

DAFTAR PUSTAKA

- Ahmaruzzaman, M., 2011, Industrial Waste as Low-cost Potential Adsorbent for the Treatment of Wastewater Laden with Heavy Metals, *Adv.Colloid. Interf. Sci.*, 166, 36-59.
- Akl, M.A.A., Dawy, M.B., Serage, A.A., 2014, Efficient removal of phenol from water samples using sugarcane bagasse based activated carbon, *J. Anal. Bioanal. Tech.*, 5, 1–12.
- Amin, N.K., 2008, Removal of reactive dye from aqueous solutions by adsorption onto activated carbons prepared from sugarcane bagasse pith, *Desalination.*, 223, 152–161.
- Azwar, A., 1996, *Pengantar Administrasi Kesehatan*, Edisi Ketiga, Binarupa Aksara, Jakarta.
- Baseri, H., dan Tizro, S., 2017, Treatment of nickel ions from contaminated water by magnetite based nanocomposite adsorbents: Effects of thermodynamic and kinetic parameters and modeling with Langmuir and Freundlich isotherm, *Proc. Envi. Protect.*, 109, 465-477.
- Bhatnagar, A., Sillanpää, M., 2009, Applications of Chitin- And Chitosan-Derivatives For The Detoxification of Water and Wastewater A Short Review, *Adv. Colloid. Interf. Sci.*, 152, 26-38.
- Chaemsanit, S., Matan, N., Matan, N., 2017, Activated Carbon for Food Packaging Application:Review, *Walailak. J. Sci&Tech.*, 15(4), 255-271.
- Champagne, L.M., 2008, The Synthesis of Water Soluble N-acyl Chitosan Derivatives for Characterization as Antibacterial Agents, *LSU Doctoral Dissertations*, 2289.
- Cheng, Z., Ma, W., Gao, L., 2014, Adsorption of nickel ions from seawater by modified chitosan, *Desalin. Water. Treat*, 52(28-30):5663–5672.
- Danalioglu, S. T., Bayazit, S.S., Kuyumcu, Ö. K., Salam, M.A., 2017, Efficient removal of antibiotics by a novel magnetic adsorbent: Magnetic activated carbon/chitosan (MACC) nanocomposite, *J. Mol. Liq.*, 240, 589-596.
- Deokar, S. K., Mandavgane, S.A., Kulkarni, B.D., 2016, Adsorptive removal of 2,4-dichlorophenoxyacetic acid from aqueous solution using bagasse fly ash as adsorbent in batch and packed-bed techniques, *Clean. Technol. Environ. Policy.*, 18, 1971–1983.

