



DAFTAR PUSTAKA

- Abbas, M., Kaddour, S., and Trari, M., 2014, Kinetic and Equilibrium Studies of Cobalt Adsorption on Apricot Stone Activated Carbon, *J.Ing.Eng.Chem.*, 20, 745-751.
- Akhtar, F. and Bergström, L., 2011, Colloidal Processing and Thermal Treatment of Binderless Hierarchically Porous Zeolite 13X Monolith for CO₂ Capture, *J.Am.Ceram.Soc.*, 94, 199-205.
- Álvarez-Ayuso, E., García-Sánchez, A., and Querol X., 2003, Purification of Metal Electroplating Waste Waters using Zeolites, *Water Res.*, 37, 4855-4862.
- Andrade, A.L., Souza, D.M., Pereira, M.C., José D.Z., and Domingues, 2010, pH Effect on The Synthesis of Magnetite Nanoparticles by The Chemical Reduction-Precipitation Method, *Quim. Nova*, 33, 3, 524-527.
- Anonim, 1990, *Peraturan Pemerintah No 20 tentang Pengendalian Pencemaran Air*.
- Barquist, K.N., 2009, Synthesis and Environmental Adsorption Applications of Functionalized Zeolite and Iron Oxide/Zeolite Composite, *Thesis*, University of Iowa.
- Barquist, K. and Larsen, S.C., 2010, Chromate Adsorption on Bifunctional, Magnetic Zeolite Composites, *Micropore. Mesopore. Mater.*, 130, 197-202.
- Bourlinos, A., Zboril, R., and Petridis, D., 2002, A Simple Route Toward Magnetically Modified Zeolites, *Micropore. Mesopore. Mater.*, 58, 155-162.
- Breck, D.W., 1974, *Zeolite Molecular Sieves*, John Wiley and Sons, New York.
- Cheetam, D.A., 1992, *Solid State Compound*, Oxford University Press, 234-237.
- Cotton, F.A., and Wilkinson, G., 1976, *Basic Inorganic Chemistry*, 1st ed., 462-463, John Wiley and Sonc, Inc., New York.
- Darmono, 1995, *Logam dalam Sistem Biologi Makhluk Hidup*, UI Press, Jakarta.
- Day, J.R.A., dan Underwood, A.L., 1998, *Analisis Kimia Kuantitatif*, Erlangga, Jakarta.
- Doula, A., Townsend, R.H.D, and Owocki, S., 2006, Centrifugal Breakout of Magnetically Confined Line-Driven Stellar Winds, *ApJL*, 640, L191-L194.
- Faghihian, H., Moayed, M., Firooz, A., and Irvani, M., 2013, Synthesis of a Novel Magnetic Zeolite Nanocomposite for Removal of Cs⁺ and Sr²⁺ from Aqueous Solution: Kinetic, Equilibrium, and Thermodynamic Studies, *J. Colloid and Interface Sci.*, 393, 445-451.
- Guo, Z., Li, Y., Zhang, S., Niu, H., Chen, Z., and Xu, J., 2011, Enhanced Sorption of Radiocobalt from Water by Bi(III) Modified Monmorilonite: A Novel Adsorbent, *J. Hazard. Mater.*, 192, 168-175.
- Hamdan, H., 1992, *Introduction to zeolite: Synthesis, Characterization, and Modification*, Universiti Teknologi Malaysia.
- Herald, E., Hisyam, S.W., dan Sulistiyono, 2003, Characterization and Activation of Natural Zeolite from Ponorogo, *Indo. J. Chem.*, 3(2), 91-97.



