

DAFTAR PUSTAKA

- Agnestisia, R., 2017, Sintesis dan Karakterisasi Magnetit (Fe_3O_4) serta Aplikasinya sebagai Adsorben Methylene Blue, *Jurnal Sains dan Terapan Kimia*, 11, 61–70.
- Ahmad, M., Ahmed, S., Swarni, B.L., and Ikram, S., 2015, Adsorption of Heavy Metal Ions: Role of Chitosan and Cellulose for Water Treatment, *Int. J. Of Pharm.*, 2, 280–289.
- Ahmed, M., Mashkoo, F., dan Nasar, A., 2020, Development, Characterization, and Utilization Of Magnetized Orange Peel Waste as A Novel Adsorbent For The Confiscation Of Crystal Violet Dye From Aqueous Solution, *Groundw. Sustain. Dev.*, 10, 100322.
- Alexander, J.W., 2009, History of the Medical Use of Silver, *Surg. Infect*, 10, 289–292.
- Al-Ghouti, M.A. and Da'ana, D.A., 2020, Guidelines for the Use and Interpretation of Adsorption Isotherm Models: A Review, *J. Hazard. Mater.*, 393, 1–22.
- Amalia, V., Nisa, A.R., dan Hadisantoso, E.P., 2022, Tinjauan Nanokomposit Hidroksiapatit/ Fe_3O_4 sebagai Adsorben Logam Berat pada Air, *Gunung Djati Conference Series*, 7, 7–24.
- Amanullah, R.S., 2020, Pengaruh pH dan Lama Kontak terhadap Adsorpsi Ion Pb^{2+} Menggunakan Nanokomposit Kitosan-Magnetit, *Skripsi*, Kimia, Fakultas MIPA, Universitas Brawijaya, Malang.
- 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, 50–54.
- Arista, D., Rachmawati, A., Ramdahini, N., and Saputro, R.E., 2019, Antibacterial Performance of Fe_3O_4 /PEG-4000 Prepared by Co-precipitation Route, *IOP Conf. Ser.: Mater. Sci. Eng.*, 515, 1–9.
- Asip, F., Mardhiah, R., dan Husna, 2008, Uji Efektivitas Cangkang Telur dalam Mengadsorpsi Ion Fe dengan Proses Batch, *J. Teknik Kimia*, 2, 22–26.
- Azeredo, H.M.C. and Waldron, K.W., 2016, Crosslinking in Polysaccharide and Protein Films and Coatings For Food Contact - A review, *Trends. Food. Sci. Technol.*, 52, 109–122.
- Azhar, M., Efendi, J., Syofyeni, E., Marfa, L.M., dan Novalina, S., 2012, Pengaruh Konsentrasi NaOH dan KOH terhadap Derajat Deasetilasi Kitin dari Limbah Udang, *J. Training*, 2, 1–8.

- Bangun, H., Tandiono, S., and Arianto, A., 2018, Preparation and Evaluation of Chitosan-Tripolyphosphate Nanoparticles Suspension as an Antibacterial Agent, *J Appl Pharm Sci*, 8, 147–56.
- Baker, J.F., 2018, Questioning the Orbital Picture of Magnetic Spin Coupling: A Real Space Alternative, *Phy. Chem. Chem. Phys.*, 7, 1–14.
- Berger, J., Reist, M., and Mayer, J.M., 2004, Stucture and Interaction In Covalently And Ionically Crosslinked Chitosan Hydrogels For Biomedical Application, *Eur. J. Pharm. and Biopharm.*, 57, 19–34.
- Bhumkar, D.R. dan Pokharkar, V., 2006, Studies on Effect of pH on Crosslinking of Chitosan with Sodium Tripolyphosphate, *AAPS PharmSciTech*, 7, 138–143.
- Bishnoi, N.R., Bajaj, M., Sharma, N., dan Gupta, A., 2004, Adsorption of Ag(I) on Activated Rice Husk Carbon and Activated Alumina, *Bioresour. Technol.*, 91, 305–307.
- Bodnar, M., Hartmann, J.F., dan Borbely, J., 2005, Preparation and Characterization of Chitosan-Based Nanoparticles, *J. of. Biomacro.*, 6, 2521–2527.
- Bonilla-Petriciolet, A., Mendoza-Castillo, D.I., and Reynel-Avia, H.E., 2017, Adsorption Processes for Water Treatment and Purification, Springer, Berlin.
- Cahyaningrum, S.E., 2001, Karakterisasi Adsorpsi Ni(II) dan Cd(II) pada Kitosan dan Kitosan Sulfat dari Cangkang Udang Windu, *Tesis*, Magister Kimia, Fakultas MIPA, Universitas Gadjah Mada, Yogyakarta.
- Canra, M., Fadli, M., dan Komalasari, 2015, Kinetika Adsorpsi Ion Logam Cu²⁺ Menggunakan Tricalciumphospate sebagai Adsorben dengan Variasi Kecepatan Pengadukan dan Temperatur, *J. F.Teknik*, 2, 1–6.
- Choi, C.H., Allan-Cole, E., and Chang, C.H., 2017, Visible to Infrared Plasmonic Absorption from Silver Nanostructures Enabled by Microreactor-assisted Solution Deposition, *Cryst. Eng. Comm.*, 19, 1265–1272.
- Craig, S.W., Ong, S.W., Rdjan, S., Elacic, J., Ebecca, R., Abeeb, L.H., Atkins, A.L.W., and Arr, I.T., 2000, The Risk of the Hemolytic–Uremic Syndrome after Antibiotic Treatment of *Escherichia coli* O157:H7 Infections, *N. Eng. J. Med.*, 342, 1930–1936.
- Crini, G. and Badot, P.M., 2008, Application of Chitosan, a Natural Aminopolysaccharide for Dye Removal from Aqueous Solutions by Adsorption Processes Using Batch Studies: A Review of Recent Literature, *Prog. Polym. Sci.*, 33, 399–447.