- Erosa, M.S.D., Medina, T.I.S., Mendoza, R.N., Rodriguez, M.A., dan Guibal, E., 2001, Cadmium Sorption on Chitosan Sorbents: Kinetic and Equilibrium Studies, *Hydrometallurgy.*, 61, 157-167.
- Esfandiar, N., Nasernejad, B., Ebadi, T., 2014, Removal of Mn(II) from groundwater by sugarcane bagasse and activated carbon (a comparative study): Application of response surface methodology (RSM), *J. Indus Eng. Chem.*, 20, 3726-3736.
- Friák, M., Schindlmayr, A., Scheffler, M., 2007, Ab initio study of the half-metal to metal transition in strained magnetite, *New J. Phys.*, 9, 1-15.
- Garg, U.K., Kaur, M.P., Sud, D., Garg, V.K., 2009, Removal of hexavalent chromium from aqueous solution by adsorption on treated sugarcane bagasse using response surface methodological approach, *Desalination.*, 249(2), 475-479.
- Guibal, E., 2004, Interactions of metal ions with chitosan-based sorbents: a review, *Sep. Purif. Technol.*, 38, 43-74.
- Hariani, P.L., Faizal, M., Ridwan., Marsi., dan Stiabudidaya, D., 2013, Synthesis and Properties of Fe₃O₄ Nanoparticles by Co-precipitation Method to Removal Procion Dye, *Inter. J. Envi. Sci.*, 4, 336-340.
- Hasany, S.F., Ahmed, I., Rajan, J., Rehman, A., 2012, Systematic Review of The Preparation Techniques of Iron Oxide Magnetic Nanoparticles, *Nanosci. Nanotechnol.*, 2(6), 148-158.
- Ho, Y.S., dan McKay, G., 1998, A Comparison Of Chemisorption Kinetic Models Applied To Pollutant Removal On Various Sorbents, *Trans. IChemE.*, 76, 332-340.
- Holleman, A.F., dan Wiberg, N., 2001, *Inorganic Chemistry*, Academic Press, San Diego.
- Huang, R., Yang, B., Liu, Q., dan Liu, Y., 2013, Multifunctional Activated Carbon/Chitosan Composite Preparation and Its Simultaneous Adsorption of Phenol and Cr(VI) From Aqueous Solutions, *Envi. Prog. Sustainable Energy.*, 00, 1-10.
- Jeirani, Z., Niu, C.H., Soltan, J., 2017, Adsorption of emerging pollutants on activated carbon, *Rev. Chem. Eng.*, 33(5), 1-32.
- Khoramzadeh, E., Nasernejad, B., and Halladj, R., 2013, Mercury biosorption from aqueous solutions by sugarcane bagasse, *J. Taiwan. Inst. Chem. Eng.*, 44:266-269.

- Karnitz Jr, O., Gurgel, L. V. A., Melo, J. C. P., Botaro, V. R., Melo, T.M.S., Gil, R.P.F., Gil, L.F., 2007, Adsorption of heavy metal ion from aqueous single metal solution by chemically modified sugarcane bagasse, *Bio. Technol.*, 98, 1291-1297.
- Keun, Hyung, C., Woon-Hoe, K., Jeongwon, P., Jinwoo, C., Tae-Young, J., Pyung-Kyu, P., 2015, Application of Langmuir and Freundlich isotherms to predict adsorbate removal efficiency or required amount of adsorbent, *J. Indus. Eng. Chem.*, 28, 241–246.
- Lagergren, S., 1988, Zur Theorie der Sogenannten Adsorption Geloster Stoffe.Kungliga Svenska Vetenskapsakademiens, *Handlingar.*, 24, 1-39.
- Le., V.T., Dao,M.U., Le, H.S., Tran, D.L., Doan, V.D., dan Nguyen,H.T., 2019, Adsorption of Ni(II) ions by magnetic activated carbon chitosan beads prepared from spent coffe grounds, shrimps shells and green tea extract, *Envi. Technol.*, 41, 2817-2832.
- Leimkuehler, E., P., 2010, *Production, Characterization, and Applications of Activated Carbon*, Thesis, The Faculty of The Graduate School, University of Missouri, Missouri.
- Lempang, M., 2014, Pembuatan dan Kegunaan Arang Aktif, *Info Teknis EBONI.*, 11,65-80.
- Luiz C.A. Oliveira , Rachel. V.R.A. Rios , Jose D. Fabris , V. Garg , Karim Sapag, Rochel M. Lago. 2002, *Carbon.*, 40, 2177-2183.
- Modi, A., Shukla, K., Pandya, J., Parmar, K., 2012, Extraction of silver from photographic Waste, *Int. J. Emerg. Technol. Adv. Eng.*, 2 (11), 599–606.
- Moubarik, A., and Grimi, N., 2015, Valorization of olive stone and sugarcane bagasse byproducts as biosorbents for the removal of cadmium from aqueous solution, *Food. Res. Int.*, 73, 169-175.
- Muzzarelli, 1977, *Chitin*, Pergamon Press, New York.
- Ngah, W.S., Kamari, A., and Koay, Y.J., 2004, Equilibrium and Kinetics Studies of Adsorption of Copper (II) on Chitosan and Chitosan/PVA Beads, *Inter. J. Bio. Macromol.*, 34, 155–161.
- Ngaha, W.S.W., Teonga, L.C., Hanafiah, M.A.K.M., 2011, Adsorption of dyes and heavy metal ions by chitosan composites: a review, *Carbohydr. Polym.*, 83, 1446-1456.
- Nigam, P., dan Pandey,A., 2009, *Biotechnology for Agro-Industrial Residues Utilisation*, Springer Science,India.

