DAFTAR PUSTAKA

Abdullah, M., 2008, Sintesis Nanomaterial, *J. Nanosains Nanoteknol.*, 1(2), 1-25.

Ahamed, M., Alhadlaq, H.A., Khan, M.A.M., Karuppiah, P., and Al-dhabi, N.A. 2014. Synthesis, Characterization , and Antimicrobial Activity of Copper Oxide Nanoparticles, *J. Nanomater.*, 2014, 1-4

Arif, M.D. dan Anwar, M., 2020, Pengaruh Konsentrasi Awal Larutan Terhadap Penyerapan Ion Logam Cr^{6+} Menggunakan Biomassa Alga Hijau Mougeotia Sp yang Diimobilisasi Dengan Natrium Silika, *Periodic*, 9(2), 50-54.

Benson, T., 2001, *Microbiological Applications Laboratory Manual in General Microbiology*, 8th Ed., The McGraw-Hill, New York.

Berger, J., Reist, M., Mayer, J.M., Felt, O., Peppas, N.A., and Gurny, R., 2004, Structure and Interactions in Covalently and Ionically Crosslinked Chitosan Hydrogels for Biomedical Applications, *Eur. J. Pharm. Biopharm.*, 57(1), 19-34.

Bhumkar, D.R., and Pokharkar, V., 2006, Studies on Effect of pH on Crosslinking of Chitosan with Sodium Tripolyphosphate, *AAPS PharmSciTech*, 7(2), 138-143.

Bishnoi, N.R., Bajaj, M., Sharma, N., and Gupta, A., 2004, Adsorption on Activated Rice Husk Carbon and Activated Alumina, *Bioresour. Technol.*, 91(3), 305-307.

Canra, M., Fadli, A., dan Komalasari, 2015, Kinetika Adsorpsi Ion Logam Cu^{2+} Menggunakan Tricalciumphosphate sebagai Adsorben dengan Variasi Kecepatan Pengadukan dan Temperatur, *JOM FTEKNIK*, 2(2), 1-6.

Chen, S., Zhang, C., Yue, Q., Li, Y. and Li, Y., 2010, Equilibrium and Kinetic Studies of Methyl Oranye and Metil Violet Adsorption on Activated Carbon Derived from Phragmites australis, *Desalination*, 252, 149-156.

Dabrowski, A., 2001, Adsorption-From Theory to Practice, *Adv. Colloid Interface Sci.*, 93, 135-224

Dompeipen, E. J., 2017, Isolation and Identification of Chitin and Chitosan From Windu Shrimp (*Penaeus monodon*) with Infrared Spertroscopy. *Majalah BIAM*, 13(01), 31-41.

Douglas, KL. and Tabrizian, M., 2005, Effect of Experimental Parameters on the Formation of Alginate–Chitosan Nanoparticles and Evaluation of Their Potential Application as DNA Carrier, *J. Biomater. Sci*., 16(1) 43–56.

Dubey, R., Bajpai, J., and Bajpai A. K., 2016, Chitosan-Alginate Nanoparticles (CANPs) as Potential Nanosorbent for Removal of Hg(II) Ions, *Environ. Nanotechnol. Monit. Manage.*, 6, 32-44.

Dubinin, M.M. and Radushkevich, L.V., 1947, The Equation of the Characteristic Curve of Activated Charcoal: Proceedings of the Academy of Sciences, *Physical Chemistry Section*, 55, 331.

Erhayem, M. and Sohn, M., 2015, Effect of Humic Acid Source on Humic Acid Adsorption onto Titanium Dioxide Nanoparticles, *Sci. Total Environ.*, 470-471, 92-98.

Eriningsih, R., Marlina, R., Mutia, T., Sana, A.W., dan Titis, A., 2014, Eksplorasi Kandungan Pigmen dan Alginat dari Rumput Laut Coklat untuk Proses Pewarnaan Kain Suteta, *Arena Tekstil*, 29(2), 73-80.

Escudero, C., Gabaldon, C., Marzal, P., and Villaescusa, I., 2008, Effect of EDTA on Divalent Metal Adsorption onto Grape Stalk and Exhausted Coffee Wastes, *J. Hazard. Mater.*, 152, 476–485.

Fang, Y., Al-Assaf, S., Phillips, G.O., Nishinari, K., Funami, T., Williams, P.A., and Li, L., 2007, Multiple Steps and Critical Behaviors of the Binding of Calcium to Alginate, *J. Phys. Chem. B.*, 111(10), 2456–2462.

