 28(1), 793-804.
- Haryono, H. (2017). Analisa Kinetika Reaksi Pembentukan Kerak CaCO₃ -CaSO₄ Dalam Pipa Beraliran Laminar Pada Suhu 30 °C dan 40 °C Menggunakan Persamaan Arrhenius. *TRAKSI*, 17(2).
- Hasan, A., Yerizam, M., & Yahya, M. H. (2021). Mekanisme Adsorben Zeolit Dan Manganese Zeolit Terhadap Logam Besi (Fe). *KINETIKA*, 12(1), 9-17.
- Hassaan, M. A., El Nemr, A., & Hassaan, A. (2017). Health and environmental impacts of dyes: mini review. *American Journal of Environmental Science and Engineering*, 1(3), 64-67.
- Heraldy, E., Nugrahaningtyas, K. D., & Heriyanto, H. (2017). Kalsinasi Ca-Mg-Al Hydrotalcite Dari Brine Water Dan Karakterisasinya. *Alchemy*, 13(2), 205-216.
- Hesse, M., Meier, H., & Zeeh, B. (2005). *Spektroskopische Methoden in der organischen Chemie*. Georg Thieme Verlag.
- Hidayati, E. N., Alauhdin, M., & Prasetya, A. T. (2014). Perbandingan metode destruksi pada analisis pb dalam rambut dengan AAS. *Indonesian Journal of Chemical Science*, 3(1).
- Hindrayawati, N & Alimuddin. (2010). Sintesis Dan Karakterisasi Silika Gel Dari Abu Sekam Padi Dengan Menggunakan Natrium Hidroksida (Naoh). *Jurnal*

Kimia Mulawarman, 7(2), 75-77.

- Husin, H., & Rosnelly, C. M. (2007). Studi Kinetika Adsorpsi Larutan Logam Timbal (Pb) Menggunakan Karbon Aktif dari Batang Pisang. *Jurnal Hasil Penelitian Industri*. 20(1). 1–10.
- Ismadji, S., Soetaredjo, F. E., Santoso, S. P., Putro, J. N., Yuliana, M., Irawaty, W., ... & Lunardi, V. B. (2021). *Adsorpsi pada fase cair: Kesetimbangan, kinetika, dan termodinamika*.
- Istighfarini, S. A. E., Daud, S., & Hs, E. (2017). Pengaruh massa dan ukuran partikel adsorben sabut kelapa terhadap efisiensi penyisihan Fe pada air gambut. *Jurnal Online Mahasiswa (JOM) Bidang Teknik dan Sains*, 4(1), 1-8.
- Iwai, Y., Miura, A., Rosero-Navarro, N. C., Higuchi, M., & Tadanaga, K. (2019). Composition, Valence And Oxygen Reduction Reaction Activity Of Mn-Based Layered Double Hydroxides. *Journal Of Asian Ceramic Societies*, 7(2), 147-153.
- Iyi, N., Matsumoto, T., Kaneko, Y., & Kitamura, K. (2004). Deintercalation Of Carbonate Ions From A Hydrotalcite-Like Compound: Enhanced Decarbonation Using Acid-Salt Mixed Solution. *Chemistry Of Materials*, 16(15), 2926-2932.
- Jamhour, R. M. A. Q. (2014). Intercalation And Complexation Of Co(II) And Ni(II) By Chelating Ligands Incorporated In Zn-Al Layered Double Hydroxides. *Can. Chem. Trans*, 2, 306-315.
- Jamhour, R. M. A. Q.; Al-Mazaideh, G. M. (2014). Treatment Of Chromium(III) In Tannery Wastewater Using LDH Incorporated With EDTA. *J. Envir. Earth Sci*, 4, 98-104.
- Jasmal, Sulfikar, & Ramlawati. (2015). Kapasitas Adsorpsi Arang Aktif Ijuk Pohon Aren (*Arenga pinnata*). *Jurnal Sainsmat*, 4(1), 57–66.
- Kang, D., Yu, X., Tong, S., Ge, M., Zuo, J., Cao, C., & Song, W. (2013). Performance And Mechanism Of Mg/Fe Layered Double Hydroxides For Fluoride And Arsenate Removal From Aqueous Solution. *Chemical Engineering Journal*, 228, 731-740.