- Daulay, A.M., 2011, Penggunaan Kitosan Magnetik Untuk Menyerap Logam Kadmium (Cd) dan Tembaga (Cu) Dengan Menggunakan Spektrofotometer Serapan Atom (SSA)., *Skripsi*, Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Sumatera Utara.
- Delmifiana, B. dan Astuti, 2013, Pengaruh Sonikasi Terhadap Struktur dan Morfologi Nanokomposit Magnetik yang Disintesis dengan Metode Kopresipitas, *Jurnal Fisika Unand*, 2, 186–189.
- Dewi, E.R., 2020, Modifikasi Material Magnetik Alm/Kitosan dengan Nanokomposit Perak sebagai Antibakteri Escherichia Coli, *Skripsi*, Kimia, Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Gadjah Mada, Yogyakarta.
- Dewi, S.H. dan Ridwan, 2012, Sintesis dan Karakterisasi Nanokomposit Fe₃O₄ Magnetik untuk Adsorpsi Kromium Heksavalen, *J. Sains Materi Indonesia*, 13, 136–140.
- Díaz-Hernández, A., Gracida, J., García-Almendárez, B.E., Regalado, C., Núñez, R., and Amaro-Reyes, A., 2018, Characterization of Magnetic Nanoparticles Coated with Chitosan: A Potential Approach for Enzyme Immobilization, *J. Nanomater.*, 1-11.
- Dubey, R., Bajpai, J., and Bajpai, A.K., 2016, Chitosan-Alginate Nanoparticles (CANPs) as Potential Nanosorbent for Removal of Hg(II) Ions, *Env. Nanotech. Mon. And. Manag.*, 6, 32–44.
- Dyah, P., 2009, Adsorpsi Multi Logam Ag(I), Pb(II), Cr(III), Cu(II) dan Ni(II) pada Hibrida Etilendiamino-Silika dari Abu Sekam Padi, *Jurnal Penelitian Saintek*, 14, 264–271.
- Dyansyah, R., 2015, Adsorpsi Ion Ini (II) Menggunakan Nanokomposit Magnetit-Kitosan, *Skripsi*, Kimia Fakultas MIPA Universitas Sriwijaya, Palembang.
- Effendi, F., Tresnaningsih, E., Sulistono, A.W., Wibowo, S., dan Hudoyo, K.S., 2012, Penyakit Akibat Kerja Karena Paparan Logam Berat, Direktorat Bina Kesehatan Kerja dan Olahraga, Kementerian Kesehatan Republik Indonesia, Jakarta.
- Erdem, E., Karapinar, N., and Donat, R., 2004, The Removal of Heavy Metal Cations by Natural Zeolites, *J. Colloid Interface Sci.*, 280, 309–314.
- Fajaroh, F., Setyaan, H., Winardi, S., Enggawati, R., Wardhani, I.G., Utomo, R.Y., dan Kartikasari, 2010, Stabilisasi Nanokomposit Magnetit Hasil Sintesis dengan Metode Elektrokimia Melalui Pelapisan Silika Secara In-Situ, *Seminar Rekayasa Kimia dan Proses*, April 2010, Semarang.

- Fan, H., Zhou, S., Jiao, W., Qi, G., and Liu, Y., 2017, Removal of Heavy Metals by Magnetic Chitosan Nanoparticles Prepared Continuously Via High-Gravity Reactive Precipitation Method, *Carbohydr Polym*, 174.
- Fatimah, 2014, *Adsorpsi dan Katalis Menggunakan Material Berbasis Clay*, Graha Ilmu, Yogyakarta.
- Fauzan, A., Aman, dan Drastinawati, 2014, Pemanfaatan Fly Ash Batu Bara sebagai Adsorben Logam Berat Ion Pb yang Terlarut dalam Air, *Jom. F. Teknik*, 2, 1–6.
- Fekry, M., Elmesallamy, S.M., El-Rahman, N.R.A., Bekhit, M., and Elsaied, H.A., 2022, Eco-friendly Adsorbents Based On Abietic Acid, Boswellic Acid, and Chitosan/Magnetite for Removing Waste Oil From The Surface Of The Water, *Environ. Sci. Pollut. Res.*, 29, 64633–64646.
- Firnando, H.G., 2015, Pengaruh Suhu Pada Proses Sonikasi terhadap Morfologi Partikel dan Kristalinitas Nanokomposit, *J. Fisika Unand*, 4, 1–5.
- Gazra, R.M., Olguin, M.T., Garcia, S., Aleantara, O., and Rodriguez, 2000, Silver Supported on Natural Mexican Zeolite as an Antibacterial, *J. Micro Pharm. Sci. Tech.*, 12, 453–460.
- Guo, L., Sun, C.M., Li, G.Y., Liu, C.P., and Ji, C.N., 2009, Thermodynamics and Kinetics of Zn(II) Adsorption on Crosslinked Strach Phosphates, *J. Haz. Mat.*, 161, 510–515.
- Gyawali, D., Tran, R.T., Guleserian, K.J., Liping, T., and Jian, Y., 2010, Citric acid derived photo crosslinked biodegradable elastomer, *J. Biomater. Sci. Polym. Ed.*, 21, 1761–1782.
- Gyliene, O., Inga R., Rima, T., and Ona, N., 2003, Chemical Composition and Sorption Properties of Chitosan Produced from Fly Larva Shells, *Chemija*, 14, 121–127.
- Hafiyah, E., 2013, Kinetika Adsorpsi Zat Warna Rhodamin B Menggunakan Karbon Aktif Sekam Padi (*Oryza Sativa L.*), *J. Chem. Inf. Model*, 53, 1689–1699.
- Hamdaoui, O. and Chiha, M., 2006, Removal Of Methylene Blue From Aqueous Solution By Wheat Bran, *Acta Chim. Slov.*, 54, 407–418.
- Han, X., Wang, W., and Ma, X., 2011, Adsorption Characteristics of Methylene Blue onto Low-Cost Biomass Material Lotus Leaf, *J. Of. Chem. Eng.*, 171, 1–8.

