

DAFTAR PUSTAKA

- Agrafioti, E., Kalderis, D., and Diamadopoulos, E., 2014, Arsenic and Chromium Removal from Water Using Biochars Derived from Rice Husk, Organic Solid Wates and Sewage Sludge, *J. Environ. Manage.*, 133, 309-314.
- Akcil, A., Erust, C., Gahan, C.S., Ozgun, M., Sahin, M., and Tuncuk, A., 2015, Precious Metal Recovey from Waste Printed Circuit Boards Using Cyanide and Non Cyanide Lixiviants, *Waste Manage.*, 1-14.
- Arsyad, M.N., 2000, *Kamus Kimia Arti an Penjelasan Istilah*, Gramedia Pustaka Utama. Jakarta.
- Atkins, P.W., 1990, *Physical Chemistry*, Oxford University Press, Oxford.
- Avena, M.J. and Koopal, L.K., 1999, Kinetics of Humic Acid Adsorption at Solid-Water Interfaces, *Environ.Sci. Technol.*, 33(16), 2739-2744.
- Baalousha, M., Motelica-Heino, M., and Coustumer, P.L., 2006, Conformation and Size of Humic Substances: Effects of Major Cation Concentration and Type, pH, Salinity, and Residence Time, *Colloids Surf.*, 272, 48-55.
- Bahri, S., Muhdarina., Nurhayati., dan Andiyani, F., 2011, Isoterma dan Termodinamika Adsorpsi Kation Cu^{2+} Fasa Berair pada Lempung Cengar Terpilair, *Jurnal Natur Indonesia*, 14(1), 7-13.
- Bear, R., 1987, *Sample Pretreatment and Separation, First Edition*, John Willey and Sons, New York.
- Bhattacharyya, K.G., and Gupta, S.S., 2007, Adsorptive Accumulation of Cd(II), Co(II), Cu(II), Pb(II), and Ni(II) from Water on Montmorillonite: Influence of Acid Activation, *J. Colloid Interf Sci.*, 310, 411-424.
- Bhattacharyya, K.G., and Gupta, S.S., 2008, Adsorption of a Few Heavy Metals on Natural and Modified Kaolinite and Montmorillonite, *Adv. Colloid Interf Sci.*, 140, 114-131.
- Chang, Y., and Chen, D., 2006, Recovery of Gold(III) Ions by a Chitosancoated Magnetic Nano Adsorbent, *Gold Bulletin*, 39 (3), 98-102.
- Chen, X., Lam, K.F., Mak, S.F., and Yeung, K.L., 2011, Precious Metal Recovery by Selective Adsorption Using Biosorbents, *J. Hazard Mater.*, 186, 902-910.
- Dewi, S.R., 2010, Aplikasi Humin dari Tanah Gambut untuk Adsorpsi Reduksi AuCl_4^- dalam Larutan, *Tesis*, Departemen Kimia FMIPA UGM, Yogyakarta.

