DAFTAR PUSTAKA

Avetta, P., Pensato, A., Minella, M., Malandrino, M., Maurino, V., Minero, C., Hanna, K., Vione, D., 2015. Activation of persulfate by irradiated magnetite: implications for the degradation of phenol under heterogeneous photo-Fenton-like conditions. Environ. Sci. Technol. 49, 1043–1050.

Babu, P., dan K. Muthukumar. (2014). A review on Fenton and improvements to the Fenton process for wastewater treatment. Journal of Environmental Chemical Engineering 2(1):557–572.

Baker, M, 1999, Material Safety Data Sheet, Mallinckrodt baker, Inc, Phillipsburg, New York.

Barb, W.G., Baxendale, J.H., George, P., Hargrave, K.R., 1951. Reactions of ferrous and ferric ions with hydrogen peroxide. Part I.-the ferrous ion reaction. Trans. Faraday Soc. 47, 462–500

Benkelberg, H.J., P. Warneck,1995. Photodecomposition of Iron(III) Hydroxo and Sulfato Complexes in Aqueous Solution: Wavelength Dependence of OH and SO^{4-} Quantum Yields Physical Chemistry A 99

Brillas, E., Sirés, I., Oturan, M.A., 2009. Electro-Fenton process and related electrochemical technologies based on Fenton's reaction chemistry. Chem. Rev. 109, 6570–6631.

Capelo-Martınez JL, Ximénez-Embún P, Madrid Y, Cámara C. Advanced oxidation processes for sample treatment in atomic spectrometry. TrAC Trends Anal Chem 2004;23:331–4

Chang, Raymond. 2004. Kimia Dasar Konsep-Konsep Inti Edisi Ketiga Jilid 1. Jakarta: Erlangga

Chen, C.-Y., Wu, P.-S. and Chung, Y.-C. (2009) Coupled Biological and Photo-Fenton Pre-Treatment System for the Removal of Di-(2-ethylhexyl) Phthalate (DEHP) from Water. Bioresource Technology, 100, 4531-4534.

Chen, D., Sivakumar, M., & Ray, A. K. (2000b). Heterogeneous Photocatalysis in Environmental Remediation. Developments in Chemical Engineering and Mineral Processing, 8(5-6), 505-550.

Chen, Z., W. Weilin, Z. Zhengguo, and F. Xiaoming, 2013, High Efficiency Visible-Light-Druven Ag3PO4/AgI Photocatalysts: Z-Scheme Photocatalytic Mechanism for Their Enhanced Photocatalytic Activity, The Journal of Physical Chemistry, (117), pp 19346-19352.

Choi K, Kang T, Oh S-G. Preparation of disk shaped ZnO particles using surfactant and their PL properties. Mater Lett 2012;75

Chong, M.N., Jin, B., Chow, C.W.K., Saint, C., 2010. Recent developments in photo- catalytic water treatment technology: a review. Water Res. 44 (10), 2997-3027

Davis, A., Huang, C., 1989. Removal of phenols from water by a photocatalytic oxidation process. Water Sci. Technol. 21 (6-7), 455-464.

Deng Y, Zhao R. (2015). Advanced oxidation processes (AOPs) in wastewater treatment. Current Pollution Reports. 1(3):167–176.

Deng, Y., & Zhao, R. (2015). Advanced oxidation processes (AOPs) in wastewater treatment. Current Pollution Reports, 1(3), 167-176.

Dubbaka, S., 2008. Branched Zinc Oxide Nanostructures: Synthesis and Photo Catalysis Study for Application in Dye Sensitized Solar Cells, UMI Microform. ProQuest LLC, USA.

Duesterberg, C.K., Mylon, S.E., Waite, T.D., (2008). pH effects on iron-catalyzed oxidation using Fenton's reagent. Environ. Sci. Technol. 42, 8522–8527

Dutta, R.K., Nenavathu, B.P., Talukdar, S., 2014. Anomalous antibacterial activity and dye degradation by selenium doped ZnO nanoparticles. Colloids Surf. B Biointerfaces 114, 218e224.

Erhart, P., Albe, K., 2006. Diffusion of zinc vacancies and interstitials in zinc oxide. Appl. Phys. Lett. 88, 201918.

Fan, X.Q., Hao, H.Y., Wang, Y.C., Chen, F., Zhang, J.L., 2013. Fenton-like degradation of nalidixic acid with Fe3+/H2O2. Environ. Sci. Pollut. Res. 20, 3649–3656.

