

## DAFTAR PUSTAKA

Ayuningtyas, A. (2018) 'Penetapan Kadar Fenolat Total Dalam Ekstrak Etanol Rumput Laut Coklat (*Sargassum* sp.) Daerah Banten, Garut dan Kepulauan Seribu Secara Spektrofotometri Cahaya Tampak', *Skripsi*, (2018), pp. 5–13.

Bhatia, S. and Verma, N. (2017) 'Photocatalytic activity of ZnO nanoparticles with optimization of defects', *Materials Research Bulletin*, 95, pp. 468–476. doi: 10.1016/j.materresbull.2017.08.019.

Caltran, I. *dkk.* (2020) 'Impact of removal of natural organic matter from surface water by ion exchange: A case study of pilots in Belgium, United Kingdom and the Netherlands', *Separation and Purification Technology*, 247(December 2019), p. 116974. doi: 10.1016/j.seppur.2020.116974.

Digital IEC (2016) *4 Jenis Limbah Berdasarkan Wujud, Environment Indonesia*.

Edzwald, J.K., & Tobiason, J. E. (2011) *Chemical Principles, Source Water Composition, and Watershed Protection. In Water Quality & Treatment: A Handbook on Drinking Water*. Edited by Edzwald, J.K., Eds. New York: AWWA McGraw-Hill.

Febrian Sayow., Bobby Vian Jhon Polii., Wenny Tilaar., Kojoh Deanne Augustine. (2020) 'Analisis Kandungan Limbah Industri Tahu Dan Tempe Rahayu Di Kelurahan Uner Kecamatan Kawangkoan Kabupaten Minahasa', *Jurnal Transdisiplin Pertanian Sosial dan Ekonomi*, 16(2), pp. 245–252.

Han, F. *dkk.* (2009) 'Tailored titanium dioxide photocatalysts for the degradation of organic dyes in wastewater treatment: A review', *Applied Catalysis A: General*, 53, pp.

115–129.

Han, X. *dkk.* (2018) ‘Investigating the performance of three modified activated sludge processes treating municipal wastewater in organic pollutants removal and toxicity reduction’, *Ecotoxicology and Environmental Safety*, 148(November 2017), pp. 729–737. doi: 10.1016/j.ecoenv.2017.11.042.

Hidayah, E. N., Pachwarya, R. B. and Cahyonugroho, O. H. (2021) ‘Immobilization of resin photocatalyst in removal of soluble effluent organic matter and potential for disinfection by-products’, pp. 0–3.

Hifdillah, Muhammad Hakiki; Damayati, Wisnu; Widodo, L. U. (2021) ‘Penurunan Bod Dan Cod Pada Limbah Cair Industri Rumput Laut Menggunakan Ion Exchange dalam Reaktor Fixed Bed’, *Journal of Chemical and Process Engineering*, 2(2), pp. 63–69. doi: 10.33005/tekkim.v13i2.1413.

Joshi, K. M. and Shrivastava, V. S. (2011) ‘Photocatalytic degradation of Chromium ( VI ) from wastewater using nanomaterials like TiO<sub>2</sub> , ZnO , and CdS’, pp. 147–155. doi: 10.1007/s13204-011-0023-2.

Kajitvichyanukul, P. and Changul, C. (2005) ‘PHOTOCATALYTIC REMOVAL OF TRI- AND HEXA-VALENT CHROMIUM IONS FROM CHROME-ELECTROPLATING WASTEWATER’, 22(4), pp. 355–362.

Karimi-Maleh, H. *dkk.* (2021) *Recent advances in removal techniques of Cr(VI) toxic ion from aqueous solution: A comprehensive review*, *Journal of Molecular Liquids*. doi: 10.1016/j.molliq.2020.115062.

Lee, K. M. *dkk.* (2016) ‘Recent developments of zinc oxide based photocatalyst in

water treatment technology: A review', *Water Research*, 88, pp. 428–448. doi: 10.1016/j.watres.2015.09.045.

Li, Q. *dkk.* (2020) 'Removal of organic and inorganic matters from secondary effluent using resin adsorption and reuse of desorption eluate using ozone oxidation', 251. doi: 10.1016/j.chemosphere.2020.126442.

Li, Y. *dkk.* (2017) 'Photocatalytic reduction behavior of hexavalent chromium on hydroxyl modified titanium dioxide', *Applied Catalysis B: Environmental*, 206, pp. 293–299. doi: 10.1016/j.apcatb.2017.01.044.