- Fukushima, M., Nakayasu, Tanaka, S., and Nakamura, H., 1995, Chromium(III) Binding Abilities of Humic Acid, *Anal. Chem. Acta.*, 317, 195-206.
- Gaffney, J.S., Marley, N.A., and Clark, S.B., 1996, *Humic and Fulvic Acids and Organic Colloidal Materials in the Environment*, Chapter 1, American Chemical Society, Washington DC.
- Gardea-Torresdey, J.L., Tiemann, K.J., Parson, J.G., Gamez, G., Herrera, I., and Jose-Yacaman, M., 2002, XAS Investigation into the Mechanism(s) of Au(III) Binding and Reduction by Alfafa Biomass, *J. Microchem.*, 71, 193-204.
- Hamamoto, K., Kawakita, H., Ohto, K., and Inoue, K., 2009, Polymerization of Phenol Derivatives by the Reduction of Gold Ions to Gold Metal, *React. Func. Poly.*, 69, 694-697.
- Hubbard, C.R., and Mighell, A.D., 2011, JCPDS-ICDD Research Associateship (Cooperative Program with NBS/NIST), *J. Res. Natl. Inst. Stand. Technol.*, 106, 1013-1028.
- Istiningrum, R.B., 2013, Adsorpsi Selektif Au(III) Pada Hibrida Amonium Kuarter-Silika Dalam Sistem Au/Cu, *Tesis*, Departemen Kimia FMIPA UGM, Yogyakarta.
- Jehan, N., 2014, *Kandungan Berbahaya dalam E-Waste*, Yayasan Lembaga Konsumen Indonesia, Jakarta.
- Kara, A., Demirbel, E., Tekin, N., Osman, B., and Besirli, N., 2015, Magnetic Vinylphenyl Boronic Acid Microparticles of Cr(VI) Adsorption: Kinetic, Isotherm and Thermodynamic Studies, *J. Hazard Mater.*, 286, 612-623.
- Kazmi, S.A., and Qayoom, A., 2012, Effect of Temperature on Equilibrium and Thermodynamic Parameters of Cd(II) Adsorption onto Turmeric Powder, *J.Chem.Soc.Pak.*, 34 (5), 1084-1090.
- Mahdian dan Saadi, P., 2008, Pengaruh Konsentrasi dan pH Larutan Terhadap Adsorpsi Timbal(II) dan Kadmium(II) pada Biomassa Apu-apu dengan Metode Statis, *Journal of Kalimantan Scientiae*, 55-65.
- Mane, V.S., Mall, I.D., and Srivastava, V.C., 2007, Kinetic and Equilibrium Isotherm Studies for Adsorptive Removal of Brilliant Green Dye from Aqueous Solution By Rice Husk Ash, *J. Environ Manage*, 84, 390-400.
- Maruyama, T., Terashima, Y., Takeda, S., Okazaki, F., and Goto, M., 2014, Selective Adsorption and Recovery of Precious Metal Ions Using Protein-rich Biomass as Efficient Adsorbents, *Process Biochem*, 49, 850–857.

- Marwati, S., 2009, Kajian Tentang Kandungan Logam-logam Berharga Dalam Limbah Elektronik (E-Waste) dan Teknik Recoverynya Melalui Proses Daur Ulang, *Prosiding Seminar Nasional Penelitian, Pendidikan dan Penerapan FMIPA UNY*, Yogyakarta.
- Muhammad, N., Pair, J., Smith, M.D., and Wheatley, A.D., 1998, *Adsorption of heavy metal in slow sand filters. Proceedings of the 24th WEOC International Conference on Water Supply and Sanitation*, Durban, South Africa.
- Muhdarina, Mohammad, A.W., dan Muchtar, A., 2014, Potensi Adsorpsi Polutan Anorganik oleh Lempung Cengar: Kajian Isoterma dan Mekanisme Adsorpsi Batch Kation Ni(II) di Dalam Media Air, *Repository University of Riau*, Riau, 19-28.
- Ozcan, A., Ozcan, A.S., Tunali, S., Akar, T., and Kiran, I., 2005, Determination of The Equilibrium, Kinetic and Thermodynamic Parameters of Adsorption of Copper(II) Ions Onto Seeds of Capsicum Annuum, *J. Hazard Mater*, B124, 200–208.
- Parajuli, D., Adhikari, C.R., Kawakita, H., Kajiyama, K., Ohto, K., and Inoue, K., 2008, Reduction and Accumulation of Au(III) by Grape Waste: A kinetik Approach, *React. Funct. Polym*, 68, 1194-1199.
- Parajuli, D., Khunathai, K., Adhikari, C.R., Inoue, K., Ohto, K., Kawakita, H., Funaoka, M., and Hirota, K., 2009, Total Recovery of Gold, Palladium and Platinum Using Lignophenol Derivative, *Miner. Eng.*, 22, 1173-1178.
- Prasasti, D., 2011, Studi Adsorpsi-Reduksi Ion Au(III) pada Asam Humat, Asam Humat Teresterifikasi, dan Asam Humat Tereterifikasi, *Tesis*, Departemen Kimia FMIPA UGM, Yogyakarta.
- Piccolo, A., 2002, The Supramolecular Structure of Humic Substances: A novel Understanding of Humus Chemistry and Implications in Soil Science, *Adv Agron*, 75, 57-134.
- Rahmawati, A., dan Santoso, S.J., 2012, Studi Adsorpsi Logam Pb(II) dan Cd(II) pada Asam Humat dalam Medium Air, *Alchemy*, 2 (1), 46-57.
- Rahmawati, A., 2011, Pengaruh Derajat Keasaman Terhadap Adsorpsi Logam Kadnium(II) dan Timbal(II) Pada Asam Humat, *Jurnal Penelitian Sains & Teknologi*, 12 (1), 1-14.
- Rovita, E., 2013, Imobilisasi Asam Salisilat Pada Mg/Al Hydrotalcite dan Aplikasinya untuk Adsorpsi-Reduksi AuCl₄⁻, *Tesis*, Departemen Kimia FMIPA UGM, Yogyakarta.

