



DAFTAR PUSTAKA

- Ahmad, T., Bustam, M.A., Irfan, M., Moniruzzaman, M., Asghar, H.M.A., and Bhattacharjee, 2018, Green Synthesis of Stabilized Spherical Shaped Gold Nanoparticles Using Novel Aqueous Elaeis Guineensis (Oil Palm) Leaves Extract, *J. Mol. Struct.*, 1159, 167-173
- Ahmad, T., Irfan, M., Bustam, M.A., and Bhattacharjee, S., 2016, Effect of Reaction Time on Green Synthesis of Gold Nanoparticles by Using Aqueous Extract of Elaeis Guineensis (Oil Palm Leaves), *Procedia. Eng.*, 148, 467-472.
- Al-Akraa, I.M., Mohammad, A.M., El-Deab, M.S., and El-Anadouli, B.E, 2017, Flower-shaped Gold Nanoparticles: Preparation, Characterization, and Electrocatalytic Application, *Arab. J. Chem.*, 10, 877-884.
- Alaqad, K and Saleh, T.A., Gold and Silver Nanoparticles: Synthesis Methods, Characterization Routes and Applications Towards Drugs, *J. Environ. Anal. Toxicol.*, 6, 1-10.
- Alaqad, K., and Saleh, T. A., 2016, Gold and silver nanoparticles: synthesis methods, characterization routes and applications towards drugs. *J. Environ. Anal. Toxicol.*, 6(4), 525-2161.
- Anigol, L. B., Charantimath, J. S., and Gurubasavaraj, P. M., 2017, Effect of concentration and pH on the size of silver nanoparticles synthesized by green chemistry., *Org. Med. Chem. Int. J.*, 3(5), 1-5.
- Annur, S., Santosa, S.J., and Aprilita, N.H., 2018, pH Dependence of Size Control in Gold Nanoparticles Synthesized at Room Temperature, *Orient. J. Chem.*, 34(5), 2305-2312.
- Atun, S and Handayani, S., 2017., Synthesis of Nanoparticles Produced by Ethanol Extract of *Boesenbergia rotunda* Rhizome Loaded with Chitosan and Alginic Acid and its Biological Activity test, *Pharmacogn. J.*, 9(2), 142-147.



- Bac, L.H., Kim, J.S., and Kim, J.S., 2011, Size, Optical and Stability Properties of Gold Nanoparticles Synthesized by Electrical Explosion of Wire in Different Aqueous Media, *Rev. Adv. Mater. Sci.*, 28, 117-121.
- Bhattacharjee, 2018, Green Synthesis of Stabilized Spherical Shaped GoldNanoparticles Using
- Boken, J., Dalela, S., Sharma, C.K., & Kumar, D., 2013, Detection of Pathogenic Escherichia coli (E.coli) Using Robust Silver and Gold Nanoparticles, *J. Chem. Eng. Process. Technol.*, 4(8), 1-6.
- Borah, S. B. D., Bora, T., Baruah, S. and Dutta, J, 2015, Heavy Metal Ion Sensing in Water Using Surface Plasmon Resonance of Metallic Nanostructures., *Groundwat. Sust. Dev.*, 1(1-2), 1-11
- Brosnan, J.T., Brosnan, M.E., Bertolo, R.F.P., and Brunton, J.A., 2007, Methionine: A Metabolically Unique Amino Acid, *Livets. Sci.*, 112, 2-7.
- Byrne, Liam, John Barker, Gaëlle Pennarun-Thomas, Dermot Diamond, and Steve Edwards., 2000, Digital Imaging as a Detector for Generic Analytical Measurements. *TrAC, Trends Anal.Chem.*, 19(8), 517-522.
- Cantrell, K., M. M. Erenas, I. de Orbe-Paya, and L. F. Capitan-Vallvey., 2009, Use of the Hue Parameter of the Hue, Saturation, Value Color Space as a Quantitative Analytical Parameter for Bitonal Optical Sensors. *Anal. chem.*, 82(2), 531 -542.
- Chang, C. C., Chen, C. P., Chen, C. Y., & Lin, C. W., 2016, DNA Base-stacking Assay Utilizing Catalytic Hairpin Assembly-induced Gold Nanoparticle Aggregation for Colorimetric Protein Sensing. *Chem. Commun.*, 52(22), 4167-4170.
- Chen, S., Fang, Y.M., Xiao, Q., Li, J., Li, S.B., Chen, H.J., Sun, J.J., and Yang, H.H., 2012, Rapid Visual Detection of Aluminium Ion Using Citrate Capped Gold Nanoparticles, *Analyst*, 137, 2021-2023.
- Chen, W., He, S., Pan, W., Jin, Y., Zhang, W., and Jiang, X., 2010, Strategy for The Modification of Electrospun Fibers that Allows Diverse Functional Groups for Biomolecular Entrapment, *Chem. Mater.*, 22(23), 6212-6214.