Mphela, R. K. *dkk.* (2016) 'Photocatalytic Degradation of Salicylic Acid and Reduction of Cr(VI) using TiO<sub>2</sub>', (June).

Narain, J. and Raj, J. (2009) 'Degradation of Textile Dyes Ponceau-S and Sudan IV Using Recently Developed Photocatalyst, Immobilized Resin Dowex-11 R. C. Meena, Ram Babu Pachwarya, Vijay Kumar Meena and Shakuntla Arya', 5(3), pp. 444–450.

Natalina., Hidayati, Firdaus. (2017) 'Penurunan Kadar Kromium Heksavalen(Cr<sup>6+</sup>) Dalam Limbah Batik Menggunakan Limbah Udang (Kitosan)', *Teknik*, 38(2), pp. 99–102.

Ong, C. B., Ng, L. Y. and Mohammad, A. W. (2018) 'A review of ZnO nanoparticles as solar photocatalysts: synthesis, mechanisms and applications', *Renewable and Sustainable Energy Reviews*, 81(1), pp. 536–551.

Organisasi Profesi Ilmiah Indonesia (2010) *Sintesis Nanopartikel TiO<sub>2</sub> dengan metode sol-gel*, LIPI.

Pachwarya, R. B. and 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), pp. 1651–1660.

Paul, Henri Allé, Guy Didier Fanou, Didier Robert, Kopoin Adouby, Patrick Drogui (2020) 'Photocatalytic degradation of Rhodamine B dye with TiO<sub>2</sub> immobilized on SiC foam using full factorial design', *Applied Water Science volume*, 2017.

Perwitasari, D. S. (2021) *TEKNOLOGI PENURUNAN KADAR ION LOGAM PADA LIMBAH CAIR INDUSTRI*.

Preethi, J., Farzana, M. H. and Meenakshi, S. (2017) *Photo-reduction of Cr(VI) using chitosan supported zinc oxide materials*, *International Journal of Biological Macromolecules*. Elsevier B.V. doi: 10.1016/j.ijbiomac.2017.02.082.

Rahman, A. J. (2012) *Imobilisasi TiO<sub>2</sub> Ke dalam Resin Penukar Kation Sebagai Fotokatalis Pada Fotodegradasi Zat Warna Kuning Metanil*. Surabaya: ADLN Perpustakaan Universitas Airlangga.

Reddy, P. V. L. dkk. (2017) 'TiO<sub>2</sub>-based photocatalytic disinfection of microbes in aqueous media: A review', *Environmental Research*, 154, pp. 296–303.

Rohman, A. (2015) *Sintesis Dan Karakterisasi Fotokatalis Titanium Dioksida (TiO<sub>2</sub>) Anatas Terdoping Vanadium (III) Dengan Metode Reaksi Padatan-Sonikasi*, *Fakultas Sains Dan Teknologi*.

Sholeh, M. and Setyorini, I. (2014) 'TINJAUAN PENGGUNAAN ADVANCED OXIDATION PROCESSES (AOPs) UNTUK PENGOLAHAN AIR LIMBAH

INDUSTRI PENYAMAKAN KULIT’, *Prosiding Seminar Nasional Kulit, Karet, dan Plastik*, pp. 87–105.

Sun, W. *dkk.* (2014) ‘The Degradation of natural organic matter in surface water by a nano-TiO<sub>2</sub>/diatomite photocatalytic reactor’, *Clean - Soil, Air, Water*, 42(9), pp. 1190–1198. doi: 10.1002/clen.201200713.

Swati., R. C. M. (2013) ‘UV Irradiation Assisted Photocatalytic Decolorization of Direct Red 23 in Aqueous Solution’, *International Journal of Scientific and Research Publications*, 3(4).

Syed, M. A., Mauriya, A. K. and Shaik, F. (2020) ‘Investigation of epoxy resin / nano-TiO<sub>2</sub> composites in photocatalytic degradation of organics present in oil-produced water’, *International Journal of Environmental Analytical Chemistry*, 00(00), pp. 1–17. doi: 10.1080/03067319.2020.1784889.

Taufiqur Rohman, Azidi Irwan, Zakiyatir Rahmi (2018) ‘Penurunan Kadar Amoniak dan Fosfat Limbah Cair Tahu secara Foto Katalitik’, *Jurnal Sains Natural Universitas Nusa Bangsa*, 8(2), pp. 87 – 93.