Fatmawati, R.Y., Wijaya, K., dan Tahir, I., 2018, Material Cuo/Bentonit Sebagai Bahan Antibakteri *Escherichia Coli*, *Berkala MIPA*, 25(3), 216-223

Fu, S., Thacker, A., Sperger, D.M., Boni, R.L., Buckner, I.S., Velankar, S., Munson, E.J., and Block, L.H., 2011, Relevance of Rheological Properties of Sodium Alginate in Solution to Calcium Alginate Gel Properties, *AAPS PharmSciTech*, 12(2), 453-460.

Gandhi, M.R., Kousalya, G.N., Viswanathan, N., and Meenakshi, S., 2011, Sorption Behaviour of Copper on Chemically Modified Chitosan Beads from Aqueous Solution, *Carbohydr. Polym.*, 83(3), 1082-1087.

Gearge, Z. K. and Eleni, A. D., 2013, Mercury(II) Removal with Modified Magnetic Chitosan Adsorbents, *Molecules*, 18(6), 6193-6214.

Grass, G., Rensing, C., and Solioz, M., 2011, Metallic Copper as an Antimicrobial Surface, *Appl. Environ. Microbiol*., 77, 1541–1547.

Gunay, A., Arslankaya, E., and Tosun, I., 2007, Lead Removal from Aqueous Solution by Natural and Pretreated Clinoptilolite: Adsorption Equilibrium and Kinetics, *J. Hazard. Mater*, 146, 362–371.

Guo, L., Sun, C., Li, G. and Liu, C., 2009, Thermodynamics and Kinetics of Zn (II) Adsorption on Crosslinked Starch Phosphate, *J. Hazard. Mater*., 161, 510-515.

Gupta, A.I., 2013, Utilization of Bagasse Fly Ash (A Sugar Indutry Waste) for the Removal of Copper and Zink from Wastewater, *Sep. Purif. Technol*, 18, 131-140.

Gyliene, O., Inga R., Rima, T. and Ona, N., 2003, Chemical Composition and Sorption Properties of Chitosan Produced from Fly Larva Shells, *Chemija (Vilnius)*, 14(3), 121-127.

Gupta, V.K. and Karar, P.K., 2011, Optimization of Process Variables for the Preparation of Chitosan-Alginate Nanoparticles, *Int. J. Pharm. Pharm. Sci.*, 3, 109-116.

Harumi, M., Shaleh, F., Sudiono, S., Triyono, Studi Kinetika Adsorpsi Ion Au(III) Menggunakan Kulit Buah Manggis (Garcinia mangostana L.), *Jurnal PRAXIS*, 2(2), 148-154.

Helmiyati, A.F. dan Nurrahman, 2010, Pengaruh Konsentrasi Tawas Terhadap Pertumbuhan Bakteri Gram Positif dan Negatif, *J. Pangan dan Gizi*, 1(1), 1-6.

Hermanto, D., Mudasir, Siswanta, D., dan Kuswandi, B., 2019, Synthesis of Alginate-Chitosan Polyelectrolyte Complex (PEC) Membrane and Its Physical-Mechanical Properties, *J. Kim. Sains. Apl.*, 22(1), 11-16.

Ho, Y.S., 2006, Review of Second order Models for Adsorption System, *J. Hazard. Mater*., 36, 681-689.

Ho, Y. S., Porter, J. F., McKay, G., 2002. Equilibrium Isotherm Studies for the Sorption of Divalent Metal Ions onto Peat: Copper, Nickel and Lead Single Component Systems, *Wat. Air And Soil Poll.*, 141, 1-33.

Holle, R.B., Wuntu, A.D. dan Sangi, M.S., 2013, Kinetika Adsorpsi Gas Benzena pada Karbon Aktif Tempurung Kelapa, *Jurnal MIPA UNSRAT Online*, 2(2), 100-104.

Hossain, M.A., Ngo, H.H., Guo, W.S., and Nguyen, T.V., 2012, Palm Oil Fruit Shells as Biosorbent for Copper Removal from Water and Wastewater: Experiments and Sorption Models, *Bioresour. Technol*., 113, 97–101.

Huang, K.S., Sheu, Y.R., and Chao, I.C., 2009, Preparation and Properties of Nanochitosan. *Plast. Technol. Eng.*, 48, 1–5.