- Kartika, S. E., & Amran, M. B. (2021). Sintesis dan Karakterisasi Poly (Anthranilic Acid-Co-Formaldehyde) untuk Adsorpsi Ion Pb (II). *ALCHEMY: Journal of Chemistry*, 9(1), 15-25.
- Khuluk, R.,H. (2016). Pembuatan Dan Karakterisasi Karbon Aktif Dari Tempurung Kelapa (*Cocous Nucifera L.*) Sebagai Adsorben Zat Warna Metilen Biru. Bandar Lampung: Universitas Lampung.
- Kishor, R., Purchase, D., Saratale, G. D., Saratale, R. G., Ferreira, L. F. R., Bilal, M., ... & Bharagava, R. N. (2021). Ecotoxicological And Health Concerns Of Persistent Coloring Pollutants Of Textile Industry Wastewater And Treatment Approaches For Environmental Safety. *Journal Of Environmental Chemical Engineering*, 9(2), 105012.

- Koesmawati, Tiny A. 2017. *Modul Pelatihan Dasar Spektrofotometer Uv-Vis. Pusat Pengembangan Kompetensi Profesi Indonesia.*
- Kyzas, G. Z. (2012). A decolorization technique with spent “Greek coffee” grounds as zero-cost adsorbents for industrial textile wastewaters. *Materials*, 5(11), 2069-2087.
- Laksono, E. W. (2009). Kajian Terhadap Aplikasi Kitosan Sebagai Adsorben Ion Logam Dalam Limbah Cair. *Jurdik Kimia*, FMIPA, UNY.
- Laysandra, L., Santosa, F. H., Austen, V., Soetaredjo, F. E., Foe, K., Putro, J. N., ... & Ismadji, S. (2018). Rarasaponin-bentonite-activated biochar from durian shells composite for removal of crystal violet and Cr (VI) from aqueous solution. *Environmental Science and Pollution Research*, 25(30), 30680-30695.
- Lee, J. H.; Rhee, S. W.; Jung, D. Y. (2004). Solvothermal Ion Exchange Of Aliphatic Dicarboxylates Into The Gallery Space Of Layered Double Hydroxides Immobilized On Si Substrates. *Chem. Mater*, 16, 3774-3779.
- Legrouri, A.; Lakraimi, M.; Barroug, A.; Roy, A. D.; Besse, J. P. (2005). Removal Of The Herbicide 2,4- Dichlorophenoxyacetate From Water To Zinc–Aluminium–Chloride Layered Double Hydroxides. *Water Res*, 39, 3441-3448.
- Lesbani, A., D. R. Maretha, T. Taher, Miksusanti, R. Mohadi, And R. Andreas (2018). Layered Double Hydroxides Mg/Fe Intercalated $H_3[A-PW_{12}O_{40}] \cdot nH_2O$ As Adsorbent Of Cadmium(II). In *AIP Conference Proceedings*, Volume 2049. AIP Publishing, Page 020013.
- Liang, X., Hou, W., Xu, Y., Sun, G., Wang, L., Sun, Y., & Qin, X. (2010). Sorption Of Lead Ion By Layered Double Hydroxide Intercalated With Diethylenetriaminepentaacetic Acid. *Colloids And Surfaces A: Physicochemical And Engineering Aspects*, 366(1-3), 50-57.
- Ling, F., Fang, L., Lu, Y., Gao, J., Wu, F., Zhou, M., & Hu, B. (2016). A Novel CoFe Layered Double Hydroxides Adsorbent: High Adsorption Amount For Methyl Orange Dye And Fast Removal Of Cr (VI). *Microporous And Mesoporous Materials*, 234, 230-238.
- Liu, W., & Yu, Y. (2022). Ultrafast Advanced Treatment Of Chromium Complex-Containing Wastewater Using Co/Fe Layered Double Hydroxide. *Environmental Technology & Innovation*, 26, 102296.
- Liu, Z., Ma, R., Osada, M., Iyi, N., Ebina, Y., Takada, K., & Sasaki, T. (2006). Synthesis, Anion Exchange, And Delamination Of Co– Al Layered Double Hydroxide: Assembly Of The Exfoliated Nanosheet/Polyanion Composite Films And Magneto-Optical Studies. *Journal Of The American Chemical Society*, 128(14), 4872-4880.
