

DAFTAR PUSTAKA

- Abbasi, H.N., Vasileva, V., and Lu, X., 2017, The influence of the ratio of nitrate to ammonium nitrogen on nitrogen removal in the economical growth of vegetation in hybrid constructed wetlands, *Enviroment*, 4 (24), 1-9.
- Abdul Kareem, F.A., Shariff, A.M., Ullah, S., Mellon, N., and Keong, L.K., 2018, Adsorption of pure and predicted binary (CO₂:CH₄) mixtures on 13X-Zeolite: Equilibrium and kinetic properties at offshore conditions, *Microporous Mesoporous Mater.*, 267 (2018), 221–234.
- Abdullah, N.H., Shameli, K., Etesami, M., Chan Abdullah, E., and Abdullah, L.C., 2017, Facile and green preparation of magnetite/zeolite nanocomposites for energy application in a single-step procedure, *J. Alloys Compd.*, 719, 218–226.
- Adiningtyas, A. and Mulyono, P., 2016, Kinetika adsorpsi nikel (II) dalam larutan aqueous dengan karbon aktif arang tempurung kelapa, *J. Rekayasa Proses*, 10 (2), 36-42.
- Afuja, G., 2021, Kajian adsorpsi ion sulfat pada zeolit-magnetit termodifikasi setiltrimetilamonium bromida, *Skripsi*, Kimia FMIPA Universitas Gadjah Mada, Yogyakarta.
- Apriyanti, D., Santi, V.I., Siregar, Y.D.I., 2013, Pengkajian metode analisis amonia dalam air dengan method assessment for ammonia analysis in water using salicylate test kit method, *Ecolab*, 7 (2), 49-108.
- Ariadi, H., Wafi, A., Musa, M., and Supriatna, S., 2021, Keterkaitan hubungan parameter kualitas air pada budidaya intensif udang putih (*Litopenaeus vannamei*), *Samakia J. Ilmu Perikan.*, 12 (1), 18–28.
- Bagbi, Y., Sarswat, A., Mohan, D., Pandey, A., and Solanki, P.R., 2016, Lead (Pb²⁺) adsorption by monodispersed magnetite nanoparticles: Surface analysis and effects of solution chemistry, *J. Environ. Chem. Eng.*, 4 (4), 4237–4247.
- Cakicioglu-Ozkan, F. and Ulku, S., 2005, The effect of HCl treatment on water vapor adsorption characteristics of clinoptilolite rich natural zeolite, *Microporous Mesoporous Mater.*, 77 (1), 47–53.
- Ch'en, P., 1977, *Table of key lines in x-ray powder diffraction patterns of minerals in clays and associated rocks*, Dept. of Natural Resources, Bloomington, Ind.
- Chieng, Z.H., Mohyaldinn, M.E., Hassan, A.M., and Bruining, H., 2020, Experimental investigation and performance evaluation of modified viscoelastic surfactant (VES) as a new thickening fracturing fluid, *Polymers (Basel)*, 12 (7), 1–19.
- Darmadi, 2014, Pengolahan limbah cair pabrik pupuk urea menggunakan

