

DAFTAR PUSTAKA

- Ajit, K. (2016). A Review on Grey Water Treatment and Reuse. *International Research Journal of Engineering and Technology*, 2395–56. <https://www.irjet.net/archives/V3/i5/IRJET-V3I5551.pdf>
- Alfionita, A. N. A., Patang, P., & Kaseng, E. S. (2019). Pengaruh Eutrofikasi Terhadap Kualitas Air Di Sungai Jeneberang. *Jurnal Pendidikan Teknologi Pertanian*, 5(1), 9. <https://doi.org/10.26858/jptp.v5i1.8190>
- Ateeq, F. (2016). *Chemical Removal of Total Phosphorus from Wastewater to Low Levels and Its Analysis*. 1–86. <https://scholars.wlu.ca/etd/1889%0AThis>
- Ávila, C., Pelissari, C., Sezerino, P. H., Sgroi, M., Roccaro, P., & García, J. (2017). Enhancement of total nitrogen removal through effluent recirculation and fate of PPCPs in a hybrid constructed wetland system treating urban wastewater. *Science of the Total Environment*, 584–585, 414–425. <https://doi.org/10.1016/j.scitotenv.2017.01.024>
- Ayu, C., Anggraeni, D., Kurniasari, S., & Ismail, T. (2002). *Penggunaan Membran Bioreaktor (MBR) Pada Activated Sludge Dalam Pengolahan Limbah Cair Industri*. 2309105004.
- Bastom, B. M. (2015). Kajian Efek Aerasi Pada Kinerja Biofilter Aerob Dengan Media Bioball Untuk Pengolahan Air Limbah Budidaya Tambak Udang. *Tugas Akhir*.
- Bodík, I., & Kubaská, M. (2013). Energy and sustainability of operation of a wastewater treatment plant. *Environment Protection Engineering*, 39(2), 15–24. <https://doi.org/10.5277/EPE130202>
- Budi, A. (2010). *Microbubble Generator untuk Aerator STP*.
- Budiyono, Setiadi, T., & Wenten, I. G. (2003). *Aktivitas Mikroba Lumpur Aktif Konsentrasi Tinggi pada Sistem Lumpur Aktif - Membran* (pp. 27–32). Universitas Diponegoro.
- Chen, H., Tu, Z., Wu, S., Yu, G., Du, C., Wang, H., Yang, E., Zhou, L., Deng, B., Wang, D., & Li, H. (2021). Recent advances in partial denitrification-anaerobic ammonium oxidation process for mainstream municipal wastewater treatment. *Chemosphere*, 278, 130436. <https://doi.org/10.1016/j.chemosphere.2021.130436>
- Côté, P., Peeters, J., Adams, N., Hong, Y., Long, Z., & Ireland, J. (2015). A new membrane-aerated biofilm reactor for low energy wastewater treatment: Pilot results. *88th Annual Water Environment Federation Technical Exhibition and Conference, WEFTEC 2015*, 6(January), 4226–4239. <https://doi.org/10.2175/193864715819540883>
- Dan, N. H., Phe, T. T. M., Thanh, B. X., Hoinkis, J., & Le Luu, T. (2021). The Application of Intermittent Cycle Extended Aeration Systems (ICEAS) in Wastewater Treatment. *Journal of Water Process Engineering*, 40(June 2020), 101909.

