

DAFTAR PUSTAKA

- Abdullah, M. Arutanti, O. Isnaeni, V.A. Fitria, I. Amalia. Maturi. Aliah, H. dan Khairurijjal., 2011, Pengolahan Air Limbah dengan Material Struktur Nanometer, *Jurnal Seminar Kontribusi Fisika*, INV05.
- Ali, T.; Ahmed, A.; Alam, U.; Uddin, I.; Tripathi, P.; Muneer, M., 2018, Enhanced photocatalytic and antibacterial activities of Ag-doped TiO₂ nanoparticles under visible light, *Mater. Chem. Phys*, 212, 325–335.
- Andayuni. 2009. Pengolahan Air Minum Rumah Tangga. *Departemen Kesehatan Indonesia*. Jakarta.
- Ariyadi, T., dan Sintadewi. S., 2009, Pengaruh Sinar Ultraviolet terhadap Pertumbuhan Bakteri *Bacillus* sp sebagai Bakteri Kontaminan, *E Journal UNIMUS*, 2(2).
- Ariyani, N., and Sari, R. A., 2018, Doxycycline and Ciprofloxacin Resistance in *Escherichia coli* Isolated from Layer Feces. *Doctoral dissertation*. Universitas Airlangga.
- Ayu, D.I., 2015, Sintesis Nano TiO₂ menggunakan Metode Sol-Gel dengan Penambahan PEG sebagai Antimikroba, *Skripsi*, FMIPA, Universitas Negeri Semarang.
- Blvd. W, 2002, Technology Characterization: Steam Turbines, *M.sc thesis* University Arlington, Virginia.
- Boel, T., 2004, *Pseudomonas Aeruginosa*, *Erlangga*, Jakarta.
- Castro, C.A., Jurado, A., Sissa, D., and Giraldo, S.A., 2011, Performance of Ag-TiO₂ Photocatalyst towards the Photocatalytic Disinfection of Water under Interior-Lighting and Solar-Simulated Light Irradiations, *Hindawi Publishing Corporation Internatinal Journal of Photoenergy*, Volume 2012, ID 261045.
- Chen, S., Guo, Y., Zhong, H., and Chen, S., 2014, Synergistic Antibacterial Mechanism and Coating Application of Copper/Titanium Dioxide Nanoparticles, *Chem. Eng. J*, 256:238-246.
- Chen Y., Yang H., Liu X., and Guo L., 2010, Effects of Cocatalysts on Photocatalytic Properties of La Doped Cd₂TaGaO₆ Photocatalysts for Hydrogen Evolution from Ethanol Aqueous Solution. *Int. J. Hydrogen Energy*, 35:7029-7035.
- Chong, M., Jin, B., Chow, C.W.K., and Saint, C., 2010, Recent Developments in Photocatalytic Water Treatment Technology: A Review, *Water Res.*, 44, 2997-3027.
- Cribbs, T.P., and Dagon, T.J., 1986, Disposal of Small Volumes of Photographic Processing Solutions, *Kodak Publication*, Eastmen Kodak Company, New York.