- advanced oxidation processes urea plant wastewater treatment by advanced oxidation processes, *Jurnal Rekayasa Kimia dan Lingkungan*, 10 (1), 6–11.
- De Magalhães, L.F., Da Silva, G.R., and Peres, A.E.C., 2022, Zeolite Application in wastewater treatment, *Adsorpt. Sci. Technol.*, 2022, 1-25.
- Dede, H., Riris, A., and Gusti, D., 2014, Evaluasi tingkat kesesuaian kualitas air tambak udang berdasarkan produktivitas primer PT. Tirta Bumi Nirbaya Teluk Hurun Lampung Selatan, *Maspari J.*, 6 (1), 32–38.
- Duyen, T., Minh, T., Nguyen, P., and Van, H.T., 2022, Environmental technology and innovation adsorption removal of ammonium from aqueous solution using Mg / Al layered double hydroxides-zeolite composite, *Environmental Technology & Innovation*, 25 (2022), 1-16.
- Emilia A. T., Faizal, M., and Aprianti, T., 2014, Application of activated carbon and natural zeolite for phosphate removal from laundry wastewater, *5th Sriwij. Int. Semin. Energy Environ. Sci. Technol.*, 165–170.
- Erhayem, M., Al-Tohami, F., Mohamed, R., and Ahmida, K., 2015, Isotherm, kinetic and thermodynamic studies for the sorption of mercury (ii) onto activated carbon from leaves, *Am. J. Anal. Chem.*, 6 (1), 1–10.
- Gawande, S.M., Belwalkar, N.S., and Mane, A.A., 2017, Adsorption and its Isotherm – Theory, *Int. J. Eng. Res.*, 6 (6), 312-316.
- Gougazeh, M. and Buhl, J.C., 2014, Synthesis and characterization of zeolite a by hydrothermal transformation of natural Jordanian kaolin, *J. Assoc. Arab Univ. Basic Appl. Sci.*, 15 (1), 35–42.
- He, Y., Lin, H., Dong, Y., and Wang, L., 2017, Preferable adsorption of phosphate using lanthanum-incorporated porous zeolite: characteristics and mechanism, *Appl. Surf. Sci.*, 426 (2017), 995–1004.
- Hikmah, F.N. and Mulyono, T., 2021, Analisis kadar ion amonium dan nitrat secara simultan dengan metode sistem alir multi-commutation potensiometri simultaneous analysis of ammonium and nitrate ions levels with potentiometric multi-commutation flow system method, *Ilmu Dasar J.*, 22 (1), 69–74.
- Ho, Y.S. and McKay, G., 1998, A comparison of chemisorption kinetic models applied to pollutant removal on various sorbents, *Process Saf. Environ. Prot.*, 76 (4), 332–340.
- Imandiani, S., Indira, C., Johan, A., and Budiyo, 2018, Utilization of Natural Zeolite from Ponorogo and Purworejo for Naphthol Substance Adsorption, *E3S Web Conf.*, 31, 4–7.
- Kamyab, S.M. and Williams, C.D., 2021, Pure zeolite LTJ synthesis from kaolinite under hydrothermal conditions and its ammonium removal efficiency, *Microporous Mesoporous Mater.*, 318, 1-13.