- Nordberg, G.F., Nogawa, K., Nordberg, N., dan Friberg, L., 2007, *Handbook of the Toxicology of Metals*, 3rd edition, Elsevier, Amsterdam, 445-468.
- Nowicki, P., Pietrzak, R., Wachowska, H. 2008, Siberian anthracite as a precursor material for microporous activated carbons. *Fuel.*, 87, 2037-2040.
- Palar, H., 2004, *Pencemaran dan Toksikologi Logam Berat*, Rineka Cipta, Jakarta.
- Reddy, D.H.K., Lee, S., 2013, Application of magnetic chitosan composites for the removal of toxic metal and dyes from aqueous solutions, *Adv. Colloid. Interf. Sci.*, 201, 68-93.
- Rinaudo, M., Chitin and Chitosan: Properties And Application, 2006, *Prog. Polym. Sci.*, 31, 603-632.
- Santosa, S.J., dan Muzakky, 2002, Kinetika Adsorpsi Logam Berat (krom, tembaga dan uranium) oleh Magnetiti dalam Tanah Gambut, *Laporan Penelitian*, Yogyakarta.
- Sharififard, H., Nabavinia, M., dan Soleimani, M., 2016, Evaluation of Adsorption Efficiency of Activated Carbon/Chitosan Composite for Removal of Cr (IV) and Cd (II) from single and bi-solute dilute solution, *Adv. Envi. Technol.*, 4, 215-227.
- Soni, U., Bajpai, J., and Bajpai, A.K., 2015, Chitosan-Activated Carbon Nanocomposites as Potential Biosorbent for Removal of Nitrophenol from Aqueous Solutions, *Inter. J. Nano.*, 5(4), 53-61.
- Srivastava, V.C., Mall, I.D., dan Mishra, I.M., 2009, Competitive adsorption of cadmium(II) and nickel(II) metal ions from aqueous solution onto rice husk ash, *Chem. Eng. Process.*, 48, 370-379.
- Sugita, P., Wukisari T., Sjahriza A., dan Wahyono D. 2009. *Kitosan Sumber Biomaterial Masa Depan*, IPB Press, Bogor.
- Suhas, Carrott, P. J. M., Carrot, M. M. L. R., Singh, R., Singh, L. P., Chaudhary, M., 2017, An innovative approach to develop microporous activated carbons in oxidising atmosphere, *J. Cleaner Prod.*, 156, 549-555.
- Sutikno, Marniza, Sari, N., 2015, Pengaruh Perlakuan Awal Basa dan Hidrolisis Asam Terhadap Kadar Gula Reduksi Ampas Tebu, *Jurnal Teknologi Industri & Hasil Pertanian.*, 20(2), 65-72.
- Sutrisno, B., Rizka, N. A., Hidayat, A. S., dan Hidayat, A., 2016, Preparation and characterization of activated carbon from sugarcane bagasse by physical activation with CO₂ gas, *Mater. Sci. Eng.*, 105, 1-8.