- Handoko, C.T., Yanti, T.B., Syadiyah, H., dan Marwati, S., 2013, Penggunaan Metode Presipitasi untuk Menurunkan Kadar Cu dalam Limbah Cair Industri Perak di Kotagede, *J. Penelitian Saintek*, 2, 51–58.
- Haryono, A., Sondari, D., Harmami, S.B., dan Randy, M., 2013, Sintesa Nanokomposit Perak dan Potensi Aplikasinya, *J. Riset Industri*, 3, 156–163.
- Hashemian, S., Karimi, A.M., and Salehifar, 2013, Kinetics and Thermodynamics of Adsorption Methylene Blue onto Tea Waste/CuFe₂O₄ Composite, *Americ. J. of. Analy. Chem.*, 4, 1–7.
- Hayati, U.P. dan Sawir, H., 2017, Pemanfaatan Limbah Kulit Buah Kakao Sebagai Adsorben Untuk Penyerapan Logam Ion Logam Kromium pada Limbah Elektroplating di Bukittinggi, *J. Sains dan Teknologi*, 1, 73–88.
- Helmiyati, A.F. dan Nurrahman, 2010, Pengaruh Konsentrasi Yawas Terhadap Pertumbuhan Bakteri Gram Positif dan Negatif, *J. Pangan dan Gizi*, 1, 1–6.
- Hermanto, D., Mudasir, M., Siswanta, D., and Kuswandi, B., 2019, Synthesis of Alginate-Chitosan Polyelectrolyte Complex (PEC) Membrane and Its Physical-Mechanical Properties, *J. Kimia Sains dan Aplikasi*, 22, 11–16.
- Ho, Y.S., 2006, Review of Second order Models for Adsorption System, *J. Hazard. Mater.*, 36, 681–689.
- Hong, R.Y., Guo, L., Liu, G., and Li, H.Z., 2010, Preparation and characterization of chitosan poly (acrylic acid) magnetic microspheres, *Mar. Drugs.*, 8, 2212–2222.
- Hossain, M.A., Ngo, H., Hao, W.S., Guo, and Nguyen, T. v., 2012, Removal of Copper from Water by Adsorption onto Banana Peel as Bioadsorbent, *Int. J. of. Geomate.*, 2, 227–234.
- Htwe, A.T., Maung, M.T.M., and Naing, Z., 2022, Synthesis of Chitosan-coated Magnetite Nanoparticles Using Co-precipitation Method for Copper (II) Ions Removal in Aqueous Solution, *World J. Eng.*, 19, 726–734.
- Husain, S., Suryajaya, Haryanti, N.H., Manik, T.N., Sudarningsih, Rodiansono, Hutasoit, S.M., dan Riyanto, A., 2019, Potensi Nanokomposit Magnetit dari Bijih Besi Sebagai Pendeteksi Kadar Glukosa, *Positron*, 2, 44–52.
- Husniati dan Oktarina, E., 2014, Sintesis Nanopartikel Kitosan dan Pengaruhnya Terhadap Inhibisi Bakteri Pembusuk Jus Nanas, *J. Dinamika Penelitian Industri*, 25, 89–95.
- Indah, S., Helard, D., dan Ramadhan, D., 2021, Penerapan Kolom Adsorpsi Seri dengan Adsorben Sekam Padi pada Penyisihan Logam Seng (Zn) dari Air Tanah, *J. Riset Kimia*, 12, 19–26.

- Indrasti, N.S., Subroto, M.A., dan Funawan, G.G., 2005, Adsorpsi Logam Berat Seng (Zn) dengan Menggunakan Akar Rambut Solanum ningrum l Galur A4 Kering Termobilisasi dalam Na-Alginat, *J. Tek. Ind. Pert.*, 15, 1–9.
- Putri, A.I., Sundaryono, A., dan Chandra, I.N., 2019, Karakterisasi Nanokomposit Kitosan Ekstrak Daun Ubi Jalar (*Ipomoea batatas L.*) menggunakan Metode Gelasi Ionik, *Alotrop*, 2(2), 203–207.
- Islam, S., Bhiyan, M.A.R., and Islam, M.N., 2016, Chitin and Chitosan: Structure, Properties, and Applications in Biomedical Engineering, *J. Polym. Environ*, 25, 854–866.
- Jawetz, Melnick, dan Adelberg, 2007, *Mikrobiologi Kedokteran*, EGC, Jakarta.
- Jin, Z., Dong, Y., Dong, N., Yang, Z., Wang, Q., Lei, Z., and Su, B., 2016, One-Step Synthesis of Magnetic Nanocomposite Fe₃O₄/C Based on The Waste Chicken Feathers by A Green Solvothermal Method, *Mater. Lett.*, 186, 322–325.
- Jintakosol, T., and Nitayaphat, W., 2016, Adsorption of Silver (I) From Aqueous Solution Using Chitosan/Montmorillonite Composite Beads, *Mat. Res.*, 19(5), 1114–1121.
- Jeon, C., 2017, Adsorption of Silver Ions from Industrial Wastewater Using Waste Coffee Grounds, *Korean J. Chem. Eng.*, 34, 384–391.
- Jung, W.K., Koo, H.C., Kim, K.W., Shin, S., Kim, S.H., and Park, Y.H., 2008, Antibacterial Activity and Mechanism of Action of the Silver Ion in Staphylococcus Aureus and Escherichia Coli, *Appl. Environ. Microbiol.*, 74, 2171–2178.
- Kantima, J. and Chuntimon. S., 2012, Antimicrobial Activity of Chitosan and Tannic Acid on Cotton Fabrics Materials, In, *RMUTP International Conference: Textiles & Fashion 2012*. Bangkok.
- Karimi, M.A., Mohammadi, S.Z., Mohadesi, A., Hatefi-Mehrjardi, A., Mazloun-Ardakani, M., Sotudehnia Korani, L., and Askarpour Kabir, A., 2011, Determination of Silver(I) by Flame Atomic Absorption Spectrometry After Separation/preconcentration Using Modified Magnetite Nanoparticles, *Sci. Iran.*, 18, 790–796.
- Karnib, M., Kabbani, M., Holail, H., and Olama, Z., 2014, Heavy Metal Removal Using Activated Carbon, Silica and Silica Activated Carbon Composite, *Energy Procedia*, 50, 113–120.
- Kaushik, A., Khan, R., Solanki, P.R., Pandey, P., Alam, J., Ahmad, S., and Malhotra, B.D., 2008, Iron Oxide Nanoparticles Chitosan Composite Based Glucose Biosensor, *Biosens. Bioelectron.*, 24, 676–683.