Ilmi, M.M., 2018, Studi Adsorpsi Zat Warna Auramin Menggunakan ZSM-5 yang Disintesis dari Kaolin Bangka tanpa Templat Organik, *Skripsi*, Departemen Kimia Fakultas Ilmu Alam Institut Teknologi Sepuluh Nopember, Surabaya

Irawati, D.A., Hamzah, B., dan Nurdin, 2016, Pengaruh Ion Logam Cu(II) terhadap Persen Ekstraksi Ion Pb(II) Menggunakan Teknik Emulsi Membran Cair. *J. Akad. Kim.*, 5, 172–177

Irnawati, D., Agustiono, P., dan Wardhani, E.H., 2010, Pengaruh Konsentrasi Cu dalam Cu-Zeolit terhadap Daya Antibakteri pada *Streptococcus mutans*, *Jurnal Zeolit Indonesia*, 9(2), 47-53.

Isnanto, J., Koestiarti, T., dan Sunyatno, 2014, Pelet-Tanin Sebagai Adsorben Ion Pb^{2+}, *UNESA Journal of Chemistry*, 3(2), 18-25

Jawetz., Melnick., dan Adelberg, 2007, *Mikrobiologi Kedokteran*, Edisi 23, EGC, Jakarta.

Kaban, J., Bangun, H., dan Dawolo, A.K., 2006, Pembuatan Membran Kompleks Polielektrolit Alginat Kitosan, *Jurnal Sains Kimia*, 10(1), 10– 16.

Kedang, Y.I., 2017, Fabrikasi Membran Komposit Berbasis Kitosan/Asam Sulfosuksinat Dengan Filler Nanomontmorillonit, *Tesis*, Institut Teknologi Sepuluh Nopember, Surabaya.

Koukaras E.N., Papadimitriou, A.S., Bikiaris, D.N., and Froudakis, G.E., 2012, Insight on the Formation of Chitosan Nanoparticles through Ionotropic Gelation with Tripolyphosphate, *Mol. Pharmaceutics*, 9, 2856–2862.

Khanifa, L.N., Mulyatun, and Suryandari, E.T., 2019, Uji Kapasitas Adsorpsi Ion Logam Cu^{2+} Menggunakan Hidrochar Eichhornia Crassipes Termodifikasi H_2O_2, *Walisongo Journal of Chemistry*, 2(2), 64-79.

Kulig, D., Zimoch-Korzycka, A., Jarmoluk, A., and Marycz, K., 2016, Study on Alginate-Chitosan Complex Formed with Different Polymers Ratio, *Polymers*, 8(5), 167

Kumala S., Agustina E., dan Wahyudi P., 2007, Uji Aktifitas Antimikroba Metabolit Sekunder kapang Endofit Tanaman trengguli, *Jurnal Bahan alam Indonesia*, 6(2), 46-48.

Kurniawan, E., 2012, *Preparasi dan Karakterisasi Nanopartikel Sambung Silang Kitosan-Natrium Tripolifosfat dalam Gel Verapamil Hidroklorida*, UI, Jakarta.

Kusmiyati dan Agustini, N.W.S., 2006, Uji Aktifitas Senyawa Antibakteri dari *Mikroalga Porphyridium cruentum*, Biodiversitas, 8(1), 48-53.

Li, B., Yu, S., Hwang, J., and Shi, S., 2002, Antibacterial Vermiculite Nano-Material, *J. Miner. Mater. Charact. Eng.*, 1, 61-68.

Li, S., He, M., Li, Z., Li, D., and Pan, Z., 2017, Removal of Humic Acid from Aqueous Solution by Magnetic Multi-Walled Carbon Nanotubes Decorated with Calcium, *J. Mol. Liq*., 230, 520-528.

Loquercio, A., Castell-Perez, E., Gomes, C., and Moreira, R.G., 2015, Preparation of Chitosan-Alginate Nanoparticles for Trans-cinnamaldehyde Entrapment, *J. Food Sci*., 80(10), N2305- N2315.

Maharmani, F.W., dan Sumarni, W., 2003, Kajian Termodinamika Penyerapan Zat Warna Indikator Metil Oranye (MO) dalam Larutan Air oleh Adsorben Kitosan, *JSKA*, 2, 6, 1-19.