- Lu, Y., Jiang, B., Fang, L., Ling, F., Gao, J., Wu, F., & Zhang, X. (2016). High Performance NiFe Layered Double Hydroxide For Methyl Orange Dye And

- Cr (VI) Adsorption. *Chemosphere*, 152, 415-422.
- Ma, K., Cheng, J. P., Zhang, J., Li, M., Liu, F., & Zhang, X. (2016). Dependence of Co/Fe ratios in Co-Fe layered double hydroxides on the structure and capacitive properties. *Electrochimica Acta*, 198, 231-240.
- Mahmoud, R. K., Taha, M., Zaher, A., & Amin, R. M. (2021). Understanding the physicochemical properties of Zn-Fe LDH nanostructure as sorbent material for removing of anionic and cationic dyes mixture. *Scientific reports*, 11(1), 1-19.
- Mamat, M., Abdullah, M. A. A., Kadir, M. A., Jaafar, A. M., & Kusriani, E. (2018). Preparation of layered double hydroxides with different divalent metals for the adsorption of methyl orange dye from aqueous solutions. *Chemical Engineering*, 9(6), 1103-1111.
- Maruthanayagam, A., Mani, P., Kaliappan, K., & Chinnappan, S. (2020). In Vitro And In Silico Studies On The Removal Of Methyl Orange From Aqueous Solution Using Oedogonium Subplagiostomum AP1. *Water, Air, & Soil Pollution*, 231(5), 1-21.
- Mittal, J. (2020). Permissible Synthetic Food Dyes In India. *Resonance*, 25(4), 567-577.
- Mon, I., Yerimadesi, Y., & Hardeli, H. (2012). *Kimia Fisika (Kinetika Kimia)*. Padang: UNP Press Padang.
- Morcos, C., Seron, A., Maubec, N., Ignatiadis, I., & Betelu, S. (2022). Comprehension of the Route for the Synthesis of Co/Fe LDHs via the Method of Coprecipitation with Varying pH. *Nanomaterials*, 12(9), 1570.
- Murachman, B., Putra, E. S., Kimia, J.T., Teknik, F., & Grafika, J. (2014). Dekolorisasi Dan Deoilisasi Parafin Menggunakan Adsorben Zeolit, Arang Aktif Dan Produk Pirolisis Batu Bara. *J. Rekayasa Proses*, 8(2), 40-48.
- Nandiyanto, A. B. D., Ragadhita, R., & Yunas, J. (2020). Adsorption isotherm of densed monoclinic tungsten trioxide nanoparticles. *Sains Malaysiana*, 49(12), 2881-2890.
- National Center For Biotechnology Information (2022). Pubchem Compound Summary For CID 23673835, Methyl Orange. Retrieved September 22, 2022 From <https://pubchem.ncbi.nlm.nih.gov/compound/Methyl-Orange>.
- Nicolet, T. (2001). *Introduction To FTIR Spectrometry*. USA: Thermo Nicolet Inc.
- Nisah, K., & Nadhifa, H. (2020). Analisis Kadar Logam Fe Dan Mn Pada Air Minum Dalam Kemasan (AMDK) Dengan Metode Spektrofotometri Serapan Atom. *AMINA*, 2(1), 6-12.
- Nugrahadi, Z. (2020). Pembuatan dan Karakterisasi Komposit TiO₂/Serat Tandan Pisang Sebagai Adsorben Untuk Menyerap Metil Jingga. [Skripsi]
- Nurhasni, N., Mar'af, R., & Hendrawati, H. (2018). Pemanfaatan Kulit Kacang Tanah (*Arachis hypogaea* L.) sebagai Adsorben Zat Warna Metilen

Biru. *Jurnal Kimia VALENSI Volume, 4(2)*.

- Queiroz, R. M., Pires, L. H., de Souza, R. C., Zamian, J. R., De Souza, A. G., da Rocha Filho, G. N., & Da Costa, C. E. F. (2009). Thermal characterization of hydrotalcite used in the transesterification of soybean oil. *Journal of thermal analysis and calorimetry*, 97, 163-166.