- Swastawati, F., Wijayanti, I., dan Susanto, E., 2008, Pemanfaatan Limbah Cangkang Udang Melalui Edible Coating Untuk Mengurangi Pencemaran Lingkungan, *Jurnal Teknologi Lingkungan Universitas Trisakti.*, 4, 101-106.
- Tao, H-C., Zhang, H-R., Li, J-B., Ding, W-Y., 2015, Biomass based Activated carbon obtained from sludge and sugarcane bagasse for removing lead ion from wastewater, *Bioresour. Technol.*, 192,611–617.
- Teja,A.S., and Koh,P., 2009, Synthesis, Properties, and Applications of Magnetic Iron Oxide Nanoparticles, *Prog. Cryst. Growth Charact. of Mater.*, 55, 22-45.
- Tran, H,V., Tran, L,D., Nguyen, T,N., 2010, Preparation of chitosan/magnetite composite beads and their application for removal of Pb(II) and Ni(II) from aqueous solution, *Mater Sci Eng.*, 30, 304-310.
- Tran, VS., Ngo, HH., Guo, W., Zhang, J., Liang, S., Ton-That, C., Zhang, X., 2015, Typical low cost biosorbents for adsorptive removal of specific organic pollutants from water, *Bioresour Technol.*, 182,353–363.
- Ulisses, C., Silveira, A.T., Condomitti, G.W., Toma, S.H., Araki, K., Toma, H. E., 2014, Silver recovery using electrochemically active magnetite coated carbon particles, *Hydrometallurgy.*, 147, 241-245.
- Umaningrum, D., Santoso, U.T., Nurmasari, R., dan Yunus, R., 2010, Adsorption Kinetics of Pb(II), Cd(II) and Cr(III) on Adsorbent Produced by Protected Crosslinking of Humic Acid-Chitosan, *Indo, J. Chem.*, 10, 80-87.
- Unagolla, J. M., dan Adikary, S.U., 2015, Adsorption Characteristics of Cadmium and Lead Heavy Metals Into Locally Synthesized Chitosan Biopolymer, *Trop. Agri.Research.*, 26(2),395-401.
- Vanitha, P. D., Sudersan, K., Arun, K. S., Arumugam, P., Pandima, D.M.K., Anuradha, V., dan Gobi,N., 2018, Adsorption mechanism of chitosan, activated carbon, and magnetic chitosan activated carbon composites on to the dyes with different polarities: adsorbent optimization study, *Inter. J. Current Adv Research.*, 7(7), 14306-14312.
- Venault,A., Vachoud.,L , Pochat,c., Bouyer,D.,& Faur,C., 2008,Elaboration Of Chitosan/Activated Carbon Composites For The Removal Of Organic Micropollutants From Waters, *Envi. Technol.*, 29(12), 1285-1296.
- Weiner, E.R., 2008, *Application of Enviromental Aquatic chemistry*, a Partical guide, edisi ke 2, CRC Press, Taylor and Francis Group.

- Wu, F., Tseng, R., Juang, R., 2002, Adsorption of dyes and humic acid from water using chitosan-encapsulated activated carbon, *J.Chem. Technol Biotechnol.*, 77, 1269-1279.
- Wu, W., He, Q., Jiang, C., 2008, Magnetic Iron Oxide Nanoparticles: Synthesis and Surface Functionalization Strategies, *Nanoscales Res Lett.*, 3, 397-415.
- Zaini, M. A. A., Okayama, R., Machida, M., 2009, Adsorption of aqueous metal ions on cattle-manurecompost based activated carbons. *J. Hazard Mater.*, 170(2), 1119-1124.
- Zaku, S.G., Emmanuel, S.A., Aguzue, O.C., dan Thomas, S.A., 2011, Extraction and characterization of chitin, a functional biopolymer obtained from scales of common carp fish (*Cyprinus carpio* L.): A lesser known source, *African J. Food Sci.*, 5(8), 478- 483.
- Zou, X., Zhao, X., Ye, L., Wang Q., and Li, H., 2015, Preparation and Drug Release Behavior of pH-Responsive Bovine Serum Albumin-Loaded Chitosan Microspheres, *J. Ind. Eng. Chem.*, 21,1389-1397.
- Zhu, Y., Hu, J., dan Wang, J., 2014, Removal of Co²⁺ from Radioactive Wastewater by Polyvinyl Alcohol (PVA)/Chitosan Magnetite Composite, *Prog. Nucl. Energy.*, 71, 172-178.