- Ke, C.L., Deng, F.S., Chuang, C.Y., and Lin, C.H., 2021, Antimicrobial Actions and Applications of Chitosan, *Polymers*, 13.
- Kędziora, A., Wieczorek, R., Speruda, M., Matolínová, I., Goszczyński, T.M., Litwin, I., Matolín, V., and Bugla-Płoskońska, G., 2021, Comparison of Antibacterial Mode of Action of Silver Ions and Silver Nanoformulations with Different Physico-Chemical Properties: Experimental and Computational Studies, *Front. Microbiol.*, 12, 1707.
- Khalil, M., Ning, L., and Robert, L., 2017, Synthesis and Characterization of Hematite Nanoparticles using Ultrasonic Sonochemistry Method, *Int. J. of Tech.*, 8, 582–590.
- Khalil, M.I., 2015, Co-precipitation in Aqueous Solution Synthesis of Magnetite Nanoparticles using Iron(III) Salts as Precursors, *Arab. J. Chem.*, 8, 279–284.
- Rosyidah, A.K., dan Suyanta, 2021, Sintesis dan Karakterisasi Komposit Zeolit Magnetit dan Aplikasinya sebagai Adsorben Ni(II), *J. Ilm. Berk. Si. Ter. Kim.*, 15(1), 37–47.
- Koo, K.N., Ismail, A.F., Othman, M.H.D., Bidin, N., and Rahman, M.A., 2019, Preparation and Characterization of Superparamagnetic Magnetite (Fe₃O₄) Nanoparticles: A short review, *Mal. J. Fund. App. Sci.*, 15, 23–31.
- Kooti, M., Kharazi, P., and Motamedi, H., 2014, Preparation, Characterization, and Antibacterial Activity of CoFe₂O₄/polyaniline/Ag Nanocomposite, *J. Taiwan Inst. Chem. Eng.*, 45, 2698–2704.
- Kornak, R., Nižňansky, D., Haimann, K., Tylus, W., and Maruszewski, K., 2005, Synthesis of Magnetic Nanoparticles via The Sol Gel Technique, *Mater. Sci. Poland.*, 23(1).
- Kosasih, A.N., Febrianto, J., Sunarso, J., Ju, Y.H., Indraswati, N., and Ismadji, S., 2010, Sequestering of Cu(II) from Aqueous Solution using Cassava Peel (*Manihot esculenta*), *J. Hazard. Mater.*, 180, 366–374.
- Kurniasih, M., Riyani, K., Setyaningtyas, T., dan Sufyana, 2018, Studi Adsorpsi Ion Ni(II) Menggunakan Crosslink Kitosan Tripolifosfat, *J. Rekayasa Kim. Lingkung.* 13, 174–181.
- Kurniyati, R., Sumarni, W., dan Latifah, 2015, Pengaruh Chitosan Beads dan Chitosan Beads Ikat Silang Asam Sitrat Sebagai Penurun Kadar Fosfat dan ABS (Alkyl Benzene Sulfonate) Pada Limbah Laundry, *Indo. J. Chem. Sci.*, 4, 36–41.
- Kustomo, K. dan Santosa, S.J., 2019, Studi Kinetika dan Adsorpsi Zat Warna Kation (Metilen Biru) dan Anion (Metil Orange) pada Magnetit Terlapis Asam Humat, *J. Jejaring Matematika dan Sains*, 1, 64–69.

- Latupeirissa, J., Tanasale, M.F.J.D.P., Fransina, E.G., and Noya, A., 2022, Synthesis and Characterization of Chitosan-Citrate Microparticle Using Ionic Gelation Methods, *Indones. J. Chem. Res.*, 10, 1–7.
- Leni, L., 2016, Adsorpsi Kompetitif Logam Ag(I) dan Cr(II) pada Asam Humat, *Orbital*, 1, 80–92.
- Lusiana, R.A., Siswanta, D., and Mudasir, 2016, Preparation of Citic Acid Crosslinked Chitosan/Poly(Vinyl Alcohol) Blend Membranes for Creatinine Transport, *Indones. J. Chem.*, 16(2), 21–34.
- Mahmuda, D., Sakinah, N., dan Suharyadi, D.E., 2017, Adsorpsi Logam Tembaga (Cu), Mangan (Mn) dan Nikel (Ni) dalam Artificial Limbah Cair dengan Menggunakan Nanokomposit Magnetit (Fe₃O₄), *Indones. J. Appl. Phys.*, 4, 126–133.
- Mahyati, A., and Koesnarpadi, S., 2021, Synthesis of Chitosan-Magnetite Nanoparticles Cross-linked Tripolyphosphate as Antibacterial *Salmonella typhi* and *Staphylococcus aureus*, *J. Atomik*, 6, 16–21.
- Mamani, J.B., Gamarra, L.F., and de Souza Brito, G.E., 2014, Synthesis and Characterization of Fe₃O₄ Nanoparticles with Perspectives in Biomedical Applications, *Mater. Res.*, 17, 542–549.
- Ma'muri, N.F., 2018, Penggunaan Kitosan Magnetit untuk Adsorben Zat Warna Remazol Yellow FG, *Skripsi*, Departemen Kimia Fakultas Sains dan Teknologi UIN Sunan Kalijaga, Yogyakarta.
- Mardila, V.T., Aabarudin, A., dan Santjojo, D.J.D.H., 2016, Pembuatan Nanokomposit Kitosan-Fe₃O₄ secara Ko-Presipitasi In-Situ Menggunakan Tripolyphosphate/Sitrat sebagai Crosslinker dan Karakterisasinya Menggunakan XRD, *Natural*, 3, 214–229.
- Masruhin, Rasyid, R., dan Yani, S., 2018, Penjerapan Logam Berat Timbal (Pb) dengan Menggunakan Lignin Hasil Isolasi Jerami Padi, *J. Chem. Process Eng.*, 3, 11–20.
- Maylani, A.S., Sulistyaningsih, T., dan Kusumastuti, E., 2016, Preparasi Nanokomposit Magnetit serta Aplikasinya sebagai Adsorben Logam Kadmium, *Indones. J. Chem. Sci.*, 5.
- McCabe, W.L., Smith, J.C., and Harriot, P., 2005, *Unit Operation of Chemical Enggining*, 7th ed., McGraw-Hill, New York.
- Mi, F.L., Tan, Y.C., Liang, H.F., and Sung, H.W., 2002, In Vivo Biocompatibility and Degradability of a Novel Injectable-Chitosan-Based Implant, *Biomaterials*, 23, 181–191.