Mahmood, Z., Amin, A., Zafar, U., Amir, R. M., Hafeez, I., and Akram, A., 2015, Adsorption Studies of Cadmium Ions on Alginate–Calcium Carbonate Composite Beads, *Appl. Water Sci.*, 7(2), 1–7.

Madigan, M. T., Martinko, J. M., and Parker, J., 2000, *Brock Biology of Microorganisms*, 9th Ed., Prentice-Hall, London.

Mohanraj, V. J. and Chen, Y., 2006, Nanoparticles. Nigeria: Tropical, J. *Pharm Res*, 561-573.

Monier, M., Kenawy, I.M., and Hashem, M.A., 2014, Synthesis and Characterization of Selective Thiourea Modified Hg(II) Ion-Imprinted Cellulosic Cotton Fibers, *Carbohydr. Polym.*, 106 , 49–59.

Mugiyono, H., 2016, Kompetisi Adsorpsi Logam Berat Kadmium (Cd^{2+}) dan Tembaga (Cu^{2+}) dalam Larutan Biner Menggunakan Adsorben Batang Jagung (Zea Mays), *Skripsi*, Universitas Sumatera Utara, Medan.

Najjar, R., 2012, Microemulsions: A Brief Introduction, *Introd. Prop. Appl.*, 3-30.

Navarro, R., Guzman, J., Saucedo, I., Revilla, J. and Guibal., 2003, Recovery of Metal Ions by Chitosan: Sorption Mechanism and Influence of Metal Speciation, *Macromol. Biosci*., 3, 552-561.

Ngah, W.S.W., and Fatinathan, S., 2010, Adsorption Characterization of Pb(II) and Cu(II) Ions Onto Chitosan-tripolyphosphate Beads: Kinetic, Equilibrium and Thermodynamic Studies, *J. Enviro. Manag*., 91(4), 958-969.

Nikaido, H., 2003, Molecular Basis of Bacterial Outer Membrane Permeability Revisited, *Microbial Mol. Biol. Rev*., 67(4), 593-656.

Nolte, WA., 1982, *Oral microbiology*, 4th Ed., The CV Mosby Co., St. Louis, 68-75, 287, 302-305, 523-532.

Pacho, M. N., Manzano, V. E., and D'accorso, N. B., 2019, Natural Polysaccharides in Drug Delivery and Biomedical Applications: Synthesis of Micro- and Nanoparticles of Alginate and Chitosan for Controlled Release of Drugs, *Elsevier*, 363-398.

Pavia, D.L., Lampman, G.M., Kriz, G.S., and Vyvyan, J.A., 2001, *Introduction to Spectroscopy*, 4th Ed., Bellingham, Washington.

Pelczar, M.J. dan Chan, E.C.S., 2008. *Dasar-Dasar Mikrobiologi Jilid I*, UI Press, Jakarta.

Piccin, J.S., Dotto, G.L., and Pinto, L.A.A., 2011, Adsorption isotherms and thermochemical data of FDandC RED N°40 Binding by chitosan, *Brazilian J. Chem. Eng.*, 28(2), 295–304

Plazinski, W., Rudzinski W., and Plazinski A., 2009, Theoritcal Models of Sorption Kinetics Including a Surface Reaction Mechenism: a Review, *Adv Colloid Interface Sci*., 152(1-2), 5-8.

Polo, M.S., and Utrilla, J.R., 2003, Effect of the Ozone-Carbon Reaction on the Catalytic Activity of Activated Carbon During the Degradation of 1,3,6 Naphthalenetrisulphonic Acid with Ozone, *Carbon*, 41, 303-307.

Prayoga, E., 2013, Perbandingan Efek Ekstrak Daun Sirih (Piper Betle L.) dengan Metode Difusi Disk dan Sumuran Terhadap Pertumbuhan Bakteri *Staphylococcus aureus*, *Jurnal Analis Farmasi*, 1(4), 238-243.

Priya, J. H., John, R., Alex, A., and Anoop, K.R., 2014, Smart polymers for the controlled delivery of drugs e a concise overview, *Acta Pharm Sin B*, 4(2), 120-127.

Rao, J. and McClements, D.J., 2012, Food-Grade Microemulsions and Nanoemulsions: Role of Oil Phase Composition on Formation and Stability, *Food Hydrocoll.*, 29, 326-334.

Rasenack, N. and Muller, B.W., 2004, Micron-Size Drug Particles: Common and Novel Micronization Techniques, *Pharmaceutical Development and Technology*, 9(1), 1–13.