- Chen, Y., Xianyu, Y., and Jiang, X., 2017, Surface Modification of Gold Nanoparticles with Small Molecules for Biochemical Analysis. *Acc. Chem. Res.*, 50(2), 310-319.
- Cho, S., Park, T. S., Reynolds, K. A., and Yoon, J. Y., 2017, Multi-normalization and Interpolation Protocol to Improve Norovirus Immunoagglutination Assay from Paper Microfluidics with Smartphone Detection. *SLAS TECHNOL: Translating Life Sciences Innovation*, 22(6), 609-615.
- Choi, Y., Lee, S., Lee, H., Lee, S., Kim, S., Lee, J., Ha, J., oh, H., Lee, Y., Kim, Y., and Yoon, Y., 2018, Rapid Detection of Escherichia coli in Fresh Food Using a Combination of Enrichment and PCR Analysis, *Korean J. Food. Sci. An.*, 4, 829-834.
- Choodum, A., Boonsamran, P., NicDaeid, N., and Wongniramaikul, W., 2015, On-site Semi-quantitative Analysis for Ammonium Nitrate Detection Using Digital Image Colourimetry., *Sci. Justice.*, 55(6), 437-445.
- Choodum, A., Parabun, K., Klawach, N., Daeid, N. N., Kanatharana, P., and Wongniramaikul, W., 2014, Real Time Quantitative Colourimetric Test for Methamphetamine Detection Using Digital and Mobile Phone Technology. *Forensic Sci. Int.*, 235, 8-13.
- Choodum, Aree, Proespichaya Kanatharana, Worawit Wongniramaikul, and Niamh Nic Daeid., 2013, Using the iPhone as a Device for a Rapid Quantitative Analysis of Trinitrotoluene in Soil. *Talanta*, 115: 143-149.
- Daima, H. K., Selvakannan, P. R., Shukla, R., Bhargava, S. K., and Bansal, V., 2013, Fine-tuning the Antimicrobial Profile of Biocompatible Gold Nanoparticles by Sequential Surface Functionalization Using Polyoxometalates and Lysine. *PloS one*, 8(10), 1-14.
- David, T., Grandivoriana, N. A., and Fidelis, N., 2018, Digital-based Image Detection System in Simple Silver Nanoparticles-based Cyanide Assays. *Res. J. Chem. Environ.*, 22, 10-14.
- Du, J., Shao, Q., Yin, S., Jiang, L., Ma, J., and Chen, X., 2012, Colorimetric Chemodosimeter Based on Diazonium–Gold- Nanoparticle Complexes for Sulfite Ion Detection in Solution., *Small*, 8(22), 3412-3416.



