



DAFTAR PUSTAKA

- Acton, Q.A., 2013, *Oxidoreductases-Advances in Research and Application*, Scholarly Editions TM, Georgia.
- Alaya, M.N., Girgis, B.S., dan Mourad, W.E., 2000, Activated Carbon from Some Agricultural Wastes under Action of One-Step Steam Pyrolysis, *J. Porous Mater.*, 7, 509–517.
- Awaluddin, R., Ibrahim, D., Omar, I.C., dan Manaf, U.A., 2001, Decolourization of Commercially Available Synthetic Dyes by the White Rot Fungus *Phanerochaete chrysosporium* ME446 (ATCC 34541), *NSF Workshop Proceedings*, Kuala Lumpur.
- Bilal, M., Asgher, M., Parra-Saldivar, R., Hu, H., Wang, W., Zhang, X., dan Iqbal, H.M.N., 2017, Immobilized Ligninolytic Enzymes: An Innovative and Environmental Responsive Technology to Tackle Dye-Based Industrial Pollutants – A Review, *Sci. Total Environ.*, 576, 646–659.
- Bouchelta, C., Medjram, M.S., Bertrand, O., dan Bellat, J.P., 2008, Preparation and Characterization of Activated Carbon from Date Stones by Physical Activation with Steam, *J. Anal. Appl. Pyrolysis*, 82, 70–77.
- Camarero, S., Ibarra, D., Martínez, M.J., dan Martínez, A.T., 2005, Lignin-Derived Compounds as Efficient Laccase Mediators for Decolorization of Recalcitrant Dye, *Appl. Environ. Microbiol.*, 71, 1775–1784.
- Chandra, R., 2015, *Advances in Biodegradation and Bioremediation of Industrial Waste*, CRC Press, Florida.
- Chaurasia, P.K., Shanker, R., Yadav, S., dan Yadava, S., 2013, A Review on Mechanism of Laccase Action, *RBBS*, 7, 66–71.
- Cheng, X., Jia, R., Li, P., Tu, S., Zhu, Q., Tang, W., dan Li, X., 2007, Purification of a New Manganese Peroxidase of the White-Rot Fungus *Schizophyllum sp.* F17 and Decolorization of Azo Dyes by the Enzyme, *Enzyme Microb. Technol.*, 41, 258–264.
- Dwiyanti, D. dan Kuswytasari, N.D., 2016, Imobilisasi Enzim Ligninolitik Kapang Tanah pada Bentonit. *J. Sains dan Seni ITS*, 5, 77–82.
- El-Batal, A.I., Elkenawy, N.M., Yassin, A.S., dan Amin, M.A., 2014, Laccase Production by *Pleurotus ostreatus* and Its Application in Synthesis of Gold Nanoparticles, *Biotechnol. Reports*, 5, 31–39.
- Faruk, O. dan Sain, M., 2016, *Lignin in Polymer Composites*, Elsevier Inc., Massachusetts.