- Kithome, M., Paul, J.W., Les, M., and Bomke, A.A., 2008, Communications in Soil Science and Plant Analysis Effect of pH on ammonium adsorption by natural zeolite clinoptilolite, *Commun. Soil Sci. Plant Anal*, 30 (9-10), 1417–1430.
- Komariah, A., Sriatun, S., and Pardoyo, P., 2017, Adsorpsi alkil benzena sulfonat menggunakan zeolit termodifikasi cetyltrimethylammonium, *J. Kim. Sains dan Apl.*, 20 (1), 13–18.
- Kumar, K.V., Porkodi, K., and Rocha, F., 2008, Langmuir-Hinshelwood kinetics - A theoretical study, *Catal. Commun.*, 9 (1), 82–84.
- Kurniawan, I.A.N., Sholeh, A., Pra, D.A.N., and Mariadi, D., 2022, Pemeriksaan Amonia dalam Air Menggunakan Metode Fenat dengan Variasi Suhu dan Waktu Inkubasi, *Gunung Djati Conference Series*, 7, 77–82.
- Kusuma, I.D.G.D.P., Wiratini, N.M., and Wiratma, I.G.L., 2014, Isoterm adsorpsi Cu^{2+} oleh biomassa rumput laut *eucheuma spinosum*, *e-Journal Kim. Visvitalis Univ. Pendidik. Ganesha*, 2 (1), 1–10.
- Ma'rufatin, A. and Dewanti, D.P., 2020, Analisis kadar nitrit, nitrat, dan fosfat berdasarkan variasi jarak pengukuran sampel pada pulau apung dengan rumput vetiver, *J. Rekayasa Lingkung.*, 12 (1), 82-88.
- Mng'ong'o, M., 2018, Competition between organic matter and phosphate for binding sites in sandy, *Dissertation*, Soil Science-Science in Physical Land Resources, Gent University.
- Maharana, M. and Sen, S., 2021, Magnetic zeolite: A green reusable adsorbent in wastewater treatment, *Mater. Today Proc.*, 47, 1490–1495.
- Méndez Argüello, B., Vera Reyes, I., Cárdenas Flores, A., De los Santos Villarreal, G., Ibarra Jiménez, L., and Lira Saldivar, R., 2018, Water holding capacity of substrates containing zeolite and its effect on growth, biomass production and chlorophyll content of *Solanum lycopersicum* Mill, *Nov. Sci.*, 10 (21), 45–60.
- Mgbemere, H.E., Ekpa, I.C., Lawal, G.I., Ekpe, I.C., and Lawal, G.I., 2017, Zeolite synthesis, characterisation and application areas: a review, *Int. Res. J. Environ. Sci.*, 6 (10), 45–59.
- Mojiri, A., Zhou, J.L., Robinson, B., Ohashi, A., Ozaki, N., Kindaichi, T., Farraji, H., and Vakili, M., 2020, Pesticides in aquatic environments and their removal by adsorption methods, *Chemosphere*, 253 (2020), 126646.
- Moshoeshoe, M., Tabbiruka, M.S.N., and Obuseng, V., 2017, A Review of the chemistry, structure, properties and applications of zeolites, *Am. J. Mater. Sci.*, 2017 (5), 196–221.
- Nakamura, A., Sugawara, K., Nakajima, S., and Murakami, K., 2017, Adsorption of Cs ions using a temperature-responsive polymer/magnetite/zeolite

composite adsorbent and separation of the adsorbent from water using high-gradient magnetic separation, *Colloids Surfaces A Physicochem. Eng. Asp.*, 527, 63–69.

Ngapa, Y.D. and Gago, J., 2019, Adsorpsi ion Pb (ii) oleh zeolit alam enderaktivasi asam : studi pengembangan mineral alternatif penjerap, *Cakra Kim.*, 7 (2), 84–91.

Nwabanne, J.T. and P.K.Igbokwe, 2008, Kinetics and equilibrium modeling of nickel adsorption by cassava peel, *J. Eng. Appl. Sci.*, 3 (11), 829–834.

Prabawati Y., S., Jumina, Santosa, S.J., Mustofa, and Ohto, K., 2012, Study on the adsorption properties of novel calix[6]arene polymers for heavy metal cations, *Indones. J. Chem.*, 12 (1), 28–34.

Pebriyanti, C.L., 2021, Sintesis komposit zeolit-magnetit-setiltrimetilamonium bromida dan aplikasinya sebagai adsorben ion fosfat, *Skripsi*, Kimia FMIPA Universitas Gadjah Mada, Yogyakarta.

Peri, K., Guan, Y., and Han, K.N., 2001, Dissolution behavior of gold in ammoniacal solutions with iodine as an oxidant, *Minerals & Metallurgical Processing*, 18 (99), 13–17.

Pohan, M. S., Sutarno, dan Suyanta, 2016, Studi Adsorpsi-Desorpsi Anion Fosfat pada Zeolit Termodifikasi CTAB, *J. Penelit. Sains*, 18 (3), 123-135.

Qomaruzzaman, I., Sriatun, dan Suhartana, 2020, Modifikasi zeolit alam menggunakan trietanolamin (tea) sebagai adsorben ion logam kromium (III), 5 (2), 62–75.

Romadhona, B., Yulianto, B., and Sudarno, S., 2016, Fluktuasi kandungan amonia dan beban cemaran lingkungan tambak udang vaname intensif dengan teknik panen parsial dan panen total, *Saintek Perikan. Indones. J. Fish. Sci. Technol.*, 11 (2), 84-93.