- Du, L., Jiang, H., Liu, X., and Wang, E., 2007, Biosynthesis of Gold Nanoparticles Assisted by Escherichia coli DH5a and its Application on Direct electrochemistry of hemoglobin, *Electrochem.*, 9, 1165-1170.
- Exum, N.G., Kosek, M.N., and Davis, M.F., 2017, Surface Sampling Collection and Culture Methods for Escherichia coli in Household Enviroments with High Fecal Contamination, *Int. J. Environ. Res. Public Health*, 14, 1-9
- Firdaus, M. L., Fitriani, I., Wyantuti, S., Hartati, Y. W., Khaydarov, R., Mcalister, J. A., ans Gamo, T., 2017, Colorimetric Detection of Mercury (II) Ion in Aqueous Solution Using Silver Nanoparticles. *Anal. Sci.*, 33(7), 831-837.
- Firdaus, M. Lutfi, Kazuhiro Norisuye, Taishi Sato, Shouhei Urushihara, Yusuke Nakagawa, Shigeo Umetani, and Yoshiki Sohrin., 2007, Preconcentration of Zr, Hf, Nb, Ta and W in Seawater Using Solid-phase Extraction on TSK-8-hydroxyquinoline Resin and Determination by Inductively Coupled Plasma-mass Spectrometry. *Anal. Chem* 583: 296-302.
- Firdaus, M., Andriana, S., Alwi, W., Swistoro, E., Ruyani, A., & Sundaryono, A., 2017, Green Synthesis of Silver Nanoparticles Using Carica Papaya Fruit Extract Under Sunlight Irradiation and their Colorimetric Detection of Mercury Ions., *J. Phys. Conf. Ser.*, 817
- Herizchi, R., Abbasi, E., Milani, M., & Akbarzadeh, A., 2014, Current Methods for Synthesis of Gold Nanoparticles, *Artif. Cells. Nanomed. Biotechnol.*, 44, 596-602.
- Horiba., 2017, *Guidebook to Particles Size Analysis*, Horiba Instrument INC, Irvine.
- Huang, X and El-sayed, M.A., 2010, Gold Nanoparticles: Optical Properties and Implementations in Cancer Diagnosis and Photothermal Therapy, *Int. J. Adv. Res.*, 1(1), 13-28.
- Husna, Q., 2012, Optimasi Konsentrasi Na-Sitrat dan Pengaruh Potensial dalam Sintesis Emas Nanopartikel, *Tesis.*, Institut Teknologi Sepuluh November, Surabaya.
- Hussain, N., Abro, M.I., Sherazi, S.T.H., and Hassan, S.S., 2011, Synthesis of L-methionine Stabilized Nickel Nanowires and their Application for



Catalytic Oxidative Transfer Hydrogenation of Isopropanol, *Appl. Catal. A.*, 400, 215-220.

Imtiaz, J., Hashmi, I., Saeed, A., Qazi, I., & Arshad, M., 2013, Development of PCR Protocol for Detection of Escherichia coli in Drinking Water., *WIT PRESS: Southampton, UK*, 225-232.

Jiang, T., Song, Y., Wei, T., Li, H., Du, D., Zhu, M. J., and Lin, Y., 2016, Sensitive detection of Escherichia coli O157: H7 using Pt–Au Bimetal Nanoparticles With Peroxidase-Like Amplification. *Biosens. Bioelectronics.*, 77, 687-694.

Khan, I., Saeed, K., and Khan, I., 2017, Nanoparticles: Properties, Applications and Toxicities, *Arab. J. Chem.*, 12(7), 908-931.

Kim, D., Heo, J., Kim, M., Lee, Y.W., and Han, S.W., 2009, Size-controlled Synthesis of Monodispere Gold Nanoctahedrons and their Surface-enhanced Raman Scattering Properties, *Chem. Phys. Lett.*, 468, 245-248.

Kumalasari, M.R., 2018, Sintesis Nanopartikel Emas Menggunakan Agen Pereduksi dan Penudung Serin sebagai Sarana Pendekksi Al^{3+} dalam Air Alam, *Tesis.*, Departemen Kimia FMIPA UGM, Yogyakarta.