- Mohamed, D.S., El-Baky, R.M.A., Sandle, T., Mandour, S.A., and Ahmed, E.F., 2020, Antimicrobial Activity of Silver-Treated Bacteria against Other Multi-Drug Resistant Pathogens in Their Environment, *Antibiotics*, 9.
- Murthihapsari, Mangallo, B., dan Handyani, D.D., 2012, Model Isotem Freundlich dan Langmuir oleh Adsorben Arang Aktif Bambu Andong (*G. verticillata* (Wild) Munro) DAN Bambu Ater (*G. atter* (Hassk) Kurz ex Munro), *J. Si. Natur.*, 2, 17–23.
- Muzzarelli, R.A.A., 2011, Biomedical Exploitation of Chitin and Chitosan via Mechano-chemical Disassembly, Electrospinning, Dissolution in Imidazolium Ionic Liquids, and Supercritical Drying, *Mar. Drugs.*, 9, 1510–1533.
- Navarro, R., Guzmán, J., Saucedo, I., Revilla, J., dan Guibal, E., 2003, Recovery of Metal Ions by Chitosan: Sorption Mechanisms 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, 958–969.
- Ngatijo, Gusti, D.R., Fadhillah, A.H., dan Khairunnisah, R., 2020, Adsorben Magnetit Terlapis Dimerkaptosilika untuk Adsorpsi Anion Logam $[\text{AuCl}_4]^-$ dan $[\text{Cr}_2\text{O}_7]^-$, *J. Riset Kimia*, 11(2), 113–120.
- Nisa, K., 2005, Karakteristik Fluks Membran Kitosan Termodifikasi PVA (Poli Vinil Alkohol) dengan Variasi PEG (Poli Etilena Glikol) Sebagai Porogen, *Skripsi*, Departemen Kimia FMIPA IPB, Bogor.
- Noll, K.E., Gournaris, V., and Hou, W.S., 1992, *Adsorption Technology for Air and Water Polution Control*, Lewish Publisher, Michigan.
- Nurfadilah, L., 2013, Uji Bioaktifitas Antibakteri Ekstrak dan Fraksi Lamun dari Kepulauan Spermonde, Kota Makassar, *Skripsi*, Prodi Ilmu Kelautan Fakultas Ilmu Kelautan dan Perikanan Universitas Hasanuddin, Makassar.
- Omar, F., Vazquez, G., Virgen, M.R.M., Gonzalez, M.S.E., Montoya, V.H., Gomez, R.T., and Valle, C.J.D., 2020, Analysis of The Effect of a Magnetic Field Applied to a Process of Adsorption of Water Contaminants using Adsorbents of Different Magnetic Orderings, *Ind. Eng. Chem. Res.*, 59, 13820–13830.
- Omri, A., and Benzina, M., Adsorption Characteristics of Silver Ions onto Activated Carbon Prepared from Almond Shell, *Desalination and Water Treat.*, 51, 10–12.

- Otong, M., 2020, Sintesis Nanokomposit Perak Menggunakan Bioreduktor Ekstrak Biji Kluwak dan Uji Aktivitasnya Sebagai Antibakteri, *Skripsi*, Kimia Fakultas MIPA Universitas Hassanudin, Makassar.
- Padhye, L.P., Jasemizad, T., Bolan, S., Tsyusko, O.V., Unrine, J.M., Biswal, B.K., Balasubramanian, R., Zhang, Y., Zhang, T., Zhao, J., Li, Y., Rinklebe, J., Wang, H., Siddique, K.H.M., and Bolan, N., 2023, Silver Contamination and Its Toxicity and Risk Management in Terrestrial and Aquatic Ecosystems, *Sci. of The Tot. Environ.*, 871, 1-19.
- Pambudi, T., Wahyuni, E.T., dan Mudasir, M., 2020, Recorverable Adsorbent Of Natural Zeolite/ Fe_3O_4 For Removal of Pb(II) In Water, *J. Mater. Environ. Sci.*, 1(11), 69-78.
- Pandelaki, E.C.J., Wuntu, A.D., dan Aritonang, H.F., 2018, Aktivitas Antibakteri Komposit Ag – Tulang Ikan Cakalang pada *Staphylococcus aureus*, *J. MIPA*, 7, 29.
- Petcharon, K. and Siricat, A., 2012, Synthesis and Characterization of Magnetite Nanoparticles via the Chemical Co-Precipitation Method, *Mater. Sci. Eng. C.*, 177, 421–427.
- Petrova, T.M., Fachikov, L., and Hristov, J., 2011, Magnetite As Adsorbent For Some Hazardous Species From Aqueous Solutions: A review, *Int. Rev. Chem. Eng.*, 3, 134–152.
- Pham, X.N., Nguyen, T.P., Pham, T.N., Tran, T.T.N., and Tran, T.V.T., 2016, Synthesis and Characterization of Chitosan-Coated Magnetite Nanoparticles and their Application in Curcumin Drug Delivery, *Adv. Nat. Sci.: Nanosci. Nanotechnol.*, 7, 045010.
- Piccin, J.S., Dotto, G.L., and Pinto, L.A.A., 2011, Adsorption Isotherms and Thermochemical Data of FD&C Red N° 40 Binding by Chitosan, *Brazilian J. Chem. Eng.*, 28, 295–304.
- Pillai, C.K.S., Paul, W., and Sharma, C.P., 2009, Chitin and Chitosan Polymers: Chemistry, Solubility and Fiber Formation, *Prog. Polym. Sci.*, 34, 641–678.
- Prasetyaningtyas, T., Prasetya, A., dan Widiarti, N., 2020, Nanokomposit Perak Termodifikasi Kitosan dengan Bioreduktor Ekstrak Daun Kemangi (*Ocimum basilicum L.*) dan Uji Aktivitasnya sebagai Antibakteri, *J. Chem. Sci.*, 9, 12–21.
- Prasojo, B.A. dan Siahaan, P., 2015, Pengaruh Berat Molekul Kitosan terhadap Efisiensi Enkapsulasi BSA (Bovine Serum Albumin) Menggunakan Agen Crosslink Asam Sitrat, *J. Kim. Sains Apl.*, 18, 62–66.