Faust, B. C., J. Hoigne, Photolysis of Fe (III)-hydroxy complexes as sources of OH radicals in clouds, fog and rain Atmospheric Environment 24 (1990) 79.

Fenton, H.J.H. (1894) Oxidation of tartaric acid in presence of iron. Journal of the Chemical Society, Transactions, 65, 899-910

Flynn, C.M., 1984. Hydrolysis of inorganic iron (III) salts. Chem. Rev. 84 (1), 31–41 Gallard, H., De Laat, J., Legube, B., 1999. Spectrophotometric study of the formation of iron (III)-hydroperoxy complexes in homogeneous aqueous solutions. Water Res. 33 (13), 2929–2936

Garcia JC, Takashima K. Photocatalytic degradation of imazaquin in an aqueous suspension of titanium dioxide. J Photochem Photobiol A. 2003;155:215–222.

Gharoy Ahangar E, Abbaspour-Fard MH, Shahtahmassebi N, Khojastehpour M, Maddahi P. Preparation and characterization of PVA/ZnO nanocomposite. J Food Process Preserv 2015;39:1442–51

Gouvêa C, Wypych F, Moraes SG, Durán N, Nagata N, Peralta-Zamora P. Semiconductor-assisted photocatalytic degradation of reactive dyes in aqueous solution. Chemosphere 2000; 40: 433-440.

H. Gallard, J. De Leet, B. Legube, 1998. Influence of pH on the rate of oxidation of organic compounds by FeII / H2O2. Reaction mechanisms and modeling, New Journal of Chemistry (22)263.

H. Shemer, Y. Kac´ar Kunukcu, K.G. Linden, 2006. Degradation of the pharmaceutical metronidazole via UV, Fenton and photo-Fenton processes, Chemosphere (63)269

Hapsari, V. L., & Kusumawati, Nita. 2013. Pengaruh Komposisi Larutan Cetak (PVDF/NMP) dan Non Solven (H_2O/C_2H_5OH) Terhadap Karakteristik Membran PVDF sebagai Bagian dari Teknologi Pengolahan Limbah Pewarna Industri Tekstil UNESA Journal of Chemistry Vol. 2, No 3

Haque, M.M., Muneer, M., Bahnemann, D.W., 2006. Semiconductor-mediated photocatalyzed degradation of a herbicide derivative, chlorotoluron, in aqueous suspensions. Environ. Sci. Technol. 40 (15), 4765e4770.

Hermosilla, D., M Cortijo, CP Huang, 2009. Optimizing the treatment of landfill leachate by conventional Fenton and photo-Fenton processes. Science of the Total Environment 407 (11), 3473-3481

Hindayani, N. A., 2012, Pengaruh Perbandingan TiO2-Urea terhadap Aktivitas Fotokatalis dalam Mendegradasi Fenol pada Limbah Cair Industri Batik menggunakan Sinar Matahari, Skripsi, Purwokerto: Fakultas Matematika dan Ilmu Pengetahuan Alam Universitas Jenderal Soedirman.

Hu, M.Q., Xu, Y.M., 2014. Visible light induced degradation of chlorophenols in the presence of H2O2 and iron substituted polyoxotungstate. Chem. Eng. J. 246, 299–305.

Huang, J., 2010, Adsorption Thermodynamics of Methyl Orange from Aqueous Solution onto a Hyper-cross-linked Polystyrene Resin Modified with Phenolic Hydroxy Groups, *Adsorption Science & Technology*, 28(5), 397-405.

Hug, S.J., O Leupin, 2003 Iron-catalyzed oxidation of arsenic (III) by oxygen and by hydrogen peroxide: pH-dependent formation of oxidants in the Fenton reaction. Environmental science & technology 37 (12), 2734-2742.

Hughes, W.L., Wang, Z.L., 2004. Formation of piezoelectric single-crystal nanorings and nanobows. J. Am. Chem. Soc. 126 (21), 6703e6709

Ifelebuegu, A.O., Ezenwa, C.P., 2011. Removal of endocrine disrupting chemicals in wastewater treatment by Fenton-like oxidation. Water Air Soil Poll. 217, 213–220.

Jagadish, C., Pearton, S., 2006. Zinc Oxide Bulk, Thin Films and Nanostructures, first ed. Elsevier Science, Gainesville USA.

Kantasubrata, 2008, Validasi Metode, Pusat Penelitian LIPI, Bandung.

Kantasubrata, J. 2008, Jaminan Mutu Data Hasil Pengujian : Kontrol Sampel dan Aplikasinya. RC Chem Learning Centre. Bandung.