- Foo, K.Y. dan Hameed, B.H., 2013, Utilization of Oil Palm Biodiesel Solid Residue as Renewable Sources for Preparation of Granular Activated Carbon by Microwave Induced KOH Activation, *Bioresour. Technol.*, 130, 696–702.
- Hadibarata, T. dan Kristanti, R.A., 2012, Effect of Environmental Factors in the Decolorization of Remazol Brilliant Blue R, *J. Chil. Chem. Soc.*, 2, 1095–1098.
- Hakala, T.K., 2007, *Characterization of the Lignin-Modifying Enzymes of the Selective White-Rot Fungus Physisporinus Rivulosus*, Department of Applied Chemistry and Microbiology University of Helsinki, Helsinki.
- Hameed, B.H., Din, A.T.M., dan Ahmad, A.L., 2007, Adsorption of Methylene Blue onto Bamboo-Based Activated Carbon: Kinetics and Equilibrium Studies, *J. Hazard. Mater.*, 141, 819–825.
- Haryadi, W., Muchalal, dan Cahyono, R.N., 2005, Pembuatan Karbon Aktif dari Kayu Randu dan Tempurung Kelapa dengan Proses Distilasi Kering Menggunakan Tanur dari Gerabah, *Indo. J. Chem.*, 5, 121–124.
- Jin, X.C., Liu, G.Q., Xu, Z.H., dan Tao, W.Y., 2007, Decolorization of a Dye Industry Effluent by Aspergillus Fumigatus XC6, *Appl. Microbiol. Biotechnol.*, 74, 239–243.
- Jóźwiak, T., Filipkowska, U., Szymczyk, P., Rodziewicz, J., dan Mielcarek, A., 2017, Effect of Ionic and Covalent Crosslinking Agents on Properties of Chitosan Beads and Sorption Effectiveness of Reactive Black 5 Dye, *React. Funct. Polym.*, 114, 58–74.
- Kaushik, P. dan Malik, A., 2009, Fungal Dye Decolourization : Recent Advances and Future Potential, *Environ. Int.*, 35, 127–141.
- Khani, A., Sohrabi, M.R., Khosravi, M., dan Davallo, M., 2012, Decolorization of an Azo Dye from Aqueous Solution by Nano Zero-Valent Iron Immobilized on Perlite in Semi Batch Packed Bed Reactor, *Fresenius Environ. Bull.*, 21, 2153–2159.
- Kumar, A.G., Swarnalatha, S., Kamatchi, P., Kirubagaran, R., Perinbam, K., dan Sekaran, G., 2009, Immobilization of Proteolytic Enzyme on Highly Porous Activated Carbon Derived from Rice Bran, *J. Porous Mater.*, 16, 439–445.
- Kunamneni, A., Ghazi, I., Camarero, S., Ballesteros, A., Plou, F.J., dan Alcalde, M., 2008, Decolorization of Synthetic Dyes by Laccase Immobilized on Epoxy-Activated Carriers, *Process Biochem.*, 43, 169–178.
- Kuznetsov, A.E. dan Zaikov, G.E., 2006, *New Research on the Environment and Biotechnology*, Nova Science Publishers Inc., New York.



Lehninger, A.L., 1982, *Principles of Biochemistry*, Worth Publisher Inc., New York.

Marlinda dan Nadir, 2014, Pengelolaan Limbah Organik Lokal Kalimantan Timur menjadi Produk yang Berdaya Hasil Guna, *Prosiding Seminar Nasional Teknologi Industri II ATIM 2014*, Samarinda.

Nicholas, D., 1973, Biological Control of Decay in Standing by Preservative Treatments, *J. Wood. Sci.*, 7, 6–9.

Ningsih, Y.A., Lubis, K.R., dan Moeksin, R., 2012, Pembuatan Bioetanol dari Tandan Kosong Kelapa Sawit (TKKS) dengan Metode Hidrolisis Asam dan Fermentasi, *J. Tek. Kim.*, 18, 30–34.

Pallarés, J., González-cencerrado, A., dan Arauzo, I., 2018, Biomass and Bioenergy Production and Characterization of Activated Carbon from Barley Straw by Physical Activation with Carbon Dioxide and Steam, *Biomass and Bioenergy*, 115, 64–73.

Pezzella, C., Russo, M.E., Marzocchella, A., Salatino, P., dan Sannia, G., 2014, Immobilization of a Pleurotus Ostreatus Laccase Mixture on Perlite and Its Application to Dye Decolourisation, *Biomed Res. Int.*, 2014, 1–11.

Radha, K. V., Regupathi, I., Arunagiri, A., dan Murugesan, T., 2005, Decolorization Studies of Synthetic Dyes Using Phanerochaete Chrysosporium and Their Kinetics, *Process Biochem.*, 40, 3337–3345.