- Schnitzer, M., dan Huang, P.M., 1997, *Interaksi Mineral Tanah dengan Organik Alami dan Mikroba*, (Terjemahan: Goenadi, D.H.), Gadjah Mada University Press, Yogyakarta.
- Spark, K.M., Wells, J.D., and Johnson, B.B., 1997, The Interaction of Humic Acid with Heavy Metals, *Aust. J. Soil Res.*, 35, 89-102.
- Stevenson, F.J., 1994, *Humus Chemistry : Genesis, Composition, and Reactions*, John Wiley & Sons, Inc., New York.
- Shaker, A.M., Komy, Z.R., Heggy, S.E.M., and El-Sayed, M.E.A., 2012, Kinetic Study for Adsorption Humic Acid on Soil Minerals, *J. Phys. Chem. A.*, 116, 10889-10896.
- Shu, J., Wang, Z., Huang, Y., Huang, N., Ren, C., and Zhang, W., 2015, Adsorption Removal of Congo Red from Aqueous Solution by Polyhedral Cu₂O Nanoparticles: Kinetics, Isotherm, Thermodynamics and Mechanism Analysis, *J. Alloy Compd.*, 633, 338-346.
- Sudiono, S., 2001, Sifat Asam-Basa Asam Humat dan Interaksinya Dengan Kromium(III) Tembaga(II) Kobalt(II) dan Nikel(II), *Tesis*, Departemen Kimia FMIPA UGM, Yogyakarta.
- Syed, S., 2012, Recovery of Gold from Secondary Sources, *Hydrometallurgy*, 115-116, 30-51.
- Usher, A., McPhail, D.C., and Brugger, J., 2009, A Spectrophotometric Study of Aqueous Au(III) Halide-Hydroxide Complexes at 25-80 °C, *Geochim. Cosmochim. Ac.*, 73, 3359-3380.
- Vijayakumar, G., Tamilarasan, R., and Dharmendirakumar, M., 2012, Adsorption Kinetic Equilibrium and Thermodynamic Studies on the Removal of Basic Dye Rhodamine-B from Aqueous Solution by the Use of Natural Adsorbent Perlite, *J. Mater. Environ. Sci.*, 3 (1), 157-170.
- Vogel, 1990, *Textbook of Macro and Semimicro Qualitative Inorganic Analysis*, Longman Group Limited, London.
- Yamashita, M., Ohasi, H., Kobayasi, Y., Okaue, Y., Kurisaki, T., Wakita, H., and Yokoyama, T., 2008, Coprecipitation of Gold(III) Complex Ions with Manganese(II) Hydroxide and Their Stoichiometric Reduction of Atomic Gold (Au(0)): Analysis by Mossbauer Spectroscopy and XPS, *J. Colloid Interf Sci.*, 319, 25-29.