Ratnasari, N., Kusumawati, N., dan Kuswardhani, I., 2014, Pengaruh Konsentrasi Natrium Alginat sebagai Penjerat Sel *Lactobacillus Acidophilus Fncc* 0051 dan Lama Penyimpanan terhadap Jumlah Sel yang Terlepas dan Karakter Carrier, *Jurnal Teknologi Pangan dan Gizi*, 13(2), 81-86

Reyra, A.S., Daud, S., dan Yenti, S.R., 2017, Pengaruh Massa dan Ukuran Partikel Adsorben Daun Nanas Terhadap Efisiensi Penyisihan Fe Pada Air Gambut, *Jom FTEKNIK*, 4(2), 1-9.

Rinaudo, M., 2006, Chitin and Chitosan: Properties and Applications, *Prog. Polym. Sci.*, 31, 603–632.

Rodrigues, J.R., and Lagoa, R., 2006, Copper Ions Binding in Cu-Alginate Gelation, *J. Carbohydr. Chem*., 25, 219-232.

Rowe, C.R., Sheskey, P.J., and Quinn, M.E., 2009, *Handbook of Pharmaceutical Excipients*, 6th Ed., Pharmaceutical Press, Washington.

Sahoo, T.R. and Prelot, B., 2020, Adsorption processes for the removal of contaminants from wastewater,. In, *Nanomaterials for the Detection and Removal of Wastewater Pollutants*, Elsevier, 161–222.

Sampaio, C. G., Lucas, S. F., Herbert, S. M., Lilian, M.U. D., Queiroz, D. C., Araújo, R. S., Becker, H., de Souza, J. R.R., Ricardo, N.M.P.S., and Trevisan, M.T.S., 2015, Chitosan/mangiferin Particles for Cr(VI) Reduction and Removal, *Int. J. Biol. Macromolec*, 78, 273–279.

Sarmento, B., Ribeiro, A. J., Veiga, F., Ferreira, D.C., and Neufeld, R.J., 2007, Insulinloaded nanoparticles are prepared by alginate ionotropic pre-gelation followed by chitosan polyelectrolyte complexation, *J. Nanosci. Nanotechnol*., 7, 2833–2841.

Savage, N. and Diallo, M. S., 2005, Nanomaterials and Water Purification: Opportunities and Challenges, *J. Nanopart. Res.*, 7, 331–342.

Scherrer, R. and Gerhardt, P., 1971, Molecular Sieving by the Bacillummegaterium Cell Wall and Protoplast, *J. Bacteriol. Res.*, 107(3), 718-735.

Septiani, Dewi, E.N., dan Wijayanti, I., 2017, Aktivitas Antibakteri Ekstrak Lamun (*Cymodocea rotundata*) Terhadap Bakteri *Staphylococcus Aureus* dan *Escherichia Coli*, Indones. Fish. Res. J., 13(1), 1-6.

Shofiyani, A., Santosa, S.J., dan Noegrohati, S., 2016, Peningkatan Laju Adsorpsi Cu(II) pada Komposit Kitosan Tercetak Ion-Biomassa Chlorella, *Orbital*, 1(1), 1-9.

Shokry, A., Tahan, A. El, Ibrahim, H., Soliman, M., and Ebrahim, S., 2019, Polyaniline/Akaganéite Superparamagnetic Nanocomposite for Cadmium Uptake from Polluted Water, *Desalin. Water Treat*., 171, 205–215.

Slavin, Y.N., Asnis, J., Hafeli, U.O. and Bach, H., 2017, Metal Nanoparticles : Understanding The Mechanism Behind Antibacterial Activity, *J. Nanobiotechnol*, 15(65), 1-20.

Smetana, A. B., Klabunde, K. J., Marchin, G. R., and Sorensen, C. M., 2008, Biocidal Activity of Nanocrystalline Silver Powders and Particles, *Langmuir*, 24, 7457–64.

Strahl, E.D., Dobson, W.E., and Lundie, L.L., 2002, Isolation and Screening of Brittlestar-Associated Bacteria for Antibacterial Activity, *Current Microbiology*, 44(6), 450–459.

Sawyer, C.N., McCarty, P.L., and Parkin, G.F., 2003, *Chemistry for Environmental and Engineering and Science*, McGraw-Hill, New York.