- Derco, J., Urminská, B., Kovács, A., & Šimkovič, K. (2017). Biological Nutrient Removal in an Intermittently Aerated Bioreactor. *Chemical and Biochemical Engineering Quarterly*, 31(2), 179–185. <https://doi.org/10.15255/CABEQ.2016.1026>
- DPPLP. (2018). Pedoman Perencanaan Teknik Terinci Sistem Pengelolaan Air Limbah Domestik Terpusat. In *Director General of Cipta Karya Ministry of Public Works and Public Housing: Vol. B. Kementerian Pekerjaan Umum dan Perumahan Rakyat*. http://ciptakarya.pu.go.id/plp/index.php/v2/kategori_pedoman/9/10
- Ester Suoth, A., & Nazir, E. N. (2016). Karakteristik Air Limbah Rumah Tangga Pada Salah Satu Perumahan Menengah Keatas Di Tangerang Selatan. *Jurnal Ecolab*, 10(2), 80–88. <https://doi.org/10.20886/jklh.2016.10.2.80-88>
- Fitrahani, L. Z., Indrasti, N. S., & Suprihatin. (2012). Karakterisasi Kondisi Operasi dan Optimasi Proses Pengolahan Air Limbah Industri Pangan. *E-Jurnal Agroindustri Indonesia*, 1(2), 110–117. <http://journal.ipb.ac.id/index.php/e-jaii/index>
- Gou, J., Hong, C. U., Deng, M., Chen, J., Hou, J., Li, D., & He, X. (2019). Effect of carbon to nitrogen ratio on water quality and community structure evolution in suspended growth bioreactors through biofloc technology. *Water (Switzerland)*, 11(8). <https://doi.org/10.3390/w11081640>
- Hammer. (1986). *Water and Wastewater Technology*. John Wiley and Sons.
- Hanafi, F. (2019). *Evaluasi Kinerja Instalasi Pengolahan Air Limbah (Ipal) Industri Penyamakan Kulit Di Pt.X*. https://help.uui.ac.id/bitstream/handle/123456789/16311/08_naskah_publicasi.pdf?sequence=17&isAllowed=y
- Handayani, R. (2012). *Evaluasi Kinerja dan Optimasi Instalasi Pengolahan Limbah Cair (IPLC) Gedung Perkantoran PT Pacific Paint dalam Penurunan Amonia*.
- Henkel, J. (2010). *Oxygen Transfer Phenomena in Activated Sludge*. http://tuprints.ulb.tu-darmstadt.de/3008/1/Henkel-2010-Oxygen_Transfer_Phenomena_in_Activated_Sludge.pdf
- Indrayani, E., Nitimulyo, K. H., Hadisusanto, S., & Rustadi, R. (2015). Analisis kandungan nitrogen, fosfor dan karbon organik di Danau Sentani - Papua. *Jurnal Manusia Dan Lingkungan*, 22(2), 217–225.
- Indriaswari, H. (2019). *Perancangan dan Evaluasi Start Up Instalasi Pengolahan Air Limbah (IPAL) Toilet/Kamar Mandi Umum Wisdom Park UGM Dilengkapi dengan Microbubble Generator Nozzle dan Aerasi Intermittent untuk Menurunkan COD dan TSS*. 1(4), 626–636.
- Iswantari, A., Wardiatno, Y., Pratiwi, N., & Rusmana, I. (2013). *Fluks Bentik dan Potensi Aktivitas Bakteri Terkait Siklus Nitrogen di Sedimen Perairan Mangrove Pulau Dua, Banten (Benthic Fluxes and Potency of Bacterial Activity Related to Nitrogen Cycle in Pulau Dua Mangrove*

- Kementerian Lingkungan Hidup dan Kehutanan. (2019). *Indeks Kualitas Lingkungan Hidup 2019* (Vol. 53, Issue 9). Kementerian Lingkungan Hidup dan Kehutanan. <http://www.elsevier.com/locate/scp>
- Kermani, M., Bina, B., Movahedian, H., Amin, M. M., & Nikaeen, M. (2009). Biological phosphorus and nitrogen removal from wastewater using moving bed biofilm process. *Iranian Journal of Biotechnology*, 7(1), 19–27.
- Kurnia, A., Sandi, S., Dermawan, D., & Afiuddin, A. E. (2016). *Pengaruh F / M Rasio dan Waktu Detensi Aerasi terhadap Efisiensi Removal TSS pada Pengolahan Limbah Cair Domestik Metode Conventional Activated Sludge*. 2623, 125–128.
