DAFTAR PUSTAKA

Anagnostopoulos, V.A., Manariotis, I.D., Karapanagioti, H.K., and Chrysikopoulos, C. V, 2012, Removal of mercury from aqueous solutions by malt spent rootlets, *Chem. Eng. J.*, 213, 135–141.

Anonim, 2020a, Particle characterization, https://www.horiba.com/in/scientific/products/particle-characterization/applications/colloids/, diakses pada 1 Agustus 2020.

Anonim, 2012, Spectrophotometry, GE Healthcare Life Sciences.

Anonim, 2020b, Structure and pKa of amino acids, http://www.chem.ucalgary.ca/courses/351/Carey5th/Ch27/ch27-1-3.html, diakses pada 28 Januari 2020.

Apilux, A., Siangproh, W., Praphairaksit, N., and Chailapakul, O., 2012, Simple and rapid colorimetric detection of Hg(II) by a paper-based device using silver nanoplates, *Talanta*, 97, 388–394.

Azimi, S. and Moghaddam, M.S., 2013, Effect of mercury pollution on the urban environment and human health, *Environ. Ecol. Res.*, 1, 12–20.

Bast, N.G., Comenge, J., and Puntes, V., 2011, Kinetically controlled seeded growth synthesis of citrate-stabilized gold nanoparticles of up to 200 nm : Size focusing versus Ostwald ripening, *J. Am. Chem. Soc.*, 27, 11098–11105.

Bhattacharjee, S., 2016, Review article DLS and zeta potential – What they are and what they are not ?, *J. Control. Release*, 235, 337–351.

Borah, S.B.D., Bora, T., Baruah, S., and Dutta, J., 2016, Groundwater for sustainable development heavy metal ion sensing in water using surface plasmon resonance of metallic nanostructures, *Groundw. Sustain. Dev.*, 1, 1–11.

Brust, M., Walker, M., Bethell, D., Schiffrin, D.J., and Whyman, R., 1994, Synthesis of thiol-derivatised gold nanoparticles in two-phase liquid-liquid system, *J. Chem. Soc., Chem. Commun.*, 801–802.

Buduru, P., Raja, B.C.S., and Naidu, N.V.S., 2017, Chemical functionalization of silver nanoparticles with glutamine and histidine for simple and selective detection of Hg^{2+} ion in water samples, *Sens. Actuators B Chem.*, 244, 972–982.

Clogston, J.D. and Patri, A.K., 2011, Zeta potential measurement. Characterization of nanoparticles intended for drug delivery, National Library of Medicine.

Doyen, M., Goole, J., Bartik, K., and Bruylants, G., 2016, Amino acid induced fractal aggregation of gold nanoparticles: Why and how, *J. Colloid Interface Sci.*, 464, 60–166.

Du, J., Wang, Z., Fan, J., and Peng, X., 2015, Chemical gold nanoparticle-based colorimetric detection of mercury ion via coordination chemistry, *Sens. Actuators B Chem.*, 212, 481–486.

Eustis, S., El-sayed, M.A., and Kasha, M., 2006, Why gold nanoparticles are more precious than pretty gold : Noble metal surface plasmon resonance and its enhancement of the radiative and nonradiative properties of nanocrystals of different shapes, *Chem. Soc. Rev.*, 35, 209–217.

Ghosh, D. and Chattopadhyay, N., 2013, Gold nanoparticles: acceptors for efficient energy transfer from the photoexcited fluorophores, *Opt. Photonics J.*, 3, 18–26.

Ghosh, S.K., Nath, S., Kundu, S., Esumi, K., and Pal, T., 2004, Solvent and ligand effects on the Localized Surface Plasmon Resonance (LSPR) of gold colloids, *Phys. Chem. B*, 108, 13963–13971.

Guan, J., Jiang, L., Li, J., and Yang, W., 2008, pH-dependent aggregation of histidine-functionalized Au nanoparticles induced by Fe^{3+} ions, *J. Chem. Phys.*, 112, 3267–3271.