Levkowitz, Haim, and Gabor T. Herman., 1993, GLHS: A Generalized Lightness, Hue, and Saturation Color Model. *CVGIP: Graphical Models and Image Processing.*, 55, 271 -285.

Liu, H., Rong, P., Jia, H., Yang, J., Dong, B., Dong, Q., and Liu, D., 2016, A Wash-free Homogeneous Colorimetric Immunoassay Method. *Theranostics*, 6(1), 54.

Lutfi, F. M., Juwita, M., Ibrahim, P. R., Rakhmawaty, E. D., and Iman, R., 2018, Biosynthesis of Silver Nanoparticles using Jicama Extract and Its Application for Colorimetric Sensing of Mercury Ions. *Research J.Chem. Environ.*, 22, 1-3.

Maier, S. A., 2007, *Plasmonics: Fundamentals and Applications.*, Vol. 1., New York, Springer.



- Manning, S.D., 2005, *Escherichia coli Infection*. Chelsea House Publisher, Philadelphia. Methods for Escherichia coli in Household Environments with High Fecal Contamination, *Int. J. Environ. Res. Public Health*, 14, 1-9.
- Narayan, R.L and Muthusamy. S., 2014, Preparation and Characterization of Gold Nanoparticles in Chitosan Suspension by One-pot Chemical Reduction Method, *Nano Hybrids*, 6, 47-57.
- Nita, R., Trammel, S.A., Ellis, G.A., Moore, M.H., Soto, C.M., Leary, D.H., Fontana, J., Talebzadeh, S.F., and Knight, D.A., 2016, Kinetic Analysis of the Hydrolysis of Methyl Parathion Using Citrate Stabilized 10 nm Gold Nanoparticles, *Chemosphere*., 144, 1916-1919.
- Priye, A., Ball, C. S., and Meagher, R. J., 2018., Colorimetric-luminance Readout for Quantitative Analysis of Fluorescence Signals with a Smartphone CMOS Sensor. *Anal. Chem.*, 90(21), 12385-12389.
- Rahme, K and Holmes, J.D., 2015, *Dekker Encyclopedia of Nanoscience and Nanotechnology*, 3rd Ed., CRC Press, Florida.
- Ramezani, F., Habibi, M., Rafii-Tabar, H., Amanlou, M., 2015, Effect of Peptide Length on the Conjugation to the Gold Nanoparticles Surface: A Molecular Dynamic Study., *DARU J. Pharm. Sci.* 23(9), 2-5.
- Raza, A., Javed, S., Qureshi, M.Z., Khan, M.U., Khan, M.K., 2017, Synthesis and Study of Catalytic Application of L-Methionine Protected Gold Nanoparticles, *Appl. Nanosci.*, 7(7), 429-437.
- Robert, H., 2014, The Organometallic Chemistry of The Transition Metals, Sixth Edition, Wiley: United States of America
- Safavi, A., N. Maleki, A. Rostamzadeh, and S. Maesum., 2007, CCD camera full range pH sensor array. *Talanta*., 71: 498-501.
- Su, H., Ma, Q., Shang, K., Liu, T., Yin, H., and Ai, S., 2015, Gold Nanoparticles as Colorimetric Sensor: A Case Study on E. coli O157:H7 as A Model for Gram-negative Bacteria, *Sens. Actuators. B Chem.*, 161, 298-303.
- Tambaru, D.; Rupilu, R.H.; Nitti, F.; Gauru, I.; Suwari., 2017, Development of Paper-Based Sensor Coupled with Smartphone Detector for Simple