- Priyadi, Iskandar, Suwardi, dan Mukti, 2015, *Adsorpsi Logam Berat Cu, Pb, dan Cd pada Zeolit Sintetik ZSM-5 yang Disintesis dengan Suhu Rendah*, IPB Press, Bogor.
- Pujiastuti, C., 2012, Kajian Penurunan Ca dan Mg dalam Air Laut Menggunakan Resin, *J. Teknik Kimia*, 3, 199–206.
- Puspawati, N.M. dan Simpen, I.N., 2010, Optimasi Deasetilasi Khitin dari Kulit Udang dan Cangkang Kepiting Limbah Restoran Seafood menjadi Khitosan Melalui Variasi Konsentrasi NaOH, *J. Kimia*, 1(3), 15-24.
- Putro, A.N.H. dan Ardhiyany, S.A., 2010, Pengambilan Kembali Bioetanol Hasil Fermentasi Dengan Metode Adsorpsi Hidrophobik, *J. Teknol. Kim. Indus.*, 2(2), 56-60.
- Rahayu, P. dan Khabibi, 2016, Adsorpsi Ion Logam Nikel(II) oleh Kitosan Termodifikasi Tripolifosfat, *J. Kim. Sains Apl.*, 19, 21–26.
- Rahayu, S.A. dan Gumilar, M., 2017, Uji Cemarkan Air Minum Masyarakat Sekitar Margahayu Raya Bandung Dengan Identifikasi Bakteri *Escherichia coli*, *Indones. J. Pharm. Sci. Technol.*, 4, 50–56.
- Rahmalia, W., Yulistira, F., Ningrum, F., Qurbaniah, M., dan Ismadi, M., 2006, Pemanfaatan Potensi Tandan Kosong Kelapa Sawit (*Elais guineensis Jacq*) sebagai Bahan Dasar C-Aktif Untuk Adsorpsi Logam Perak dalam Larutan, *J. PKMP*, 3, 1–10.
- Ranita, L.I., Safitir, D., dan Siswarni, M.Z., 2017, Pembuatan Biosorben dari Biji Pepaya (*Carica papaya*) untuk Penyerapan Zat Warna, *J. Tek. Kim. USU*, 6, 7–13.
- Ren, G., Yang, L., Zhang, Z., Zhong, B., and Yang, 2017, A New Green Synthesis of Porous Magnetite Nanoparticles from Waste Ferrous Sulfate by Solid-Phase Reduction Reaction, *J. Alloys. Compd.*, 710, 875–879.
- 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, *J. Teknik*, 4, 1–9.
- Rinaudo, M., 2006, Chitin and chitosan: Properties and applications, *Prog. Polym. Sci.*, 31, 603–632.
- Rita, W.S., Resaputra, I.H., dan Sukadana, I.M., 2020, Aktivitas Antibakteri Ekstrak Metanol Kulit Pisang Pecah Seribu (*Musa x paradisiaca L.*) terhadap Bakteri *Staphylococcus aureus* dan *Escherichia coli*, *Indones. J. App. Chem.*, 8, 82–91.

- Ruiz, M., Sastre, A.M., and Guibal, E., 2000, Palladium Sorption on Glutaraldehyde-Crosslinked Chitosan, *React. Funct. Polym.*, 45, 155–173.
- Sacco, Pasquale, Borgogna, M., Travan, A., Marsich, E., Paoletti, S., Asaro, F., Grassi, M., and Donati, I., 2014, Polysaccharide-Based Networks from Homogeneous Chitosan-Tripolyphosphate Hydrogels: Synthesis and Characterization, *Biomacromolecules*, 15, 3396–3405.
- Safitri, A.U., 2016, Aktivitas Antibakteri Nanokomposit Kitosan Berbasis Cangkang Lobster terhadap Bakteri *Staphylococcus aureus* dan *Staphylococcus epidermidis*., *J. Teknik*, 44-56.
- Said, N.I., 2010, Metoda Penghilangan Logam Berat (As, Cd, Cr, Ag, Cu, Pb, In, dan Zn) di dalam Limbah Air limbah Industri, *J. Air Indones.*, 6(1), 136-148.
- Saha, P., Goyal, A.K., and Rath, G., 2010, Formulation and Evaluation of Chitosan-Based Ampicillin Trihydrate Nanoparticles, *Trop. J. Pharm. Res.*, 9, 483–488.
- Sahoo, T.R. and Prelot, B., 2020, *Adsorption processes for the removal of contaminants from wastewater*, Elsevier, New York.
- Salleh, M.A.M., Mahmoud, D.K., Karim, W.A., dan Idris, A., 2011, Cationic and Anionic Dye Adsorption by Agricultural Solid Wastes: A Comprehensive Review, *Desalination*, 280, 1–13.
- Salviano, L.B., Silva, C.T.M., Silva, G.C., Silva D.M.S., and Mello Ferreira, A. de, 2018, Microstructural Assessment of Magnetite Nanoparticles (Fe₃O₄) Obtained by Chemical Precipitation Under Different Synthesis Conditions, *Mater. Res.*, 21.
- Sardjono, R.E., 2007, Sintesis dan Penggunaan Tetramer Siklis Seri Kaliksresorsinarena., Alkoksikaliksarena, dan Alkenilkaliksarena untuk Adsorpsi Kation Logam Berat, *Disertasi*, Ilmu Kimia Fakultas MIPA UGM, Yogyakarta.
- Sari, A. And Tuzen, M., 2013, Adsorption of Silver From Aqueous Solution onto Raw Vermiculite and Manganese Oxide-Modified Vermiculite, *Micro. Macro. Mater.*, 170(1), 155-163.
- Sari, D.E., 2020, Pemanfaatan Limbah Kulit Singkong Sebagai Adsorben Alami Untuk Mengurangi Kadar Besi (Fe) dalam Air Limbah dengan Sistem Batch, Skripsi, Prodi Teknologi Laboratorium Medis Politeknik Kesehatan Kemenkes, Medan.
- Sari, D.P. dan Abdiani, I.M., 2015, Pemanfaatan Kulit Udang dan Cangkang Kepiting sebagai Bahan Baku Kitosan, *J. Harpodon Borneo*, 8, 105-115.