Havaldar, D. V, Patil, R. V, Moholkar, D.N., Magdum, P.S., Vadrale, A.P., and Pawar, K.D., 2020, Differently synthesized gold nanoparticles respond differently to functionalization with L-amino acids, *Particuology*, 52, 97–104.

Ji, X., Song, X., Li, J., Bai, Y., and Yang, W., 2007, Size control of gold nanocrystals in citrate reduction : The third role of citrate, *J. Am. Chem. Soc.*, 129, 13939–13948.

Kimling, J., Maier, M., Okenve, B., Kotaidis, V., Ballot, H., and Plech, A., 2006, Turkevich method for gold nanoparticle synthesis, *J. Chem. Phys.*, 110, 15700–15707.

Krishnamurthy, S. and Yun, Y., 2013, Recovery of microbially synthesized gold nanoparticles using sodium citrate and detergents, *Chem. Eng. J.*, 214, 253–261.

Kumar, S., Gandhi, K.S., and Kumar, R., 2007, Modeling of formation of gold nanoparticles by citrate method, *Ind. Eng. Chem. Res*, 46, 3128–3136.

Kunal, A.R. and Elavarasi, G.M., 2015, Interaction of citrate-capped gold nanoparticles with the selected amino thiols for sensing applications, *Proc. Natl. Acad. Sci. India B*, 1–8.

Lee, C., Kim, I., Yoon, C., Gong, M., Choi, K., Kim, K., and Joo, S., 2004, Size-dependent adsorption of 1,4-phenylenediisocyanide onto gold nanoparticle surfaces, *J. Colloid Interface Sci.*, 271, 41–46.

Li, Y., Wu, P., Xu, H., Zhang, Z., and Zhong, X., 2011, Highly elective and sensitive visualizable detection of Hg^{2+} based on anti-aggregation of gold nanoparticles, *Talanta*, 84, 508–12.

Liu, Z., Zu, Y., Fu, Y., Meng, R., Guo, S., Xing, Z., and Tan, S., 2010, Hydrothermal synthesis of histidine-functionalized single-crystalline gold nanoparticles and their pH-dependent UV absorption characteristic, *Colloids Surf., B*, 76, 311–316.

Lou, T., Wang, Y., and Li, J., 2011, Rapid detection of melamine with 4-mercaptopyridine-modified gold nanoparticles by surface-enhanced Raman scattering, *Anal. Chem.*, 401, 333–338.

Lugos, C.M.D., Lugos, M.D., Damulak, O.D., Perikala, V., Davou, G.I., Obeta, U.M., Banda, J.M., Oluwatayo, B.O., and Okwori, J.A.E., 2019, Assay linearity and spike-recovery assessment in optimization protocol for the analysis of serum cytokines by sandwich ELISA platform, *Am. J. Biomed. Sci. Res.*, 3, 178–183.

Maruyama, T., Fujimoto, Y., and Maekawa, T., 2015, Synthesis of gold nanoparticles using various amino acids, *J. Colloid Interface Sci.*, 447, 254–257.

Miretzky, P. and Cirelli, A.F., 2009, Hg(II) removal from water by chitosan and chitosan derivatives: a review, *J. Hazard. Mater.*, 167, 10–23.

Mu’awanah, A., 2016, Recovery emas menggunakan natrium sitrat dari hasil emas hasil adsorpsi-reduksi $[AuCl4]^-$ pada Mg/Al hidrotalsit yang terimobilisasi oleh asam salisilat, Skripsi S1. UGM, Yogyakarta.

Oliveira, E., Núñez, C., Santos, H.M., Fernández-Lodeiro, J., Fernández-Lodeiro, A., Capelo, J.L., and Lodeiro, C., 2015, Revisiting the use of gold and silver functionalised nanoparticles as colorimetric and fluorometric chemosensors for metal ions, *Sens. Actuators B Chem.*, 212, 297–328.

Pal, A., Shah, S., and Devi, S., 2007, Preparation of silver, gold and silver-gold bimetallic nanoparticles in w/o microemulsion containing TritonX-100, *Colloids Surf. A Physicochem. Eng. Asp.*, 302, 483–487.