Tantowidjojo, V.R., Roosdiana, A., dan Prasetyawan, S., 2013, Optimasi Amobilisasi Pektinase dari Bacillus Subtilis Menggunakan Kitosan-Natrium Tripolifosfat, *J. Il .Kim. Univ. Braw*., 1(1), 91-97.

Tarapitakcheevin, P., Weerayutsil, P., and Khuanmar, K., 2013, Adsorption of Acid Dye on Activated Carbon Prepared from Water Hyacinth by Sodium Chloride Activation, *GMSARN International Journal*, 7, 83-90.

Tchobanoglous, G., Burton, F., and Stensel, H., 2003, *Wastewater Engineering: Treatment and Reuse*, 4th Ed., McGraw-Hill Companies, New York.

Tiwari, A., Dewangana, T., and Bajpai, A.K., 2008, Removal of Toxic As(V) Ions by Adsorption onto Alginate and Carboxymethyl Cellulose Beads, *J. Chinese Chem. Soc.*, 55(5), 952–961.

Tortora, G.J., Funke, B.R, and Case, C.L., 2010, *Microbiology: an Introduction*, 10th Ed., Peasrson Education Inc., San Francisco.

Vakili, M., Raffatullah, M., Salamatinia, B., Abdullah, A. Z., Ibrahim, M. H., Tan, K. B., Gholami, Z., and Amouzgar, P., 2014, Aplication of Chitosan and Its Derivatives as Adsorbents for Dye Removal from Water and Wastewater: A Review, *Carbohyd. Polym*., 113, 115-130.

Velde, K.V., and Kiekens, 2004, Structure analysis andDegree of substitution Chitin, Chitosan and Dibutyrylchitin by FTIR Spectroscopy and Solid State 13C NMR, *Carbohydr Polym*, 58, 409-416.

Vincent, M., Hartemann, P., and Engels-Deutsch, M., 2016, Antimicrobial Applications of Copper, *Int. J. Hyg. Environ. Health*, 10-26.

Wahyono, D., 2006, Optimalisasi Sintesis dan Kajian Adsorpsi Gel Kitosan-Alginat terhadap Ion Cu(II), *Skripsi*, Institut Pertanian Bogor, Bogor.

Wardiyati, S., Fisli, A., dan Ridwan, Penyerapan Logam Ni dalam Larutan oleh Nanokomposit Fe_3O_4-Karbon Aktif, *Jurnal Sains Materi Indonesia*, 12(3), 224 – 228.

Wogo, H.E., Nama, M.I.B., and Ola A.R.B., 2017, Antibacterial Plastic Made From the Composite of Silica Immobilized with Variation of EDTA-Cu And Chitosan, *J. Phys.: Conf. Ser*., (1), 012001.

Wu, F.C., Tseng, R.L., and Juang, R.S, 2001, Kinetic Modeling of Liquid-Phase Adsorption of Reactive Dyes and Metal Ions on Chitosan, *Wat. Res*., 35, 613-618

Yadav, S.K. and Dixit, A.K., 2016, Efficient Removal of Cr (VI) from Aqueous Solution onto Palm Trunk Charcoal: Kinetic and Equilibrium Studies, *Chem Sci. J.* , 7(1), 2150-3494.

Yanti, I., Santosa, S.J., dan Kartini, I., 2016, Kinetics Study of Au(III) Adsorption on Gallic Acid Intercalated Mg/Al-Hydrotalcite, *Eksakta : Jurnal Imu-Ilmu MIPA*, 16(1), 27-34.

Yao, Y., Xu, F., Chen, M., Xu, Z., ans Zhu, Z., 2010, Adsorption Behavior of Methylene Blue on Carbon Nanotubes, *Bioresour. Technol*., 101, 3040–3046

Zakaria, A., Rohaeti, E., Batubara, I., Sutisna, dan Purwamargapratala, Y., 2012, Adsorpsi Cu(II) Menggunakan Zeolit Sintetis dari Abu Terbang Batu Bara, *Prosiding Pertemuan Ilmiah Ilmu Pengetahuan dan Teknologi Bahan*, Serpong: 3 Oktober 2012, 190-194.

Zhou, L., Wang,Y., Liu, Z., and Huang, Q., 2009, Characteristics of Equilibrium, Kinetics Studies for Adsorption of Hg(II), Cu(II), and Ni(II) Ions by Thiourea-Modified Magnetic Chitosan Microspheres, *J. Hazard. Mater*., 161, 995–1002.