- Creatinine Determination. In *AIP Conference Proceedings*; AIP Publishing: College Park, MD, USA., p. 0200951.
- Todar K., 2008, Pathogenic *E. Coli*, Online Textbook of Bacteriology. Ph.D. thesis. Department of Bacteriology. University of Wisconsin. www.textbookofbacteriology.net
- Trigo, B.C., Garcia, V.D., and Oyarzun, P., 2018, Slight pH fluctuations in the Gold Nanoparticles Synthesis Process Influence the Performance of the Citrate Reduction Method, *Sensors*, 8(7), 2246.
- Tyagi, H., Kushwaha, A., and Kumar, A., 2011, pH-Dependent Synthesis of Stabilized Gold Nanoparticles Using Ascorbic Acid, *Int. Nanosci.*, 10(4), 857-860.
- Wagers, K., Chui, T., and Adem, S., 2014, Effect of pH the Stability of Gold Nanoparticles and their Application for Melamine Detection in Infant Formula, *IOSR-JAC.*, 7(8), 15-20.
- Wu, Y., Ali, M.R.K., Chen, K., Fang, N., and El-Sayed, M.A., 2019, Gold Nanoparticles in Biological Optical Imaging, *Nano. Today*, 4, 120-140.
- Xie, X., Liao, J., Shao, X., Li, Q., and Lin, Y., 2017, The Effect of Shapes on Cellular Uptake of Gold Nanoparticles in the Form of Star, Rods, and Triangles, *Nature*, 7(1), 1-9.
- Xu, H.; Wang, Y.; Huang, X.; Li, Y.; Zhang, H.; Zhong, X., 2012, Hg^{2+} -Mediated aggregation of gold nanoparticles for colorimetric screening of biothiols. *Analyst.*, 137, 924–931.
- Xum, N.G., Kosek, M.N., Davis, M.F., and Schwab, K.J., 2017, Surface Sampling Collection and Culture Methods for Escherichia coli in Household Environments with High Fecal Contamination, *Int. J. Environ. Res. Public Health*, 4, 947-956.
- Yang, Y. C., and Tseng, W. L., 2016), 1, 4-Benzeneboronic-acid-induced aggregation of gold nanoparticles: application to hydrogen peroxide detection and biotin–avidin-mediated immunoassay with naked-eye detection., *Anal. Chem.*, 88(10), 5355-5362.



- Yang, Y. W.; Sun, Y. L.; Song, N, 2014, Switchable Host-Guest Systems on Surfaces, *Acc. Chem. Res.*, 47, 1950-1960.
- Zangheri, M., Cevenini, L., Anfossi, L., Baggiani, C., Simoni, P., Di Nardo, F., and Roda, A., 2015,. A simple and compact smartphone accessory for quantitative chemiluminescence-based lateral flow immunoassay for salivary cortisol detection. *Biosens. Bioelectronics*, 64, 63-68.
- Zha, J., Dong, C., Wang, X., Zhang, X.,Xiao, X., and Yang, X., 2017, Green Synthesis and Characterization of Gold Nanoparticles Using Ginkgo Biloba Leaf Extract, *Optik*, 144, 511-521.
- Zhang, H., Ma, X., Hu, S., Lin, Y., Guo, L., Qiu, B., and Chen, G., 2016, Highly sensitive visual detection of Avian Influenza A (H7N9) virus based on the enzyme-induced metallization. *Biosens. Bioelectronics.*, 79, 874-880.
- Zhang, L. P., Xing, Y. P., Liu, L. H., Zhou, X. H., and Shi, H. C., 2016, Fenton reaction-triggered colorimetric detection of phenols in water samples using unmodified gold nanoparticles. *Sens. Actuators B: Chemical*, 225, 593-599.
- Zhao, Y., Tian, Y., Cui, Y., Liu, W., Ma, W., and Jiang, X., 2010, Small Molecule-Capped Gold Nanoparticles as Potent Antibacterial Agent that Target Gram-Negative Bacteria, *J. Am. Chem. Soc.*, 132(35), 12349-12356.
- Zheng, T., Zhang, Q., Feng, S., Zhu, J. J., Wang, Q., and Wang, H., 2014, Robust nonenzymatic hybrid nanoelectrocatalysts for signal amplification toward ultrasensitive electrochemical cytosensing. *J. Am. Chem. Soc.*, 136(6), 2288-2291.