- Dakal, T.C., Kumar, A., Majumdar, R.S., and Yadav, V., 2016, Mechanistic basis of antimicrobial actions of silver nanoparticles, *Front Microbiol*, 7, 1831.
- Dong, H., Zeng, G., Tang, L., Fan, C., Zhang, C., and He, X., 2015, An Overview on Limitations of TiO₂-Based Particles for Photocatalytic Degradation of Organic Pollutants and the Corresponding Countermeasures. *Water Res.* 79, 128–146.
- Farhataziz and Ross, B.A., 1977, Selected specific rates of reactions of transients from water in aqueous solution. III. Hydroxyl radical and perhydroxyl radical and their radical ions, *National Standard Reference Data Series*, N. B. o. Standards, Ed.
- Foster, H. A., Ditta, I. B., Varghese, S., and Steele, 2011, A Photocatalytic Disinfection Using Titanium Dioxide: Spectrum and Mechanism of Antimicrobial Activity, *Appl. Microbiol. Biotechnol*, 90(6), 1847–1868.
- Fujishima, A., Rao, T.N., and Tryk, D.A., 2000, Titanium Dioxide Photocatalyst, *J. Photoc. Photobio. C.*, 1, 1-21.
- Hanaor, D., and Sorrell, C., 2011, Review of the anatase to rutile phase transformation, *J. Mater. Sci*, Springer Verlag, 46 (4), pp.855-874.
- Hoffmann, M.R., Martin, S.T., Choi, W., and Bahnemann, D.W., 1995, Environmental Applications of Semiconductor Photocatalysis, *Chem. Rev.*, 95, 69–96.
- Huang, Z., Maness, P.C., Blake, D.M., Wolfrum, E.J., Smolinski, S.L., and Jacoby, W.A., 2000, Bactericidal Mode of Titanium Dioxide Photocatalysis, *J. Photochem, Photobiol. A: Chemistry*, 130 (2-3). 163-170.
- Hsu, Y., K. Lin, L. Hung, C. Hua, and C. Hsieh., 2001, Properties of PVA-PSA Hybrid Materials Prepared Through the Incorporation of Polysilicic Acid (PSA) into Polyvinyl Alcohol, *J. Polym. Res*, Vol. 8:125-132.
- Jia, J., Yamamoto, H. Okajima, T., and Shigesato, Y., 2016, On the Crystal Structural Control of Sputtered TiO₂ Thin Films, *Nano Lett*, 11:324.
- Kim, J., Cho M., Oh B., Choi S., and Yoon J., 2004, Control of Bacterial Growth in Water Using Synthesized Inorganic Desinfectant, *Chemosphere* 55:775-780.
- Kim, K.D., Han D.M., Lee, J.B, and Kim, H.T., 2006, Formation and Characterization of Ag-deposited TiO₂ Nanoparticles by Chemical Reduction Method, *Scripta Mater.*, 54, 143-146.
- Kim, K.J., Sung, W.S., Suh, B.K., Moon, S.K., Choi, J.S., Kim, J.G., and Lee, D.G., 2009, Antifungal activity and mode of action of silver nano-particles on *Candida albicans*, *BioMetals*, 22, 235–242.
- Ko, S., Banerjee, K.C., and Sankar, J., 2011, Photochemical Synthesis and Photocatalytic Activity in Simulated Light of Nanosized Ag Doped TiO₂ Nanoparticle Composite, *Composites Part B-Eng*, 42, 579-583.

- Kočí, K., Matějů, K., Obalová, L., Krejčíková, S., Lacný, Z., Plachá, D., Capek, L., Hospodkova, A., and Solcova, O., 2010, Effect of silver doping on the TiO₂ for photocatalytic reduction of CO₂, *Appl. Catal. B Environ.*, 96, 239–244.
- Lestari, N.D., 2019, Doping Ag dari Air Limbah Radiofotografi pada TiO₂ dan Uji Aktivitasnya pada Inhibisi Bakteri *Staphylococcus aureus*, *Tesis*, FMIPA, Universitas Gadjah Mada, Yogyakarta.
- McCharty and Mmeritt, 1999, Chemistry of Photography, *Chemical Heritage Foundation*, London.
- Merchant, I. A., and Parker R. A., 1961, Veterinary Bacterial and Virology, 6th Edition, Iowa, Iowa State University Press.
- Mei, S., Wang, H., Wang, W., Tong, L., Pan, H., Ruan, C., Ma, Q., Liu, M., Yang, H., Zhang, L., Cheng, Y., Zhang, Y., Zhao, L., and Chu, P.K., 2014, Antibacterial Effects and Biocompatibility of Titanium Surfaces with Garded Silver Incorporation in Titania Nanotubes, *Biomaterials*, 35, 4255-4265.
- Moat, A. G. and Foster J. W., 1988, Microbial Physiology, 2nd Ed. John Wiley and Sons. New York.
- Novarita, D., 2017, Pemanfaatan Limbah Radiofotografi sebagai Sumber Ag pada Pembuatan Fotokatalis TiO₂-Ag Nanopartikel untuk Bahan Antibakteri, *Tesis*, FMIPA, Universitas Gadjah Mada, Yogyakarta.
- Pasang, T., Namratha, K., Parvin, T., Ranganathaiah, C., and Byrappa, K., 2015, Tuning of Band Gap in TiO₂ and ZnO Nanoparticles by Selective Doping for Photocatalytic Applications, *Mater. Res. Innov.*, 19, 73–80.
- Pratiwi, S.T., 2008, Mikrobiologi Farmasi, Penerbit Erlangga, Jakarta.
- Prayitno dan Sukosrono, 2006, Sistem Reduktor Elektromagnetik untuk Penurunan Kadar Ag dalam Limbah Cair. *Prosiding PPI-PDIPTN*, 95-102.
- Rahmat, N., 2019, Aktivitas Antijamur TiO₂/Ag Nanopartikel Di bawah Penyinaran Cahaya Tampak, *Tesis*, FMIPA, Universitas Gadjah Mada, Yogyakarta.
- Rorh, U., Weber, S., Selenka, F., and Wilhelm, M., 2000, Impact of Silver and Copper on the Survival of Amoebae and Ciliated Protozoa In Vitro. *Int J Hyg Environ Health*, 203:87-89.
- Said, N.I., 2007, Disinfeksi Untuk Proses Pengolahan Air Minum, *JAI*, 1(3), 15-28.
- Samsudin, E.M., Goh, S.N., Wu, T.Y., Ling, T.T., Hamid, S.B.A and Juan, J.C., 2015, Evaluation on The Photocatalytic Degradation Activity of Reactive Blue 4 using Pure Anatase Nano-TiO₂, *Sains Malaysiana*, 44(7):1011-1019.
- Sholeh, M. A., 2018, Kuantitas Penggunaan Antibiotik dan Pola Resistensi *Escherichia coli* Flora Normal Usus di Ruang Rawat Intensif dan Ruang Rawat Tropik Infeksi di RSUD dr. Soetomo Surabaya. *Doctoral dissertation*. Universitas Airlangga.
- Silvestry-Rodriguez, N., Sicaros-Ruclas, E. E., Gerba, C. P. and Bright, K. B., 2007, Silver as Disinfectant, *Rev. Environ. Contam. Toxicol.* 191:23-45.