- Lang, Z., Zhou, M., Zhang, Q., Yin, X., & Li, Y. (2020). Comprehensive treatment of marine aquaculture wastewater by a cost-effective flow-through electro-oxidation process. *Science of the Total Environment*, 722, 137812. <https://doi.org/10.1016/j.scitotenv.2020.137812>
- Li, Z., Zou, Z., & Wang, L. (2019). Analysis and Forecasting of the Energy Consumption in Wastewater Treatment Plant. *Mathematical Problems in Engineering*, 2019. <https://doi.org/10.1155/2019/8690898>
- Liu, C., Tanaka, H., Ma, J., Zhang, L., Zhang, J., Huang, X., & Matsuzawa, Y. (2012). Effect of Microbubble and Its Generation Process on Mixed Liquor Properties of Activated Sludge Using Shirasu Porous Glass (SPG) Membrane System. *Water Research*, 46(18), 6051–6058. <https://doi.org/10.1016/j.watres.2012.08.032>
- MAGNAYE, F. A., GASPILLO, P. D., & AURESENIA, J. L. (2009). Biological Nitrogen and COD Removal of Nutrient-Rich Wastewater Using Aerobic and Anaerobic Reactors. *Journal of Water Resource and Protection*, 01(05), 376–380. <https://doi.org/10.4236/jwarp.2009.15045>
- Metcalf, & Eddy. (2003). *Wastewater Engineering Treatment and Reuse, 4th Edition* (4th ed.). McGraw-Hill.
- Mubarak, A. ., Satyari, D. ., & Kusdarwati, R. (2010). Korelasi Antara Konsentrasi Oksigen Terlarut Pada Kepadatan Yang Berbeda Dengan Skoring Warna Daphnia spp. *Jurnal Ilmiah Perikanan Dan Kelautan*, 2(1), 45–50.
- Nevya Rizki, Sutrisno, E., & Sri Sumiyati. (2012). Penurunan Konsentrasi COD dan TSS pada Limbah Cair Tahu dengan Teknologi Kolam (Pond) - Biofil Menggunakan Media Biofilter Jaring Ikan dan Bioball Nevya. *Psychology Applied to Work: An Introduction to Industrial and Organizational Psychology, Tenth Edition Paul*, 53(9), 1689–1699.
- Nuryadi, Astuti, T. D., Utami, E. S., & Budaintara, M. (2017). *Dasar-Dasar Statistika Penelitian*. http://lppm.mercubuana-yogya.ac.id/wp-content/uploads/2017/05/Buku-Ajar_Dasar-Dasar-

- Patricia, C., Astono, W., & Irvindiaty Hendrawan, D. (2018). Kandungan Nitrat Dan Fosfat Di Sungai Ciliwung. *Jurusan Teknik Lingkungan Fakultas Arsitektur Lanskap Dan Teknologi Lingkungan Universitas Trisakti*, 4(1), 179–185.
- Patty, S. I., Arfah, H., & Abdul, M. S. (2015). Zat Hara (Fosfat, Nitrat), Oksigen Terlarut dan pH Kaitannya Dengan Kesuburan di Perairan Jikumerasa, Pulau Buru. *Jurnal Pesisir Dan Laut Tropis*, 3(1), 43. <https://doi.org/10.35800/jplt.3.1.2015.9578>
- PPLP Pekerjaan Umum. (2006). *Perencanaan Pengelolaan Air Limbah Kriteria Teknis Prasarana dan Sarana Pengelolaan Air Limbah*. 1–83.
- Priyambada, I. B., & Purowono. (2019). Efektivitas IPAL Portabel Sebagai Alternatif Pengelolaan Limbah Cair Domestik. *Journal of Environmental Sustainability Management*, 3(1), 235–243.
- Putri, W. A. E., Purwiyanto, A. I. S., Fauziyah, ., Agustriani, F., & Suteja, Y. (2019). Kondisi Nitrat, Nitrit, Amonia, Fosfat Dan Bod Di Muara Sungai Banyuasin, Sumatera Selatan. *Jurnal Ilmu Dan Teknologi Kelautan Tropis*, 11(1), 65–74. <https://doi.org/10.29244/jitkt.v11i1.18861>
- Qasim, S. R. (1998). *Wastewater Treatment Plants*. CRC Press.