Uyguner, C. S., Birben, N. C. and Bekbolet, M. (2017) ‘Elucidation of background organic matter matrix effect on photocatalytic treatment of contaminants using TiO<sub>2</sub>: A review’, *Catalysis Today*, 284, pp. 202–214.

- Ayuningtyas, A. (2018) 'Penetapan Kadar Fenolat Total Dalam Ekstrak Etanol Rumput Laut Coklat (*Sargassum* sp.) Daerah Banten, Garut dan Kepulauan Seribu Secara Spektrofotometri Cahaya Tampak', Skripsi, (2018), pp. 5–13.
- Bhatia, S. and Verma, N. (2017) 'Photocatalytic activity of ZnO nanoparticles with optimization of defects', *Materials Research Bulletin*, 95, pp. 468–476. doi: 10.1016/j.materresbull.2017.08.019.
- Caltran, I. et al. (2020) 'Impact of removal of natural organic matter from surface water by ion exchange: A case study of pilots in Belgium, United Kingdom and the Netherlands', *Separation and Purification Technology*, 247(December 2019), p. 116974. doi: 10.1016/j.seppur.2020.116974.
- Digital IEC (2016) 4 Jenis Limbah Berdasarkan Wujud, Environment Indonesia.
- Edzwald, J.K., & Tobiason, J. E. (2011) *Chemical Principles, Source Water Composition, and Watershed Protection*. In *Water Quality & Treatment: A Handbook on Drinking Water*. Edited by Edzwald, J.K., Eds. New York: AWWA McGraw-Hill.
- Febrian Sayow., Bobby Vian Jhon Polii., Wenny Tilaar., Kojoh Deanne Augustine. (2020) 'ANALISIS KANDUNGAN LIMBAH INDUSTRI TAHU DAN TEMPE RAHAYU DI KELURAHAN UNER KECAMATAN KAWANGKOAN KABUPATEN MINAHASA', *Jurnal Transdisiplin Pertanian Sosial dan Ekonomi*, 16(2), pp. 245–252.
- Han, F. et al. (2009) 'Tailored titanium dioxide photocatalysts for the degradation of organic dyes in wastewater treatment: A review', *Applied Catalysis A: General*,

53, pp. 115–129.

Han, X. et al. (2018) ‘Investigating the performance of three modified activated sludge processes treating municipal wastewater in organic pollutants removal and toxicity reduction’, *Ecotoxicology and Environmental Safety*, 148(November 2017), pp. 729–737. doi: 10.1016/j.ecoenv.2017.11.042.

Hidayah, E. N., Pachwarya, R. B. and Cahyonugroho, O. H. (2021) ‘Immobilization of resin photocatalyst in removal of soluble effluent organic matter and potential for disinfection by-products’, pp. 0–3.

Hifdillah, Muhammad Hakiki; Damayati, Wisnu; Widodo, L. U. (2021) ‘Penurunan Bod Dan Cod Pada Limbah Cair Industri Rumput Laut Menggunakan Ion Exchange dalam Reaktor Fixed Bed’, *Journal of Chemical and Process Engineering*, 2(2), pp. 63–69. doi: 10.33005/tekkim.v13i2.1413.

Joshi, K. M. and Shrivastava, V. S. (2011) ‘Photocatalytic degradation of Chromium ( VI ) from wastewater using nanomaterials like  $\text{TiO}_2$  ,  $\text{ZnO}$  , and  $\text{CdS}$ ’, pp. 147–155. doi: 10.1007/s13204-011-0023-2.

Kajitvichyanukul, P. and Changul, C. (2005) ‘PHOTOCATALYTIC REMOVAL OF TRI- AND HEXA-VALENT CHROMIUM IONS FROM CHROME-ELECTROPLATING WASTEWATER’, 22(4), pp. 355–362.

Karimi-Maleh, H. et al. (2021) Recent advances in removal techniques of Cr(VI) toxic ion from aqueous solution: A comprehensive review, *Journal of Molecular Liquids*. doi: 10.1016/j.molliq.2020.115062.