- Sari, F.I.P., 2017, Sintesis, Karakterisasi Nanokomposit Magnetit, Mg/Al/NO₃ – Hidrotalsit dan Komposit Magnetit-Hidrotalsit, *J. Kim. Val.*, 3.
- Sartika, D., 2016, Sifat Magnetik Adsorben Nanopartikan Fe₃O₄ terhadap Adsorpsi Logam Berat (Co dan Fe) dalam Larutan, *Seminar Nasional Pendidikan FISIKA 2016*, 21 Mei 2016, Jember.
- Savage, N. and Diallo, M.S., 2005, Nanomaterials and Water Purification: Opportunities and Challenges, *J. Nano. Res.*, 7, 331–342.
- Septiani, S., Dewi, E.N., dan Wijayanti, I., 2017, Antibacterial Activities of Seagrass Extracts (*Cymodocea rotundata*) Against *Staphylococcus aureus* and *Escherichia coli*, *Indones. J. Fish. Sci. Technol.*, 13, 1–6.
- Setiyani, R., 2015, Pemanfaatan Komposit Kitosan ZnO-SiO₂ Composite as Antibacterial Agent of *Staphylococcus aureus* bacteria in Cotton Fabric, *Unesa J. Chem.*, 4.
- Shankar, S. and Rhim, J.W., 2019, Eco-friendly Antimicrobial Nanoparticles of Keratin-Metal Ion Complex, *Mat. Sci. Eng.*, 105, 110068.
- Sharifi, M.J., Nourlasihahi, A., Hallajisani, A., and Askari, M., 2020, Magnetic Chitosan Nanocomposites as Adsorbents in Industrial Wastewater Treatment: A Brief Review, *Cellulose Chem. Technol.*, 55, 185–205.
- Sharmin, N., Sone, I., Walsh, J.L., Sivertsvik, M., and Fernández, E.N., 2021, Effect of Citric Acid and Plasma Activated Water on The Functional Properties of Sodium Alginate for Potential Food Packaging Applications, *Food Packag. Shelf Life*, 29, 100733.
- Shaumbwa, V.R., Liu, D., Archer, B., Li, J., and Su, F., 2021, Preparation and Application of Magnetic Chitosan in Environmental Remediation and Other Fields: A review, *J. Appl. Polym. Sci.*, 1, 138–145.
- Shofiyan, A., Santosa, S.J., dan Noegrohati, S., 2016, Peningkatan Laju Adsorpsi Cu(II) pada Komposit Kitosan Tercetak Ion-Biomassa Chlorella, *Orbital*, 1, 1–9.
- Simatupang, M., Asri, L., dan Purwasmita, B.S., 2015, Pengaruh Penambahan Kitosan dan Asam Sitrat terhadap Pembentukan LiMn₂O₄ Spinel menggunakan Sol Gel, *J. Teknol. Bahan dan Barang Teknik*, 5, 61.
- Sivakami, M.S., Gomathi, T., Venkatesan, J., Jeong, H.S., Kim, S.K., and Sudha, P.N., 2013, Preparation and Characterization of Nano Chitosan for Treatment Wastewaters, *Int. J. Biol. Macromol.*, 57, 204–212.
- Srivastava, S. and Goyal, P., 2010, Novel biomaterials: Decontamination of toxic Metals from Wastewater, *Inter. J. Biol. Macromol.*, 57, 204–211.

- Suc, N.V. and Ly, H.T.Y., 2013, Lead (II) Removal from Aqueous Solution by Chitosan Flake Modified with Citric Acid via Crosslinking with Glutaraldehyde, *J. Chem. Technol. Biotechnol.*, 88, 1641–1649.
- Sun, Z., Fan, C., Tang, X., Zhao, J., Song, Y., Shao, Z., and Xu, L., 2016, Characterization and Antibacterial Properties of Porous Fibers Containing Silver Ions, *Appl. Surf. Sci.*, 387, 828–838.
- Susilawaty, A., Sitorus, E., Gala, S., dan Chaerul, M., 2021, *Ilmu Lingkungan*, Yayasan Kita Menulis, Medan.
- Susilowati, E., Masykuri, M., Ulfa, M., and Puspitasari, D., 2020, Preparation of Silver-Chitosan Nanocomposites Colloidal and Film as Antibacteri Material, *J. Kim. Pendidikan Kim.*, 5, 300–310.
- Sutirman, Z.A., Sanagi, M.M., Abd Karim, K.J., Wan Ibrahim, W.A., and Jume, B.H., 2018, Equilibrium, Kinetic and Mechanism Studies of Cu(II) and Cd(II) Ions Adsorption by Modified Chitosan Beads, *Int. J. Biol. Macromol.*, 116, 255–263.
- Taib, S. and Suharyadi, E., 2015, Magnetite (Fe₃O₄) Nanoparticle Synthesis using Silica (SiO₂) Template and Magnetic Properties Characterisation, *Indones. J. Appl. Phys.*, 5, 23–30.
- Tatinting, G.D., Aritonang, H.F., dan Wuntu, A.D., 2021, Sintesis Nanokomposit Fe₃O₄“POLIETILEN GLIKOL (PEG) 6000 dari Pasir Besi Pantai Hais sebagai Adsorben Logam Kadmium (Cd), *Chem. Prog.*, 14, 131.
- Teja, A.S. and Koh, P.Y., 2009, Synthesis, Properties, and Applications of Magnetic Iron Oxide Nanoparticles, *Prog. Crys. Growth Charact. Mater.*, 55, 22–45.
- Thamilarasan, V., Sethuraman, V., and Gopinath, K., 2018, Single Step Fabrication of Chitosan Nanocrystals Using *Penaeus semisulcatus*: Potential as New Insecticides Antimicrobials and Plant Growth Promoters, *J. Clust. Sci.*, 29(2), 375–384.
- Tyas, M.E.C., 2018, Sintesis Komposit Kitosan/Magnetit/Asam Oleat dan Aplikasinya Sebagai Adsorben Cd(II), *Skripsi*, Kimia Fakultas MIPA Universitas Gadjah Mada, Yogyakarta.
- Unsoy, G., Yalcin, S., Khodadust, R., Gunduz, G., and Gunduz, U., 2012, Synthesis Optimization and Characterization of Chitosan Coated Iron Oxide Nanoparticles Produced for Biomedical Applications, *J. Nano. Res.*, 14, 1–13.
- Vahdat, A., Ghasemi, B., and Yousefpour, M., 2019, Synthesis of Hydroxyapatite and Hydroxyapatite/Fe₃O₄ Nanocomposite for Removal of Heavy Metals, *Environ. Nanotechnol. Monit. Manag.*, 12, 100233.