- Ho, Y.S., 2006, Review of Second-Order Models for Adsorption Systems, *J. Hazard. Mater.*, B136, 681-689.
- Kartini, I., Sutarno, dan Arryanto, Y., 1994, Kajian Pengambilan Cr(III) dengan Menggunakan Koagulan dan Kombinasi Koagulan-Flokulan, *Journal Nusantara Kimia*, 94.11.1-A, 39-54.
- Khopkar, S.M., 1990, *Konsep dasar Kimia Analitik*, UI Press, Jakarta.
- Kim, D.K., Mikhaylova, M., Zhang, Y., and Muhammed, M., 2003, Protective Coating of Superparamagnetic Iron Oxide Nanoparticles, *Chem. Mater*, 15, 1617-1627.
- Kok, T., 2009, Penentuan Model dan Kapasitas Adsorpsi Ion Kadmium Oleh Zeolit Alam Hasil Kalsinasi, *Prosiding Seminar Nasional Kimia*, Surabaya.
- Lagergren, S., 1989, Zur Theorie der Sogenannten Adsorption Geloster Stoffe, *Kungliga Svenska Vetenskapsakademiens, Handlingar*, 23, 1-39.
- Lestari, D.Y., 2010, Kajian Modifikasi dan Karakterisasi Zeolit Alam dari Berbagai Negara, *Prosiding Seminar Nasional*, Universitas Negeri Yogyakarta, Yogyakarta.
- Liu, H., Peng, S., Shu, L., Chen, T., Bao, T., and Frost, R.L., 2013, Magnetic Zeolite NaA: Synthesis, Characterization Based on Metakaolin and Its Application for The Removal of Cu^{2+} , Pb^{2+} , *Chemosphere*, 91, 1539-1546.
- Ma, M., Zhang, Y., Yu, W., YingShen, H., QianZhang, H., and Gu, N., 2003, Preparation and Characterization of Magnetite Nanoparticle Coated by Aminosilane, *Colloid Surface*, 219-226.
- Mockovčiaková, A., Orolínová, Z., Matik, M., Hudec, P., and Kmecová, E., 2006, Iron Oxide Contribution to The Modification of Natural Zeolite, *Acta Montanistica Slovaca Ročník 11, mimoriadne číslo 1*, 353-357.
- Mockovčiaková, A., Matik, M., Orolínová, Z., Hudec, P., and Kmecová, E., 2008, Structural Characteristic of Modified Natural Zeolite, *J. Porous. Mater.*, 15, 559-564.
- Munandar, A., Krisdiyanto, D., Khamidinal, dan Artsanti, P., 2014, Adsorpsi Logam Pb dan Fe dengan Zeolit Alam Teraktivasi Asam Sulfat, *Seminar Nasional*, Universitas Negeri Surakarta, Surakarta.
- Naumov, S., 2009, Hystheresis Phenomena in Mesoporous Materials, *Disertasi*, Universitas Leipzig.
- Navratil, I.D., 2004, Adsorption and Nanoscale Magnetit Separation of Heavy Metal from Water, *Water.Sci.Tecnol.*, 47(1), 29-32.
- Oliveira, L.C.A., Petkowicz, D.I., Smaniotto, A., and Petgher, S.B.C., 2004, Magnetic Zeolites: A New Adsorbent for Removal of Metallic Contaminants from Water, *Water Research*, 38, 3699-3704.
- Patricha, I.R., 2014, Efek Magnetisasi Zeolit Alam Terhadap Kristalinitas, Sifat Pori dan Kinerjanya Sebagai Adsorben Pb(II), *Skripsi*, FMIPA, Universitas Gadjah Mada, Yogyakarta.
- Pertiwi, C., 2007, Sintesis Magnetit (Fe_3O_4) dengan Metode Kopresipitasi serta Aplikasinya untuk Adsorpsi Cd(II), *Skripsi*, FMIPA, Universitas Gadjah Mada, Yogyakarta.