Kathryn Reid. (2020, 19 Maret). Global water crisis: Facts, FAQs, and how to help. Diakses pada 10 desember 2020, dari https://www.worldvision.org/clean-water-news-stories/global-water-crisis-facts

Katsumata, H., Kaneco, S., Suzuki, T., Ohta, K., Yobiko, Y., 2006. Photo-Fenton degradation of alachlor in the presence of citrate solution. J. Photochem. Photobiol. A. 180, 38–45.

Katsumata, H., S. Kaneco, T. Suzuki, K. Ohta, Y. Yobiko, Chemical Engineering Journal 108 (2005) 269.Degradation of linuron in aqueous solution by the photo-Fenton reaction

King, D.S., Nix, R.M., 1996. Thermal stability and reducibility of ZnO and Cu/ZnO catalysts. J. Catal. 160, 76-83.

Kong, X.Y., Wang, Z.L., 2003. Spontaneous polarization-induced nanohelixes, nanosprings, and nanorings of piezoelectric nanobelts. Nano Lett. 3 (12), 1625e1631.

Kurniawan, 2010, Belajar Mudah SPSS untuk Pemula, Mediakom, Yogyakarta.

Liang S, Xiao K, Mo Y, Huang X. A novel ZnO nanoparticle blended polyvinylidene fluoride membrane for anti-irreversible fouling. J Memb Sci 2012;394:184–92

Luca A. D,, R.F. Dantas, S. Esplugas, Assessment of iron chelates efficiency for photo-Fenton at neutral pH, Water Res. 61 (2014) 232–242.

Maggard, P.A., Stern, C.L., Poeppelmeier, K.R., 2001. Understanding the role of helical chains in the formation of noncentrosymmetric solids. J. Am. Chem. Soc. 123 (31), 7742e7743.

Mahatmanti, F. W., and Sumarni, W., 2003. Kajian Termodinamika Penyerapan Zat Warna Indikator Metil Oranye (MO) dalam Larutan Air oleh Adsorben Kitosan. Jurnal Kimia Sains dan Aplikasi, [Online] Volume 6(2), pp. 13-18.

Malik, M. A., Ghaffar, A., and Malik, S. A., 2001, Water purification by electrical discharges, Plasma Sources Science And Technology, 10 82–91

Manurung, R.; Hasibuan, R. dan Irvan. 2004. Adsorpsi Zat Warna Methyl Orange Menggunakan Pasir Vulkanik gunung Berapi. Jurnal Penelitian Sumatera : Sumatera Utara.

Maria del C., Cotto-Maldonado., Teressa, C., Eduardo, E., Arancha GomesMartinez, Carmen, M., dan Francisco, M., 2013, Photocatalytic Degradation of Rhodamin-B Under UV-Visible Light Irradiation Using Different Nanostructured Catalysis, American Chemical Science Journal, Vol 3: 178-202.

Martínez-Huitle, C.A., Rodrigo, M.A., Sirés, I., Scialdone, O., 2016. Single and coupled electrochemical processes and reactors for the abatement of organic water pollutants: a critical review. Chem. Rev. 115 (24), 13362–13407

Meeker, R. E., Stabilization of hydrogen peroxide, US Pat., 3,208,606 (1965).

Michael I., Rizzo L., McArdell C.S., Manaia C.M., Merlin C., Schwartz T., Dagot C., Fatt-Kassino D. Urban wastewater treatment plants as hotspots for the release of antibiotics in the environment: A review. *Water Res.* 2013;47:957–995

Moore, D., Wang, Z.L., 2006. Growth of anisotropic one-dimensional ZnS nanostructures. J. Mater. Chem. 16 (40), 3898e3905.

Morkoç, H., Ozgür, Ü., 2009. Zinc Oxide: Fundamentals, Materials and Device € Technology, first ed. Wiley-VCH, UK

Nie, Y.L., Hu, C., Qu, J.H., 2008. Efficient photodegradation of acid red B by immobilized ferrocene in the presence of UVA and H2O2. J. Hazard. Mater. 154, 146–152.

Nieto, L.M., Hodaifa, G., Rodríguez, S., Giménez, J.A., Ochando, J., 2011. Degradation of organic matter in olive-oil mill wastewater through homogeneous Fenton-like reaction. Chem. Eng. J. 173, 503–510.