- Rossinskyi, V. (2018). Define of internal recirculation coefficient for biological wastewater treatment in anoxic and aerobic bioreactors. *E3S Web of Conferences*, 30. <https://doi.org/10.1051/e3sconf/20183002002>
- Rusmana, I. (2007). Effects of Temperature on Denitrifying Growth and Nitrate Reduction End Products of *Comamonas testosteroni* Isolated from Estuarine Sediment. *Microbiology Indonesia*, 1(1), 43–47. <https://doi.org/10.5454/mi.1.1.10>
- Rustadi, R. (2009). Eutrofikasi Nitrogen dan Fosfor serta Pengendaliannya dengan Perikanan di Waduk Sermo. *Jurnal Manusia Dan Lingkungan*, 16(3), 176–186.
- Ruzhitskaya, O., & Gogina, E. (2017). Methods for Removing of Phosphates from Wastewater. *MATEC Web of Conferences*, 106, 1–7. <https://doi.org/10.1051/matecconf/201710607006>
- Said, N. I., & Sya'bani, M. R. (2015). Penghilangan Amoniak Di Dalam Air Limbah Domestik Dengan Proses Moving Bed Biofilm Reactor (MBBR). *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 53(9), 1689–1699. <http://publications.lib.chalmers.se/records/fulltext/245180/245180.pdf><https://hdl.handle.net/20.500.12380/245180><http://dx.doi.org/10.1016/j.jsames.2011.03.003><https://doi.org/10.1016/j.gr.2017.08.001><http://dx.doi.org/10.1016/j.precamres.2014.12>
- Santín, I., Vilanova, R., Pedret, C., & Barbu, M. (2021). New approach for regulation of the internal recirculation flow rate by fuzzy logic in biological wastewater treatments. *ISA Transactions*, xxxx. <https://doi.org/10.1016/j.isatra.2021.03.028>

- Saputri, E. S. H., Bambang, D., & Karnaningroem, N. (2020). Evaluasi Kinerja Instalasi Pengolahan Air Limbah di Rusunawa Tanah Merah II Surabaya. *Water Conservation Science and Engineering*, 5(1–2), 23–29. <https://doi.org/10.1007/s41101-020-00081-x>
- Setyapeni, O. Y. (2021). *SISTEM LUMPUR AKTIF IPAL TOILET WISDOM PARK UGM DALAM MENGURANGI KADAR COD , NITROGEN , DAN PHOSPHOR*.
- Suganda, R., Sutrisno, E., & Wardana, I. W. (2019). *Penurunan Konsentrasi Amonia, Nitrat, Nitri dan COD dalam Limbah Cair Tahu dengan Menggunakan Biofilm-Kolam (Pond) Media Pipa PVC Sarang Tawon dan Tempurung Kelapa Disertai Penambahan Ecotru*. 53(9), 1689–1699.
- Suhardjo, D. (2008). PBNURUNAN COD, TSS DAN TOTAL FOSFAT PADA SEPTIC TANK LIMBAH MATARAM CITRA SEMBAD A CATERING DENGAN MENGGUNAKAN WASTEWATER GARDEN. (Degradation of COD, TSS and Total Phosphate in Septic Tank Wastewater of Matarom Citra Sembada Catering Using Wastewater Gar. *Manusia Dan Lingkungan*, 15(2), 79–89. <http://jpe-ces.ugm.ac.id/ojs/index.php/JML/article/download/298/228>.
- Sun, G., Gray, K. R., Biddlestone, A. J., Allen, S. J., & Cooper, D. J. (2003). Effect of effluent recirculation on the performance of a reed bed system treating agricultural wastewater. *Process Biochemistry*, 39(3), 351–357. [https://doi.org/10.1016/S0032-9592\(03\)00075-X](https://doi.org/10.1016/S0032-9592(03)00075-X)
- Suryadi, E. (2009). Transfer Oksigen Dalam Proses Aerasi. In *Jurnal Kimia dan Kemasan* (p. 24). <https://doi.org/10.24817/jkk.v0i0.4731>
- Syafira, K. (2021). *Modifikasi dan Evaluasi Start-Up Instalasi Pengolahan Air Limbah (IPAL) Kamar Mandi Umum Wisdom Park, UGM*. July, 1–23.