- Petcharoen, A. and Sivirat, A., 2012, Synthesis and Characterization of Magnetite Nanoparticles Via The Chemical Co-Precipitation Method, *Mater. Sci. Eng. B.*, 177, 421-427.
- Pode, V., Popovici, E., Pode, R., and Georgescu, V., 2007, Magnetic Properties of an Adsorben Based on Modified Natural Zeolite, *Rev.Roum.Chim.*, 512(10), 983-989.
- Qu, S.C., 1999, Magnetite Nanoparticles Prepared by Precipitation from Partially Reduce Ferric Chloride Aqueous Solution, *J. Colloid and Interface Sci.*, 215, 190-192.
- Riyadi,A., 2004, Pengaruh Perlakuan Asam Klorida Terhadap Karakter Zeolit Alam Wonosari dan Uji Aktivitasnya Katalitik untuk Perengkahan n-Heksana, *Skripsi*, FMIPA, Universitas Gadjah Mada, Yogyakarta.
- Rofiana, K., 2012, Sintesis Komposit Zeolit-Magnetit dan Aplikasinya Sebagai Adsorben Magnetik Cr(III), *Skripsi*, FMIPA, Universitas Gadjah Mada, Yogyakarta.
- Santosa, S.J. dan Muzakky, 2002, *Kinetika Adsorpsi Logam Berat (Krom, Tembaga dan Uranium) oleh Senyawa Humat dalam Tanah Gambut*, Laporan Penelitian Dasar Tahun Anggaran 2002, Yogyakarta.
- Sartika, D., 2014, Studi Penurunan Kadar Logam Fe dan Co pada Limbah Cair dengan Sistem Purifikasi Berbasis Adsorben Nanopartikel Magnetik Fe₃O₄, *Jurnal Fisika Indonesia*, 52, Vol XVIII, 16-19.
- Schwertmann, V. and Cornell, R.M., 2003, Iron Oxide in The Laboratory Preparation and Characterization, *VCH Publisher, Inc.*, New York.
- Setyawan, D. dan Handoko, P., 2003, Aktivitas Katalis Cr/Zeorlit dalam Reaksi Konversi Katalitik Fenol dan Metil Isobutil Keton, *Jurnal ILMU DASAR*, 4, 2, 70-76.
- Sing, K.S., Everett, D.H., Haul, R., Moscou, L., Pierotti, R.A., Rouquerol, J., and Siemieniewska, T., 1985, Reporting Physisorption Data for Gas/ Solit Systems with Special Reference to The Determination of Surface Area and Porosity, *J. Pure Appl. Chem.*, 57, 603-619.
- Stumm, W. dan Morgan, J.J., 1981, *Aquatic Chemistry*, John Wiley and Sons, Inc., New York.
- Suroto, T., 2004, Kajian Pengaruh Konsentrasi Asam Klorida Terhadap Distribusi Ukuran Pori Zeolit Alam dan Uji Kemampuan Sebagai Adsorben untuk Kemurnian Minyak Daun Cengkeh, *Skripsi*, FMIPA, Universitas Gadjah Mada, Yogyakarta.
- Sutarti, M. dan Rachmawati, M., 1994, *Zeolit: Tinjauan Literatur*, Pusat Dokumentasi dan Informasi LIPI, Jakarta.
- Suyanta dan Kartini, I., 1999, Kajian Pengaruh pH dalam Pembuatan Sol Magnetit Adsorben Logam, Laporan Penelitian M.A.K. 5250 Anggaran Rutin UGM, Yogyakarta.
- Szabó, T., Bakandritsos, A., Tzitzios, V., Papp, S., Kőrösi, L., Galbác, G., Musabekov, K., Balatova, D., Petridis, D., and Dékány, I., 2007, Magnetic Iron Oxide/ Clay Composites: Effect of The Layer Silicate Support on The Microstructure and Phase Formation of Magnetic Nanoparticles, *Nanotechnology*, 18, 285602-285610.



- Trisunaryanti, W., Bambang, S., dan Nazarudin, 2000, Determination of an Indonesian Natural Zeolite by Acid and Hydrothermal, *Prosiding Seminar Nasional*, FMIPA, Universitas Gadjah Mada, Yogyakarta.
- Vaclavikova, M., Jagabsky, S., and Hredzak, S., 2003, *Magnetit Nanoscales Particles for Removal of Heavy Metal Ion*, [http://drexel.edu/coe/research/conferences/ NATO ASI 2003/ manuscripts/ 5.2.vaclavikova.pdf](http://drexel.edu/coe/research/conferences/NATO_ASI_2003/manuscripts/5.2.vaclavikova.pdf).