- Venugopal, V. and Mohanty, K., 2011, Biosorptive Uptake of Cr(VI) From Aqueous Solutions by Parthenium Hysterophorus Weed: Equilibrium, Kinetics and Thermodynamic Studies, *Chem. Eng. J.*, 174, 151–158.
- Wahyuningtyas, D., Sukawati, P.D., dan Al Fitria, N.M., 2019, Optimasi Pembuatan Plastik Biodegradable dari Pati Kulit Singkong dengan Penambahan Asam Sitrat Sebagai Crosslinking Agent, *Seminar Nasional Teknik Kimia Kejuangan*, 10, 6.
- Wang, J. and Chen, C., 2014, Modification and Application for Biosorption of Heavy Metals and Radionuclides, *Bioresour. Technol.*, 160, 129–141.
- Wang, S., Li, H., Chen, X., Yang, M., and Qi, Y., 2012, Selective Adsorption of Silver Ions from Aqueous Solution using Polystyrene Supported Trimecaptotriazine Resin, *J. Environ. Sci.*, 24(12), 2166–2172.
- Wardiyati, S., Fisli, A., and Ridwan, 2011, Penyerapan Logam Ni dalam Larutan Oleh Nanokomposit Fe₃O₄-Karbon Aktif, *J. Sains Materi Indons.*, 12, 224–228.
- Wijaya, D.P., 2013, Preparasi Nanokomposit Sambung Silang Kitosan-Tripolifosfat yang Mengandung Genosida, *Skripsi*, Prodi Farmasi Fakultas Kedokteran dan Ilmu Kesehatan UIN Syarif Hidayatullah, Jakarta.
- Wijayanti, I.E., Kurniawati, E.A., dan Solfarina, S., 2019, Studi Kinetika Adsorpsi Isoterm Persamaan Langmuir dan Freundlich pada Abu Gosok sebagai Adsorben, *Edu. Chemia.*, 4, 175–184.
- Windarti, T., Dewi, F.A., and Hascaryo, D., 2022, Kitosan termodifikasi Tripolifosfat sebagai Kandidat Material Pelapis Artefak Kayu, *Borobudur*, 1, 39–50.
- Winarti, W., Kusriani, D., dan Fachriyah, E., 2009, Isolasi, Identifikasi dan Uji Aktivitas Antibakteri Minyak Atsiri Akar Sidaguri (*Sida rhombifolia* Linn), *J. Kim. Sains Apl.*, 12, 52–56.
- Winiati, W., Septiani, W., Kasipah, C., dan Sana, A.W., 2017, Aplikasi Kitosan sebagai Zat Antibakteri pada Kain Poliester-selulosa dengan Cara Modifikasi Gugus Poliester-Selulosa, *J. Ilmiah Arena Tekstil*, 32, 93–102.
- Wu, Y., Wang, Y., Luo, G., and Dai, Y., 2009, In situ Preparation of Magnetic Fe₃O₄-Chitosan Nanoparticles for Lipase Immobilization by Cross-linking and Oxidation in Aqueous Solution, *Bioresour. Technol.*, 100, 3459–3464.
- Wulandari, I.O., Santjojo, D.J.D.H., Shobirin, R.A., and Sabarudin, A., 2017, Characteristics and Magnetic Properties of Chitosan-Coated Fe₃O₄ Nanoparticles Prepared by Ex-situ Co-precipitation Method, *Rasayan J. Chem.*, 10, 1348–1358.

- Xiang, Q., Lee, Y.Y., Pettersson, P.O., and Torget, R.W., 2003, Heterogeneous Aspects of Acid Hydrolysis of α -Cellulose, *Biotechnol. Fuels Chem.*, 505–514.
- Yao, Y, Xu, F., Chen, M., Xu, Z., and Zhu, Z., 2010, Adsorption Behavior of Methylene Blue on Carbon Nanotubes, *Bioresour. Technol.*, 101, 3040–3046.
- Yao, Yunjin, Xu, F., Chen, M., Xu, Z., and Zhu, Z., 2010, Adsorption Behavior of Methylene Blue on Carbon Nanotubes, *Bioresour. Technol.*, 101, 3040–3046.
- Yazandi, F. and Seddigh, M., 2016, Magnetite Nanoparticles Synthesized by Coprecipitation Method: The Effects of Various Iron Anions on Specifications, *Mater. Chem. Phys.*, C, 318–323.
- Yin, I.X., Zhang, J., Zhao, I.S., Mei, M.L., Li, Q., and Chu, C.H., 2020, The Antibacterial Mechanism of Silver Nanoparticles and Its Application in Dentistry, *Int. J. Nanomedicine*, 15, 2555.
- Yuanbi, Z., Qiu, Z., and Huang, J., 2008, Preparation and Analysis of Fe₃O₄ Magnetic Nanoparticles Used as Targeted-drug Carriers, *Chin. J. Chem. Eng.*, 16, 451–455.
- Yu-Shin, L., Kiran, S., Kurt, M.L., Jyuhn, H.J., Long, F., Hn, Y., and Hsing, W.S., 2008, Multi-ion-crosslinked Nanoparticles with pH-responsive Characteristic for Oral Delivery of Protein Drugs, *J. Cont. Rel.*, 132, 141–149.
- Zhang, J., Lin, S., Han, M., Su, Q., Xia, L., and Hui, Z., 2020, Adsorption Properties of Magnetic Magnetite Nanoparticle for Coexistent Cr(VI) and Cu(II) in Mixed Solution, *Water*, 12, 446.
- Zhang, N., Zhang, H., Li, R., and Xing, Y., 2020, Preparation and Adsorption Properties of Citrate-Crosslinked Chitosan Salt Microspheres by Microwave Assisted Method, *Int. J. Biol. Macromol.*, 152, 1146–1156.
- Zhang, Y., Xu, Q., Zhang, S., Liu, J., Zhou, J., Xu, H., Xiao, H., and Li, J., 2013, Preparation of Thiol-modified Fe₃O₄@SiO₂ Nanoparticles and their Application for Gold Recovery from Dilute Solution, *Sep. Purif. Technol.*, 116, 391–397.
- Zhou, S., Jiang, W., Wang, T., and Lu, Y., 2015, Highly Hydrophobic, Compressible, Magnetic Poly Styrene/Fe₃O₄/Graphene Aerogel Composite for Oil-Water Separation, *Ind. Eng. Chem. Res.*, 54, 5460–5467.