

DAFTAR PUSTAKA

- Adelia, J. (2012). *Imobilisasi TiO₂ Ke dalam Resin Penukar Kation Sebagai Fotokatalis Pada Fotodegradasi Zat Warna Kuning Metanil*. 4(3), 2003–2005.
- Andara, D. R., Haeruddin, & Suryanto, A. (2014). Kandungan Total Padatan Tersuspensi, Biochemical Oxygen Demand dan Chemical Oxygen Demand Serta Indeks Pencemaran Sungai Klampisan di Kawasan Industri Candi, Semarang. *Diponegoro Journal of Maquares*, 3(3), 177–187.
- Bethi, B., Sonawane, S. H., Bhanvase, B. A., & Gumfekar, S. P. (2016). Nanomaterials-based advanced oxidation processes for wastewater treatment: A review. *Chemical Engineering and Processing: Process Intensification*, 109, 178–189. <https://doi.org/10.1016/j.cep.2016.08.016>
- Bouzid, H., Faisal, M., Harraz, F. A., Al-Sayari, S. A., & Ismail, A. A. (2015). Synthesis of mesoporous Ag/ZnO nanocrystals with enhanced photocatalytic activity. *Catalysis Today*, 252, 20–26. <https://doi.org/10.1016/j.cattod.2014.10.011>
- Chang,R. (2005). Kimia Dasar Konsep-Konsep Inti Edisi Ketiga Jilid 2. Jakarta: Erlangga
- Chen, C., Zhang, X., Zhu, L., He, W., & Han, H. (2011). Changes in different organic matter fractions during conventional treatment and advanced treatment. *Journal of Environmental Sciences*, 23(4), 582–586. [https://doi.org/10.1016/S1001-0742\(10\)60423-8](https://doi.org/10.1016/S1001-0742(10)60423-8)
- Choi, K., Kang, T., & Oh, S. G. (2012). Preparation of disk shaped ZnO particles using surfactant and their PL properties. *Materials Letters*, 75, 240–243. <https://doi.org/10.1016/j.matlet.2012.02.031>
- Cornelissen, E. R., Moreau, N., Siegers, W. G., Abrahamse, A. J., Rietveld, L. C., Grefte, A., Dignum, M., Amy, G., & Wessels, L. P. (2008). Selection of

- anionic exchange resins for removal of natural organic matter (NOM) fractions. *Water Research*, 42(1–2), 413–423.
<https://doi.org/10.1016/j.watres.2007.07.033>
- de Lasa, H., Serrano, B., & Salaices, M. (2005). Photocatalysts, Radiation Sources and Auxiliary Equipment for Photocatalysis. *Photocatalytic Reaction Engineering*, 49–62. https://doi.org/10.1007/0-387-27591-6_3
- Demir, M. M., Muñoz-Espí, R., Lieberwirth, I., & Wegner, G. (2006). Precipitation of monodisperse ZnO nanocrystals via acid-catalyzed esterification of zinc acetate. *Journal of Materials Chemistry*, 16(28), 2940–2947. <https://doi.org/10.1039/b601451h>
- Hamid, R. A. (2020). *Buku ajar guru laju reaksi*.
- Han, F., Kambala, V. S. R., Srinivasan, M., Rajarathnam, D., & Naidu, R. (2009). Tailored titanium dioxide photocatalysts for the degradation of organic dyes in wastewater treatment: A review. *Applied Catalysis A: General*, 359(1–2), 25–40. <https://doi.org/10.1016/j.apcata.2009.02.043>
- Herrmann, M. (1999). Heterogeneous photocatalysis: fundamentals and applications to the removal of various types of aqueous pollutants. *Catalysis Today*, 3, 257–264. <https://doi.org/10.1115/IMECE200743738>
- Hidayah, E. N., & Cahyonugroho, O. H. (2019). Tracking of Dissolved Effluent Organic Matter (dEfOM) in wastewater treatment plant by using fluorescence method. *IOP Conference Series: Earth and Environmental Science*, 245(1). <https://doi.org/10.1088/1755-1315/245/1/012018>
- Hutami, D. E., Mochtar, H., & Veny, L. (2016). Penurunan Kadar Cod Dan Tss Pada Limbah Tekstil Dengan Metode Ozonasi. *Jurnal Teknik Lingkungan*, 5(1), 1–11.
- Irfani, D, A., Fauzul, A, M., Retno, D. (2020). *APPLICATION OF TiO₂ -SiO₂ PHOTOCATALYS TO REDUCE BOD*. September, 1–6.