Lee, K. M. et al. (2016) ‘Recent developments of zinc oxide based photocatalyst in

- water treatment technology: A review', *Water Research*, 88, pp. 428–448. doi: 10.1016/j.watres.2015.09.045.
- Li, Q. et al. (2020) 'Removal of organic and inorganic matters from secondary effluent using resin adsorption and reuse of desorption eluate using ozone oxidation', 251. doi: 10.1016/j.chemosphere.2020.126442.
- Li, Y. et al. (2017) 'Photocatalytic reduction behavior of hexavalent chromium on hydroxyl modified titanium dioxide', *Applied Catalysis B: Environmental*, 206, pp. 293–299. doi: 10.1016/j.apcatb.2017.01.044.
- Mphela, R. K. et al. (2016) 'Photocatalytic Degradation of Salicylic Acid and Reduction of Cr(VI) using TiO<sub>2</sub>', (June).
- Natalina., Hidayati, Firdaus. (2017) 'Penurunan Kadar Kromium Heksavalen(Cr<sup>6+</sup>) Dalam Limbah Batik Menggunakan Limbah Udang (Kitosan)', *Teknik*, 38(2), pp. 99–102.
- Ong, C. B., Ng, L. Y. and Mohammad, A. W. (2018) 'A review of ZnO nanoparticles as solar photocatalysts: synthesis, mechanisms and applications', *Renewable and Sustainable Energy Reviews*, 81(1), pp. 536–551.
- Organisasi Profesi Ilmiah Indonesia (2010) Sintesis Nanopartikel TiO<sub>2</sub> dengan metode sol-gel, LIPI.
- Pachwarya, R. B. and 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), pp. 1651–1660.

Paul, Henri Allé, Guy Didier Fanou, Didier Robert, Kopoin Adouby, Patrick Drogui (2020) ‘Photocatalytic degradation of Rhodamine B dye with TiO<sub>2</sub> immobilized on SiC foam using full factorial design’, Applied Water Science volume, 2017.

Perwitasari, D. S. (2021) TEKNOLOGI PENURUNAN KADAR ION LOGAM PADA LIMBAH CAIR INDUSTRI.

Preethi, J., Farzana, M. H. and Meenakshi, S. (2017) Photo-reduction of Cr(VI) using chitosan supported zinc oxide materials, International Journal of Biological Macromolecules. Elsevier B.V. doi: 10.1016/j.ijbiomac.2017.02.082.

Rahman, A. J. (2012) Imobilisasi TiO<sub>2</sub> Ke dalam Resin Penukar Kation Sebagai Fotokatalis Pada Fotodegradasi Zat Warna Kuning Metanil. Surabaya: ADLN Perpustakaan Universitas Airlangga.

Reddy, P. V. L. et al. (2017) ‘TiO<sub>2</sub>-based photocatalytic disinfection of microbes in aqueous media: A review’, Environmental Research, 154, pp. 296–303.

Rohman, A. (2015) Sintesis Dan Karakterisasi Fotokatalis Titanium Dioksida (TiO<sub>2</sub>) Anatas Terdoping Vanadium (III) Dengan Metode Reaksi Padatan-Sonikasi, Fakultas Sains Dan Teknologi.

Sholeh, M. and Setyorini, I. (2014) ‘TINJAUAN PENGGUNAAN ADVANCED OXIDATION PROCESSES (AOPs) UNTUK PENGOLAHAN AIR LIMBAH INDUSTRI PENYAMAKAN KULIT’, Prosiding Seminar Nasional Kulit, Karet, dan Plastik, pp. 87–105.

- Sun, W. et al. (2014) 'The Degradation of natural organic matter in surface water by a nano-TiO<sub>2</sub>/diatomite photocatalytic reactor', *Clean - Soil, Air, Water*, 42(9), pp. 1190–1198. doi: 10.1002/clen.201200713.
- Swati., R. C. M. (2013) 'UV Irradiation Assisted Photocatalytic Decolorization of Direct Red 23 in Aqueous Solution', *International Journal of Scientific and Research Publications*, 3(4).
- Syed, M. A., Mauriya, A. K. and Shaik, F. (2020) 'Investigation of epoxy resin / nano-TiO<sub>2</sub> composites in photocatalytic degradation of organics present in oil-produced water', *International Journal of Environmental Analytical Chemistry*, 00(00), pp. 1–17. doi: 10.1080/03067319.2020.1784889.
- Taufiqur Rohman, Azidi Irwan, Zakiyatir Rahmi (2018) 'Penurunan Kadar Amoniak dan Fosfat Limbah Cair Tahu secara Foto Katalitik', *Jurnal Sains Natural Universitas Nusa Bangsa*, 8(2), pp. 87 – 93.
- Uyguner, C. S., Birben, N. C. and Bekbolet, M. (2017) 'Elucidation of background organic matter matrix effect on photocatalytic treatment of contaminants using TiO<sub>2</sub>: A review', *Catalysis Today*, 284, pp. 202–214.