- Tabraiz, S., Hassan, S., Abbas, A., Nasreen, S., Zeeshan, M., Fida, S., Shamurad, B. A., Acharya, K., & Petropoulos, E. (2018). Effect of effluent and sludge recirculation ratios on integrated fixed films a2o system nutrients removal efficiency treating sewage. *Desalination and Water Treatment*, 114(August), 120–127. <https://doi.org/10.5004/dwt.2018.22356>
- Tchobanoglous. (2003). *Wastewater Engineering : Treatment, Disposal and Reuse* (4rd Editio). McGraw-Hill.
- Tendean, C., Tilaar, S., & Karongkong, H. H. (2014). Pengelolaan Air Limbah Domestik di Permukiman Kumuh di Kelurahan Calaca dan Istiqlal Kecamatan Wenang. *Sabua*, 6(3), 293–306.
- Terasaka, K., Hirabayashi, A., Nishino, T., Fujioka, S., & Kobayashi, D. (2011). Development of Microbubble Aerator for Waste Water Treatment Using Aerobic Activated Sludge. *Chemical Engineering Science*, 66(14), 3172–3179. <https://doi.org/10.1016/j.ces.2011.02.043>
- Torkaman, M., Borghei, S. M., Tahmasebian, S., & Andalibi, M. R. (2015). Nitrogen removal from

- high organic loading wastewater in modified Ludzack-Ettinger configuration MBBR system. *Water Science and Technology*, 72(8), 1274–1282. <https://doi.org/10.2166/wst.2015.343>
- Torrijos, V., Gonzalo, O. G., Trueba-Santiso, A., Ruiz, I., & Soto, M. (2016). Effect of by-pass and effluent recirculation on nitrogen removal in hybrid constructed wetlands for domestic and industrial wastewater treatment. *Water Research*, 103, 92–100. <https://doi.org/10.1016/j.watres.2016.07.028>
- Tunjung Murti Pratiwi, N., Hariyani, S., Puspa Ayu, I., Apriadi, T., Iswantari, A., & Yuni Wulandari, D. (2019). Pengelolaan Kandungan Bahan Organik pada Limbah Cair Laboratorium ProlingMSP-IPB dengan Berbagai Kombinasi Agen Bioremediasi. *Jurnal Biologi Indonesia*, 15(1), 89–95. <https://doi.org/10.47349/jbi/15012019/89>
- Uggetti, E., Hughes-Riley, T., Morris, R. H., Newton, M. I., Trabi, C. L., Hawes, P., Puigagut, J., & García, J. (2016). Intermittent Aeration to Improve Wastewater Treatment Efficiency in Pilot-Scale Constructed Wetland. *Science of the Total Environment*, 559, 212–217. <https://doi.org/10.1016/j.scitotenv.2016.03.195>
- USEPA. (2007). Wastewater Management Fact Sheet. 21 Octubre 2013, 1–7. http://water.epa.gov/scitech/wastetech/upload/2008_01_23_mtb_efs_denitrifying.pdf
- Van Loosdrecht, M. C. M., Hooijmans, C. M., Brdjanovic, D., & Heijnen, J. J. (1997). Biological phosphate removal processes. *Applied Microbiology and Biotechnology*, 48(3), 289–296. <https://doi.org/10.1007/s002530051052>
- von Sperling, M., Verbyla, M. E., & Oliveira, S. M. A. C. (2020). Assessment of Treatment Plant Performance and Water Quality Data: A Guide for Students, Researchers and Practitioners. In *Assessment of Treatment Plant Performance and Water Quality Data: A Guide for Students, Researchers and Practitioners*. <https://doi.org/10.2166/9781780409320>
- Water Resources Division. (2017). *Activated Sludge Process Control: Training Manual for Wastewater Treatment Plant Operators*.
- Widayat, W., Suprihatin, & Herlambang, A. (2010). Penyisihan Amoniak Dalam Upaya Meningkatkan Kualitas Air Baku Pdam-Ipa Bojong Renged Dengan Proses Biofiltrasi. *Jurnal Akuakultur Indonesia*, 6(1), 64–76.
- Yunita, M., Rizki, P., & Sitorus, B. (2013). Pengolahan Limbah Cair Domestik untuk Penggunaan Ulang (Water Reuse). *Jurnal Teknologi Lingkungan Lahan Basah*, 1(1), 1–10. <https://doi.org/10.26418/jtllb.v1i1.1990>