Nitoi, I., T Oncescu, P Oancea, 2013. Mechanism and kinetic study for the degradation of lindane by photo-Fenton process. Journal of Industrial and Engineering Chemistry 19 (1), 305-309

Ozgür, Ü., Alivov, Y.I., Liu, C., Teke, A., Reshchikov, M.A., Do € gan, S., Avrutin, V., Cho, S.-J., Morkoç, H., 2005. A comprehensive review of ZnO materials and devices. J. Appl. Phys. 98 (4), 041301.

Pang, S.Y., Jiang, J., Ma, J., 2010. Oxidation of sulfoxides and arsenic (III) in corrosion of nanoscale zero valent iron by oxygen: evidence against ferryl ions (Fe (IV)) as active intermediates in Fenton reaction. Environ. Sci. Technol. 45 (1), 307–312.

Pignatello, J.J., Oliveros, E., MacKay, A., 2006. Advanced oxidation processes for organic contaminant destruction based on the Fenton reaction and related chemistry. Crit. Rev. Env. Sci. Tec. 36 (1), 1–84.

Pliego, G., Xekoukoulotakis, N., Venieri, D., Zazo, J.A., Casas, J.A., Rodriguez, J.J., Mantzavinos, D., 2014. Complete degradation of the persistent antidepressant sertraline in aqueous solution by solar photo-Fenton oxidation. J. Chem. Technol. Biotechnol. 89, 814–818.

Porter, F.C., 1991. Zinc Handbook: Properties, Processing and Use in Design, first ed. Marcel Dekker, New York USA.

Prakampus, Gandjar, I.G., dan Rohman, A. 1998. Kimia Farmasi Analisis. Yogyakarta: Pustaka Pelajar Kementerian Kesehatan RI, 2010. Profil Kesehatan Indonesia.

Prawithasaria, R. E., Fadilaha, I., Mudjijoana, Saraswatia, T. E., 2015, Aktivitas Fotokatalitik Nano TiO_2 Terdukung Pada Membran Selulosa Asetat/Nata De Coco (Ca/Ndc) Dalam Reaksi Fotodegradasi Metilen Biru. ALCHEMY jurnal penelitian kimia, vol. 11 (2015), no. 1, hal. 90-101

Rajamanickam D, Shanthi M. Photocatalytic degradation of an organic pollutant by zinc oxide – solar process. Arab J Chem 2016;9:S1858–S1868.

Rauf MA, Ashraf SS. Fundamental principles and application of heterogeneous photocatalytic degradation of dyes in solution. Chem Eng J 2009;151:10–8.

Restuti, N. L., & Kusumawati, Nita. 2013. Pengaruh Komposisi Larutan Cetak (PVDF/NMP) dan Non Solven (H_2O/C_2H_5OH) Terhadap Karakteristik Membran PVDF sebagai Bagian dari Teknologi Pengolahan Limbah Pewarna Industri Tekstil UNESA Journal of Chemistry Vol. 2, No 3

Rodrigguez, M.L., Timokhin, V.I., Contreras, S., Chamarro, E., Esplugas, S., 2003. Rate equation for the degradation of nitrobenzene by Fenton-like reagent. Adv. Environ. Res. 7, 583–595.

S.M. Kim, A. Vogelpohl, 1998. Degradation of Organic Pollutants by the Photo-Fenton-Process Chemical Engineering & Technology (21)187.

San N, Hatipoglu A, Koçtürk G, Çınar Z. Prediction of primary intermediates and the photodegradation kinetics of 3-aminophenol in aqueous TiO suspensions. Journal of Photochemistry and 2 Photobiology A: Chemistry 139 (2001) 225-232.

Santos, M.S.F., Alves, A., Madeira, L.M., 2011. Paraquat removal from water by oxidation with Fenton's reagent. Chem. Eng. J. 175, 279–290.

Sawhney, R., dan Kumar, A. 2011. Congo Red (Azo dye) Decolourization by Local Isolate VT-II Inhabiting Dye Effluent Exposed Soil. International Journal of Environmental Science, 1.

Setyaningtyas, Tien., Kapti Riyani, Dian Windy Dwiasi, Ening Budhi Rahayu. (2018). Degradation of Phenol in Batik Wastewater Using Fenton Reagent under UV Rays.Jurnal Kimia VALENSI, Vol. 4, No. 1, Mei 2018 [26-33]

Shifu, C., Gengyu, C., 2005. Photocatalytic degradation of organophosphorus pesticides using floating photocatalyst TiO2 $ SiO2/beads by sunlight. Sol. Energy 79 (1), 1-9.

Simon Parsons 2004 Advanced oxidation processes for water and wastewater treatment Author: , Dr.; International Water Association. Publisher:London : IWA Publishing, 2004.