Rostami, F., Davoodi, R., Nafisi Bahabadi, M., Salehi, F., and Nooryazdan, H., 2019, Effects of ammonia on growth and molting of *Litopenaeus vannamei* postlarvae reared under two salinity levels, *J. Appl. Aquac.*, 31 (4), 309–321.

Rosyidah, A.K. dan Suyanta, S., 2021, Sintesis dan karakterisasi komposit zeolit magnetit dan aplikasinya sebagai adsorben Ni(II), *J. Sains dan Terap. Kim.*, 15 (1), 37-47.

Salavati-Niasari, M., Mahmoudi, T., and Amiri, O., 2012, Easy Synthesis of Magnetite Nanocrystals via Coprecipitation Method, *J. Clust. Sci.*, 23 (2), 597–602.

Setiawan, Y., Mahatmanti, F.W., Harjono, and Jumaeri, 2017, Preparasi dan karakterisasi nanozeolit dari zeolit alam gunungkidul dengan metode top-down, *Indones. J. Chem. Sci.*, 6 (2), 1–8.

Singh, L.H., Pati, S.S., Coaquira, J.A.H., Matilla, J., Guimarães, E.M., Oliveira,

- A.C., Kuzmann, E., and Garg, V.K., 2016, Magnetic interactions in cubic iron oxide magnetic nanoparticle bound to zeolite, *J. Magn. Magn. Mater.*, 416 (2016), 98–102.
- Sriatun, Darmawan, A., dan Sriyanti, 2017, Synthesis and characterization of Zeolite/Magnetite composite from iron sand of marina beach, *Adv. Sci. Lett.*, 23 (7), 6524–6526
- Sumarni, Hindryawati, Noor, A., 2018, Aktivasi dan karakterisasi zeolit alam menggunakan NaOH, *J. At.*, 3 (2), 106–110.
- Suwardi, 2002, Prospek pemanfaatan mineral zeolit di bidang pertanian, *J. Zeolit Indones.*, 1 (1), 5–12.
- Teja, A.S. and Koh, P.Y., 2009, Synthesis, properties, and applications of magnetic iron oxide nanoparticles, *Prog. Cryst. Growth Charact. Mater.*, 55 (1-2), 22–45.
- Tseng, R.L., Wu, F.C., and Juang, R.S., 2010, Characteristics and applications of the Lagergren's first-order equation for adsorption kinetics, *J. Taiwan Inst. Chem. Eng.*, 41 (6), 661–669.
- Velásquez-Yévenes L. and Ram, R., 2022, The aqueous chemistry of the copper-ammonia system and its implications for the sustainable recovery of copper, *Cleaner Engineering and Technology journal*, 9 (2022), 1-12.
- Vigdorowitsch, M., Pchelintsev, A., Tsygankova, L., and Tanygina, E., 2021, Freundlich isotherm: An adsorption model complete framework, *Appl. Sci.*, 11 (17), 1-7.
- Wang, J. and Guo, X., 2020, Adsorption isotherm models: Classification, physical meaning, application and solving method, *Chemosphere*, 258, 1-79.
- Wang, Y.X., Sun, J., Fan, X., and Yu, X., 2011, A CTAB-assisted hydrothermal and solvothermal synthesis of ZnO nanopowders, *Ceram. Int.*, 37 (8), 3431–3436.
- Wustoni, S., Mukti, R.R., Wahyudi, A., and Ismunandar, 2011, Sintesis zeolit mordenit dengan bantuan benih mineral alam indonesia mordenit zeolit synthesis asists by indonesia netral mineralized, *J. Mat. Sains*, 16 (3), 158–160.
- Zhang, W.Y., Liu, Y., and Xi, L.J., 2013, Adsorption of chloride anion by calcined Mg-Al-Fe layered double hydroxides in wastewater, *Appl. Mech. Mater.*, 423–426 (2013), 545–549.