- Somasundaram, S., 2006, Novel Approaches to Photoassisted Deposition of Semiconductors and Nanocomposite Materials. *Disertasi*. Arlington: The University of Texas.
- Song . H. Y., Ko. K. K., Oh. H. I., Lee. B. T., 2006, Fabrication of Silver Nanoparticles and their Antimicrobial Mechanisms. *European Cell and Materials*. Vol. 1. Suppl. 1, 5.
- Songkroah, C., Nakbanpote, W., and Thiravetyan, P., 2004, Recovery of Silver Thiosilphate Complexs with Chitin, *Process Biochem*, 39: 1553-1559.
- Sontake, S., Mohan, C., Modak, J., and Madras, G., 2012, Visible light Photocatalytic Inactivation of *Escherichia coli* with Combustion Synthesized TiO₂, *Chem. Eng. J.*, 101–107.
- Sulistyo, 1971, Farmakologi dan Terapi. Liberty. Yogyakarta.
- Tsuji, M., Matsuda, K., Tanaka, M., Kuboyama, S., Uto, K., Wada, N., Kawazumi, H., Tsuji, T., Ago, H., and Hayashi, J., 2018, Enhanced Photocatalytic Degradation of Methyl Orange by Au/TiO₂ Nanoparticles under Neutral and Acidic Solutions. *Chemistry Select*, 3(5), 1432– 1438.
- Ubunchonlakate, K., Sikong, L., and Saito, F., 2012, Photocatalytic Disinfection of *P. Aeruginosa* Bacterial Ag-doped TiO₂ Film, *Procedia Engineer.*, 32, 656-662.
- Wahyudi, T., Sugiyana, D., dan Helmy, Q., 2011, Sintesis Nanopartikel Perak dan Uji Aktivitasnya terhadap Bakteri *E. coli* dan *S. Aureus*, *Arena Tekstil*, 26(1):1-6.
- Wahyuni, E.T., Roto, R., Novarita, D., Suwondo, K.P., and Kuswandi, B., 2019, Preparation of TiO₂/AgNPs by photodeposition method using Ag(I) present in radiophotography wastewater and their antibacterial activity in visible light illumination, *J. Environ. Chem. Eng.*, 7, 103178.
- Wahyuni, E.T., Roto, R., and Prameswari, M., 2019, Antibacterial Activity of TiO₂-Ag Nanoparticle under Visible Light, *Mater. Sci. Forum*, 948, 33–42.