Song, W.J., Cheng, M.M., Ma, J.H., Ma, W.H., Chen, C.C., Zhao, J.C., 2006. Decomposition of hydrogen peroxide driven by photochemical cycling of iron species in clay. Environ. Sci. Technol. 40 (15), 4782–4787.

Staehelin, J., & Hoigne, J. (1985). Decomposition of ozone in water in the presence of organic solutes acting as promoters and inhibitors of radical chain reactions. Environmental Science and Technology, 19(12), 1206–1213.

Suhartati T, 2013. Dasar-dasar Spektrofotometri Uv-vis dan spektrometri Massa untuk Penentuan struktur Senyawa organic. Lampung: AURA.

Supriyanto, G., Nisak, K., Abdulloh, A., 2018, Dekolorisasi Air Limbah Pengolahan Gurita Dengan Metode AOT, Jurnal Kimia Riset, Surabaya : Universitas Airlangga.

Tamimi, M., Qourzal, S., Barka, N., Assabbane, A., Ait-Ichou, Y., 2008. Methomyl degradation in aqueous solutions by Fenton's reagent and the photo-Fenton system. Separation and Purification Technology 61, 103–108.

Theopold, P. F., Klaus, & Richard Langley et al. (2021, September 4). Integrated Rate Laws. OpenStax CNX. https://chem.libretexts.org/@go/page/38261

Utset, B., Garcia, J., Casado, J., Domènech, X., Peral, J., 2000. Replacement of H2O2 by O2 in Fenton and photo-Fenton ractions. Chemosphere 41, 1187–1192.

Venkatesh, S., Pandey, N. D., dan Quoff, A. R. 2014. Decolourization of Synthetic Dye Solution Containing Congo Red By Advanced Oxidation Procee (AOP). International Journal of Advanced Research in Civil, Structural, Environmental and Infrastucture Engineering and Developing, 2.

Walling, C. (1975) Fenton's Reagent Revisited. Accounts of Chemical Research, 8, 125-131.

Wang, Z.L., 2004. Zinc oxide nanostructures: growth, properties and applications. J. Phys. Condens. Matter 16 (25), R829eR858.

Wang, Z.P., Guo, Y.Z., Liu, Z.Z., Feng, X.N., Chen, Y.Q., Tao, T., 2015. Catechin as a new improving agent for a photo-Fenton-like system at near-neutral pH for the removal of inderal. Photochem. Photobiol. Sci. 14, 473–480

Widjayanti, Endang; Tutik, Regina; Utomo, Pranjoto, 2011. Pola adsorpsi Zeolit terhadap Pewarna Azo Metil merah dan Metil Jingga. Jurnal Penelitian. Yogyakarta : Universitas Negri Yogyakarta.

Xue, W.J., Huang, D.L., Zeng, G.M., Wan, J., Zhang, C., Xu, R., Cheng, M., Deng, R., 2018a. Nanoscale zero-valent iron coated with rhamnolipid as an effective stabilizer for immobilization of Cd and Pb in river sediments. J. Hazard. Mater. 341, 381–389.

Xue, W.J., Peng, Z.W., Huang, D.L., Zeng, G.M., Wan, J., Xu, R., Cheng, M., Zhang, C., Jiang, D.N., Hu, Z.X., 2018b. Nanoremediation of cadmium contaminated river sediments: microbial response and organic carbon changes. J. Hazard. Mater. 359, 290–299.

Yaneva, Z. L., dan Georgieva, N. V. 2012. Insight Into Congo Red Adsorption on Agro-Industrial Materials-Spectral, Equilibrium, Kinetic, Thermodynamic, Dynamic and Desorption Studies. A Review.International Review of Chemical Engineering, 4(2)

Yulius, O, 2010, Kompas IT Kreatif SPSS 18, Yogyakarta: Panser Pustaka

Zhang, Z., Wang, G., Li, W., Zhang, L., Chen, T., Ding, L., 2020b. Degradation of methyl orange through hydroxyl radical generated by optically excited biochar:performance and mechanism. Colloid. Surface. Physicochem. Eng. Aspect. 601, 125034.

Zhao, X.-K., G.-P. Yang, Y.-J. Wang, X.-C. Gao, 2004. Photochemical degradation of dimethyl phthalate by Fenton reagent. Photochemistry and Photobiology A: 1474 Chemistry (161)215.

Zhong, L., W., (2004). Zinc oxide nanostructures: growth, properties and applications. Journal of Physics: Condensed Matter, Volume 16, Number 25