- Safitri, T., Sulistyarningsih, T., & Kusumastuti, E. (2019). Preparasi Mg/Al/Fe-NO₃ Hidrotalsit Secara Kopresipitasi. *Indonesian Journal Of Chemical Science*, 8(1), 41-46.
- Santos, R. M. M., Tronto, J., Briois, V., & Santilli, C. V. (2017). Thermal Decomposition And Recovery Properties Of ZnAl-CO₃ Layered Double Hydroxide For Anionic Dye Adsorption: Insight Into The Aggregative Nucleation And Growth Mechanism Of The LDH Memory Effect. *Journal Of Materials Chemistry A*, 5(20), 9998-10009.
- Sari, A., Aproditha, Y., Rizani, A. M., Agus M., Chairul, I. (2021). Removal Of Arsenic From Synthetic Acid Mine Drainage Using Mn-Fe Layered Double Hydroxide Adsorbent, *Jurnal Rekayasa Kimia Dan Lingkungan*. 16(1), 45-51.
- Setiabudi, A., Rifan, H., Ahmad, M. (2012). *Karakterisasi Material Prinsip Dan Aplikasinya Dalam Penelitian Kimia*. Bandung: UPI Press.
- Shah, S. S., Sharma, T., Dar, B. A., & Bamezai, R. K. (2021). Adsorptive removal of methyl orange dye from aqueous solution using populus leaves: insights from kinetics, thermodynamics and computational studies. *Environmental Chemistry and Ecotoxicology*, 3, 172-181.
- Shair, A. S., Dena, A. S. A., & El-Sherbiny, I. M. (2021). Matrix-Dispersed PEI-Coated Spions For Fast And Efficient Removal Of Anionic Dyes From Textile Wastewater Samples: Applications To Triphenylmethanes. *Spectrochimica Acta Part A: Molecular And Biomolecular Spectroscopy*, 249, 119301.
- Silva Neto, L. D., Anchieta, C. G., Duarte, J. L., Meili, L., & Freire, J. T. (2021). Effect of drying on the fabrication of MgAl layered double hydroxides. *ACS omega*, 6(33), 21819-21829.
- Sitorus, M. (2009). *Spektroskopi Edisi Elusidasi Struktur Molekul Organik*. Yogyakarta: Graha Ilmu.
- Soni, S., Bajpai, P. K., Mittal, J., & Arora, C. (2020). Utilisation Of Cobalt Doped Iron Based MOF For Enhanced Removal And Recovery Of Methylene Blue Dye From Waste Water. *Journal Of Molecular Liquids*, 314, 113642.
- St, Harfiyah. (2013). Kinetika Adsorpsi Zat Warna Rhodamin B Menggunakan Karbon Aktif Sekam Padi (Oryza Sativa L). (*Doctoral Dissertation*). Makassar: Universitas Islam Negeri Alauddin.
- Stuart, B. H. (2004). *Infrared spectroscopy: fundamentals and applications*. John Wiley & Sons.

- Suci, F.C. (2015). Adsorpsi Hidrogen pada Material Karbon Tertemplat Zeolit-Y dengan Aktivasi K_2CO_3 . *Thesis*.
- Suhartati, T. (2017). *Dasar-Dasar Spektrofotometri UV-Vis dan Spektrometri Massa untuk Penentuan Struktur Senyawa Organik*. Bandar Lampung: Anugrah Utama Raharja.
- Sulastrri, S., Nuryono, I. K., & Kunarti, E. S. (2014). Kinetika Dan Keseimbangan Adsorpsi Ion Kromium (III) Dalam Larutan Pada Senyawa Silika Dan Modifikasi Silika Hasil Sintesis Dari Abu Sekam Padi. *Jurnal Penelitian Saintek*, 19(2), 33-44.
- Teixeira, T.P.F., Aquino, S.F., Pereira, S.I., Dias, A., 2014. Use of Calcined Layered Double Hydroxides for the Removal of Color and Organic Matter from Textile Effluents: Kinetic, Equilibrium and Recycling Studies. *Brazilian Journal of Chemical Engineering*, 31(1), pp. 19–26
- Teng, M., Qiao, J., Li, F., & Bera, P. K. (2012). Electrospun Mesoporous Carbon Nanofibers Produced From Phenolic Resin And Their Use In The Adsorption Of Large Dye Molecules. *Carbon*, 50(8), 2877-2886.