Ramírez-Montoya, L.A., Hernández-Montoya, V., Montes-Morán, M.A., dan Cervantes, F.J., 2015, Correlation Between Mesopore Volume of Carbon Supports and the Immobilization of Laccase from *Trametes versicolor* for the Decolorization of Acid Orange 7, *J. Environ. Manage.*, 162, 206–214.

Rubcumintara, T., 2015, Adsorptive Recovery of Au(III) from Aqueous Solution Using Modified Bagasse Biosorbent, *Int. J. Chem. Eng. Appl.*, 6, 95–100.

Saratale, R.G., Saratale, G.D., Chang, J.S., dan Govindwar, S.P., 2011, Bacterial Decolorization and Degradation of Azo Dyes: A Review, *J. Taiwan Inst. Chem. Eng.*, 42, 138–157.

Sarayu, K. dan Sandhya, S., 2012, Current Technologies for Biological Treatment of Textile Wastewater – A Review, *Appl. Biochem. Biotechnol.*, 167, 645–661.

Şentorun-Shalaby, Ç., Uçak-Astarlıoğlu, M.G., Artok, L., dan Sarıcı, Ç., 2006, Preparation and Characterization of Activated Carbons by One-Step Steam Pyrolysis/Activation from Apricot Stones, *Microporous Mesoporous Mater.*, 88, 126–134.



Singh, R., 2002, *Synthetic Dyes*, Mittal Publications, New Delhi.

Singh, R. dan Dutta, P.K., 1999, Use of Surface-Modified Zeolite Y for Extraction of Metal Ions from Aqueous to Organic Phase, *Microporous Mesoporous Mater.*, 32, 29–35.

Singh, R.L., Singh, P.K., dan Singh, R.P., 2015, Enzymatic Decolorization and Degradation of Azo Dyes - A Review, *Int. Biodeterior. Biodegrad.*, 104, 21–31.

Tan, I.A.W., Ahmad, A.L., dan Hameed, B.H., 2008, Adsorption of Basic Dye on High-Surface-Area Activated Carbon Prepared from Coconut Husk: Equilibrium, Kinetic and Thermodynamic Studies, *J. Hazard. Mater.*, 154, 337–346.

Tian, S., Mo, H., Zhang, R., Ning, P., dan Zhou, T., 2009, Enhanced Removal of Hydrogen Sulfide from a Gas Stream by 3-Aminopropyltriethoxysilane-Surface-Functionalized Activated Carbon, *Adsorption*, 15, 477–488.

Torres, J.A., Nogueira, F.G.E., Silva, M.C., Lopes, J.H., Tavares, T.S., Ramalho, T.C., dan Corrêa, A.D., 2017, Novel Eco-Friendly Biocatalyst: Soybean Peroxidase Immobilized onto Activated Carbon Obtained from Agricultural Waste, *RSC Adv.*, 7, 16460–16466.

Weigel, C. dan Kellner, R., 1989, FTIR-ATR-Spectroscopic Investigation of the Silanization of Germanium Surfaces with 3-Aminopropyltriethoxysilane, *Fresenius' Zeitschrift für Anal. Chemie*, 335, 663–668.

Xu, W., Yong, Y., Wang, Z., Jiang, G., Wu, J., dan Liu, Z., 2017, Concanavalin A Coated Activated Carbon for High Performance Enzymatic Catalysis, *ACS Sustain. Chem. Eng.*, 5, 90–96.

Yagub, M.T., Sen, T.K., Afrose, S., dan Ang, H.M., 2014, Dye and Its Removal from Aqueous Solution by Adsorption: A Review, *Adv. Colloid Interface Sci.*, 209, 172–184.

Zaoyan, Y., Ke, S., Guangliang, S., Fan, Y., Jinshan, D., dan Huanian, M., 1992, Anaerobic-Aerobic Treatment of a Dye Wastewater by Combination of RBC with Activated Sludge, *Water Sci. Technol.*, 26, 2093–2096.