- Kasprzyk-Hordern, B., Raczyk-Stanisławiak, U., Świetlik, J., & Nawrocki, J. (2006). Catalytic ozonation of natural organic matter on alumina. *Applied Catalysis B: Environmental*, 62(3–4), 345–358.
<https://doi.org/10.1016/j.apcatb.2005.09.002>
- Kaswinarni, F. (2007). Kajian Teknis Pengolahan Limbah Padat Dan Cair Industri Tahu (Studi Kasus Industri Tahu Tandang Semarang, Sederhana Kendal, dan Gagak Sipat Boyolali). *Tesis*, 1–83.
- Keenan, Charles W. dkk. Ilmu Kimia Untuk Universitas Jilid 1, Ed. Ke6, Terj. Aloysius Hadyana Pudjaatmaka, Jakarta: Erlangga, Tt.
- Kennedy, M. D., Chun, H. K., Quintanilla Yangali, V. A., Heijman, B. G. J., & Schippers, J. C. (2005). Natural organic matter (NOM) fouling of ultrafiltration membranes: Fractionation of NOM in surface water and characterisation by LC-OCD. *Desalination*, 178(1-3 SPEC. ISS.), 73–83.
<https://doi.org/10.1016/j.desal.2005.02.004>
- Khopkar, S.M., 1990, *Konsep Dasar Kimia Analitik (Penerjemah: A. Saptoharjo)*, Jakarta, Universitas Indonesia Press. Hal 108-110
- Laxma Reddy, P. V., Kavitha, B., Kumar Reddy, P. A., & Kim, K. H. (2017). TiO₂-based photocatalytic disinfection of microbes in aqueous media: A review. *Environmental Research*, 154(January), 296–303.
<https://doi.org/10.1016/j.envres.2017.01.018>
- Lestari, D. E., & Utomo, S. B. (2007). Karakteristik kinerja resin penukar ion pada sistem air bebas mineral (GCA 01) RSG-gas. *Seminar Nasional III, November*, 21–22.
- Levenspiel, O. (2008). Chemical Reaction Engineering Third Edition. In *Albright's Chemical Engineering Handbook*.
<https://doi.org/10.1201/9781420087567-13>
- Liang, S., Xiao, K., Mo, Y., & Huang, X. (2012). A novel ZnO nanoparticle

- blended polyvinylidene fluoride membrane for anti-irreversible fouling. *Journal of Membrane Science*, 394–395, 184–192.
<https://doi.org/10.1016/j.memsci.2011.12.040>
- Lisi, D. (2002). *Self-cleaning in glass lasers*. 1–29.
- Matilainen, A., Iivari, P., Sallanko, J., Heiska, E., & Tuhkanen, T. (2006). The role of ozonation and activated carbon filtration in the natural organic matter removal from drinking water. *Environmental Technology*, 27(10), 1171–1180. <https://doi.org/10.1080/09593332708618731>
- Meena, K., Saini, S. R., & Meena, R. C. (2016). *Studies of Dye Sensitization for Solar Energy Conversion in to Electrical Energy in Congo Red EDTA System, Energy Sources Part A recovery Utilization and Environmental Effects*. 5(12), 432–439.
- Meena, R. C., & Pachwarya, R. B. (2009). Photo catalytic degradation of model textile azo dyes in textile wastewater using methylene blue immobilized resin dowex-11. *Journal of Scientific and Industrial Research*, 68(8), 730–734.
- Molinari, R., Lavorato, C., & Argurio, P. (2017). Recent progress of photocatalytic membrane reactors in water treatment and in synthesis of organic compounds. A review. *Catalysis Today*, 281, 144–164.
<https://doi.org/10.1016/j.cattod.2016.06.047>
- Morkoç, H., & Özgür, Ü. (2009). General Properties of ZnO. In *Zinc Oxide*.
<https://doi.org/10.1002/9783527623945.ch1>
- Nohong. (2010). Pemanfaatan Limbah Tahu Sebagai Bahan Penyerap Logam Krom, Kadmiun dan Besi Dalam Air Lindi TPA. *Jurnal Pembelajaran Sains*, 6(2), 257–269.
- Ong, C. B., Ng, L. Y., & Mohammad, A. W. (2018). A review of ZnO nanoparticles as solar photocatalysts: Synthesis, mechanisms and applications. *Renewable and Sustainable Energy Reviews*, 81(July 2016),