- Thamer, B. M., Aldalbahi, A., Moydeen A, M., Rahaman, M., & El-Newehy, M. H. (2020). Modified Electrospun Polymeric Nanofibers And Their Nanocomposites As Nanoadsorbents For Toxic Dye Removal From Contaminated Waters: A Review. *Polymers*, 13(1), 20.
- Tran, H. N., Nguyen, D. T., Le, G. T., Tomul, F., Lima, E. C., Woo, S. H., ... & Chao, H. P. (2019). Adsorption mechanism of hexavalent chromium onto layered double hydroxides-based adsorbents: A systematic in-depth review. *Journal of hazardous materials*, 373, 258-270.
- Wang, X., Shao, D., Hou, G., Wang, X., Alsaedi, A., & Ahmad, B. (2015). Uptake of Pb (II) and U (VI) ions from aqueous solutions by the ZSM-5 zeolite. *Journal of Molecular Liquids*, 207, 338-342.
- Wijitwongwan, R., Intasa-Ard, S., & Ogawa, M. (2019). Preparation Of Layered Double Hydroxides Toward Precisely Designed Hierarchical Organization. *Chemengineering*, 3(3), 68.
- Wiyantoko, B., Kurniawati, P., Purbaningias, T. E., Jauhari, M. H., Yahya, A., Tamyiz, M., ... & Doong, R. A. (2022). Assessing the effect of calcination on adsorption capability of Mg/Al layer double hydroxides (LDHs). *Materials Research Express*, 9(3), 035505.
- Wu, L., Liu, X., Lv, G., Zhu, R., Tian, L., Liu, M., ... & Liao, L. (2021). Study on the adsorption properties of methyl orange by natural one-dimensional nano-mineral materials with different structures. *Scientific reports*, 11(1), 1-11.
- Yanlinastuti, Fatimah S. (2016). *Pengaruh Konsentrasi Pelarut Untuk Menentukan Kadar Zirkonium dalam Paduan U-Zr dengan Menggunakan Metode Spektrofotometri UV-Vis*. 17.
- Yenti, S. R., Fadli, A., Nirwana, D., Fifiyana, R., & Sari, M. (2018). Model

- Kesetimbangan Freundlich Pada Adsorpsi Ion Kadmium Menggunakan Hidroksiapatit. In *Prosiding Seminar Nasional Fisika Universitas Riau*, 3(2018).
- Yuan, D., Zhou, L., & Fu, D. (2017). Adsorption of methyl orange from aqueous solutions by calcined ZnMgAl hydrotalcite. *Applied Physics A*, 123(2), 1-8.
- Yuliasari, N., Badri, A. F., Wijaya, A., Siregar, P. M. S. B. N. ., Amri, Mardiyanto, Mohadi, R., & Lesbani, A. (2022). Modification of Mg/Al-LDH Intercalated Metal Oxide (Mg/Al-Ni) to Improve The Performance of Methyl Orange and Methyl Red Dyes Adsorption Process. *Science and Technology Indonesia*, 7(3), 275–283.
- Zaghloul, A., Benhiti, R., Abali, M. H., Ait Ichou, A., Soudani, A., Chiban, M., ... & Sinan, F. (2021). Kinetic, isotherm, and thermodynamic studies of the removal of methyl orange by synthetic clays prepared using urea or coprecipitation. *Euro-Mediterranean Journal for Environmental Integration*, 6, 1-10.
- Zaghloul, A., Benhiti, R., Soudani, A., Chiban, M., Zerbet, M., & Sinan, F. (2019). Removal of methyl orange from aqueous solution using synthetic clay type MgAl-LDH: Characterization, Isotherm and thermodynamic studies. *Mediterranean Journal of Chemistry*, 9(2), 155-163.
- Zainul, R. (2021). Teknik Karakterisasi Kimia Fisika. *Teknik Karakterisasi Kimia Fisika*, 1-249. Padang: Berkah Prima.
- Zhang, P.; Qian, G.; Shi, H.; Ruan, X.; Yang, J.; Frost, R. L. (2012). Mechanism of Interaction of hydrocalumites (Ca/Al-LDH) with Methyl Orange and Acidic Scarlet GR. *J. Colloid Interface Sci*, 365, 110-116.