Perrault, S.D. and Chan, W.C.W., 2009, Synthesis and surface modification of highly monodispersed , spherical gold nanoparticles of 50-200 nm, *J. Am. Chem. Soc.*, 131, 17042–17043.

Priyadarshini, E. and Pradhan, N., 2017, Chemical gold nanoparticles as efficient sensors in colorimetric detection of toxic metal ions : A review, *Sens. Actuators B Chem.*, 238, 888–902.

Schulz, F., Homolka, T., Bastu, N.G., Puntes, V., Weller, H., and Vossmeyer, T., 2014, Little adjustments significantly improve the Turkevich synthesis of gold nanoparticles, *J. Am. Chem. Soc.*, 30, 10779–10784.

Sener, G., Uzun, L., and Denizli, A., 2014a, Colorimetric sensor array based on gold nanoparticles and amino acids for identification of toxic metal ions in water, *ACS Appl. Mater. Interfaces*, 6, 1–13.

Sener, G., Uzun, L., and Denizli, A., 2014b, Lysine-promoted colorimetric response of gold nanoparticles: a simple assay for ultrasensitive mercury(II) detection, *Anal. Chem.*, 86, 514–520.

Sueli, P., Carolinne, N., and Douglas, W., 2018, Quantification and speciation of mercury in streams and rivers sediment samples from Paracatu , MG , Brazil , using a direct mercury analyzer®, *Microchem. J.*, 140, 199–206.

Sugunan, A., Thanachayanont, C., Dutta, J., and Hilborn, J.G., 2005, Heavy-metal ion sensors using chitosan-capped gold nanoparticles, *Sci. Technol. Adv. Mater.*, 6, 335–340.

Tripathy, S.K., Woo, J.Y., and Han, C.-S., 2013, Colorimetric detection of Fe(III) ions using label-free gold nanoparticles and acidic thiourea mixture, *Sens Actuators B Chem.*, 181, 114–118.

Turkevich, J., Stevenson, P.C., and Hiller, J., 1951, A study of the nucleation and growth processes in the synthesis of colloidal gold, *Faraday Discuss.*, 11, 55–75.

Tyagi, H., Kushwaha, A., Kumar, A., and Aslam, M., 2016, A facile pH controlled citrate-based reduction method for gold nanoparticle synthesis at room temperature, *Nanoscale Res. Lett.*, 11, 1–11.

Wang, H., Wang, Y., Jin, J., and Yang, R., 2008, Gold nanoparticle-based colorimetric and " turn-on " fluorescent probe for mercury(II) ions in aqueous solution, *Anal. Chem.*, 80, 9021–9028.

Willets, K.A. and Duyne, R.P. Van, 2006, Localized surface plasmon resonance spectroscopy and sensing, *Annu. Rev. Phys. Chem.*, 58, 267–297.

Yang, X., Liu, H., Xu, J., Tang, X., Huang, H., and Tian, D., 2011, A simple and cost-effective sensing strategy of mercury(II) based on analyte-inhibited aggregation of gold nanoparticles, *Nanotechnology*, 22, 1–6.

Yoosaf, K., Ipe, B.I., Suresh, C.H., and Thomas, K.G., 2007, In situ synthesis of metal nanoparticles and selective naked-eye detection of lead ions from aqueous media, *J. Chem. Phys.*, 111, 12839–12847.

Yu, L., Song, Z., Peng, J., Yang, M., Zhi, H., and He, H., 2020, Progress of gold nanomaterials for colorimetric sensing based on different strategies, *Trends Anal. Chem.*, 127, 115880.

Zabetakis, K., Ghann, W.E., Kumar, S., and Daniel, M., 2012, Effect of high gold salt concentrations on the size and polydispersity of gold nanoparticles prepared by an extended Turkevich – Frens method, *Gold Bull.*, 45, 203–211.

Zhao, Y., Gui, L., and Chen, Z., 2017, Chemical colorimetric detection of Hg^{2+} based on target-mediated growth of gold nanoparticles, *Sens. Actuators B Chem.*, 241, 262–267.