- 536–551. <https://doi.org/10.1016/j.rser.2017.08.020>
- Pachwarya, R. B., & Meena, R. C. (2011). Degradation of Azo dyes ponceau S, S-IV from the wastewater of textile industries in a new photocatalytic reactor with high efficiency using recently developed photocatalyst MBIRD-11. *Energy Sources, Part A: Recovery, Utilization and Environmental Effects*, 33(18), 1651–1660. <https://doi.org/10.1080/15567036.2011.577654>
- Pachwarya, R.B., Rang, M.M., Ramanathan, A.L. (2019a). *Degradation Of MCIBV 14: Using Heterocyclic Dye Based Photocatalyst Methylene Blue Immobilized Resin Dowex 11 and TiO2 Nano Particles Mixture 1:1, Heterocyclic Letters*. 9(3), 265-272
- Pachwarya, R.B., Meena, R.C., Ramanathan, A.L. (2019b). *Transformation Of Heterocyclic Dye Methylene Blue Through Zno Nano Particle Catalyst*. *Heterocyclic Letters*. Volume 9 Issue 3, 2019, Page 225-235,
- Petrucci, Ralph H. Kimia Dasar, Jilid 2, Cet. Ke4, terj. Suminar Achmadi, Jakarta: Erlangga, 1987.
- Pristancho, J. F. (2011). *DEGRADASI FOTOKATALITIK SURFAKTAN NaLS* (.
- Purba, L. S. L. (2020). Kimia Fisika 1. In *Kimia Fisika*.
- Putri, A. K. (2014). Efektivitas discovery learning pada materi pokok laju reaksi terhadap hasil belajar dan kreativitas belajar peserta didik SMK Penerbangan Kartika Aqasa Bhakti Semarang. *Paper Knowledge . Toward a Media History of Documents*, 11–43.
- Quaranta, M. L., Mendes, M. D., & MacKay, A. A. (2012). Similarities in effluent organic matter characteristics from Connecticut wastewater treatment plants. *Water Research*, 46(2), 284–294.
<https://doi.org/10.1016/j.watres.2011.10.010>
- Radecka, M., Rekas, M., Trenczek-Zajac, A., & Zakrzewska, K. (2008).

- Importance of the band gap energy and flat band potential for application of modified TiO₂ photoanodes in water photolysis. *Journal of Power Sources*, 181(1), 46–55. <https://doi.org/10.1016/j.jpowsour.2007.10.082>
- Savira, F., & Suharsono, Y. (2013). Bahaya Limbah Cair Tahu Bagi Lingkungan. *Journal of Chemical Information and Modeling*, 01(01), 1689–1699.
- Shon, H. K., Vigneswaran, S., & Snyder, S. A. (2006). Effluent organic matter (EfOM) in wastewater: Constituents, effects, and treatment. *Critical Reviews in Environmental Science and Technology*, 36(4), 327–374.
<https://doi.org/10.1080/10643380600580011>
- Sohrabnezhad, S., & Seifi, A. (2016). The green synthesis of Ag/ZnO in montmorillonite with enhanced photocatalytic activity. *Applied Surface Science*, 386, 33–40. <https://doi.org/10.1016/j.apsusc.2016.05.102>
- Tani, T., Mädler, L., & Pratsinis, S. E. (2002). Homogeneous ZnO nanoparticles by flame spray pyrolysis. *Journal of Nanoparticle Research*, 4(4), 337–343.
<https://doi.org/10.1023/A:1021153419671>
- Tjahjanto, R. T., & Gunlazuardi, J. (2014). Preparasi Lapisan Tipis TiO₂ sebagai Fotokatalis : Keterkaitan antara Ketebalan Preparasi Lapisan Tipis TiO₂ sebagai Fotokatalis : Keterkaitan antara Ketebalan dan Aktivitas Fotokatalisis. *Jurnal Penelitian Universitas Indonesia*, 5(2)(December 2001), 81–91.
- Uyguner-Demirel, C. S., Birben, N. C., & Bekbolet, M. (2017). Elucidation of background organic matter matrix effect on photocatalytic treatment of contaminants using TiO₂: A review. *Catalysis Today*, 284, 202–214.
<https://doi.org/10.1016/j.cattod.2016.12.030>
- Velten, S., Knappe, D. R. U., Traber, J., Kaiser, H. P., von Gunten, U., Boller, M., & Meylan, S. (2011). Characterization of natural organic matter adsorption in granular activated carbon adsorbers. *Water Research*, 45(13), 3951–3959.

<https://doi.org/10.1016/j.watres.2011.04.047>

Yahya, N., Aziz, F., Jamaludin, N. A., Mutalib, M. A., Ismail, A. F., Salleh, W. N., Jaafar, J., Yusof, N., & Ludin, N. A. (2018). A review of integrated photocatalyst adsorbents for wastewater treatment. *Journal of Environmental Chemical Engineering*, 6(6), 7411–7425.

<https://doi.org/10.1016/j.jece.2018.06.051>

Ye, Y., Bruning, H., Liu, W., Rijnaarts, H., & Yntema, D. (2019). Effect of dissolved natural organic matter on the photocatalytic micropollutant removal performance of TiO₂ nanotube array. *Journal of Photochemistry and Photobiology A: Chemistry*, 371(November 2018), 216–222.

<https://doi.org/10.1016/j.jphotochem.2018.11.012>