

## DAFTAR PUSTAKA

- Abbas, S. Z., Rafatullah, M., Ismail, N., & Shakoori, F. R. (2018). Electrochemistry and microbiology of microbial fuel cells treating marine sediments polluted with heavy metals. *RSC Advances*, 8(34), 18800–18813. <https://doi.org/10.1039/C8RA01711E>
- Albarracin-Arias, J. A., Yu, C. P., Maeda, T., Valdivieso Quintero, W., & Sanchez-Torres, V. (2021). Microbial community dynamics and electricity generation in MFCs inoculated with POME sludges and pure electrogenic culture. *International Journal of Hydrogen Energy*, 46(74), 36903–36916. <https://doi.org/10.1016/j.ijhydene.2021.08.218>
- Ahmad, J., & EL-Dessouky, H. (2008). Design Of A Modified Low Cost Treatment System For The Recycling And Reuse Of Laundry Waste Water. *Resources, Conservation and Recycling*, 52, 973–978.
- Anggrek, D. (2021). Analisis Potensi Energi Listrik dari Sedimen Telaga Koto Baru serta Isolasi dan Identifikasi Bakteri Pada Anoda Microbial Fuel Cell (Doctoral dissertation, Universitas Andalas).
- Amjadi, M., Rowshanzamir, S., Peighambarou, S. J., Hosseini, M. G., & Eikani, M. H. (2010). Investigation of physical properties and cell performance of Nafion/TiO<sub>2</sub> nanocomposite membranes for high temperature PEM fuel cells. *International Journal of Hydrogen Energy*, 35(17), 9252-9260.
- Anisa, A., & Herumurti, W. (2017). Pengolahan Limbah Domestik Menggunakan Moving Bed Biofilm Reactor (MBBR) dengan Proses Aerobik-Anoksik untuk Menurunkan Konsentrasi Senyawa Organik dan Nitrogen. *Jurnal Teknik ITS*, 6(2). <https://doi.org/10.12962/j23373539.v6i2.25166>
- Ardiyanto, P., & Yuantari, M. G. C. (2016). 1. Analisis Limbah Laundry Informal Dengan Tingkat Pencemaran Lingkungan Di Kelurahan Muktiharjo Kidul Kecamatan Pedurungan Semarang. *Jukung (Jurnal Teknik Lingkungan)*, 2(1), 1–12. <https://doi.org/10.20527/jukung.v2i1.1055>
- Baranitharan, E., Khan, M.R., Prasad, D.M.R., Salihon, J.B., (2013). Bioelectricity generation from palm oil mill effluent in microbial fuel cell using polyacrylonitrile carbon felt as electrode. *Water Air Soil Pollut.* 224, 1533–1543.
- Bergey, D. H. (1994). *Bergey's manual of determinative bacteriology*. Lippincott Williams & Wilkins.

- Chae, K. J., Choi, M., Ajayi, F. F., Park, W., Chang, I. S., & Kim, I. S. (2008). Mass transport through a proton exchange membrane (Nafion) in microbial fuel cells. *Energy and Fuels*, 22(1), 169–176. <https://doi.org/10.1021/ef700308u>
- Chang, H., Zou, Y., Hu, R., Feng, H., Wu, H., Zhong, N., & Hu, J. (2020). Membrane applications for microbial energy conversion: a review. *Environmental Chemistry Letters*, 18(5), 1581–1592. <https://doi.org/10.1007/s10311-020-01032-7>
- Chaudhuri, S. K., & Lovley, D. R. (2003). Electricity generation by direct oxidation of glucose in mediatorless microbial fuel cells. *Nature biotechnology*, 21(10), 1229–1232.
- Cheng, J., Zhu, X., Ni, J., Borthwick, A., (2010). Palm oil mill effluent treatment using a two-stage microbial fuel cells system integrated with immobilized biological aerated filters. *Bioresour. Technol.* 101, 2729–2734.
- Cowan and Steel's manual for the identification of medical bacteria. *Journal of Clinical Pathology*, 46(10), 975. 1993
- Das, D. (2017). *Microbial fuel cell A Bioelectrochemical System That Converts Waste to Watts*. Springer.
- Du, Z., Li, H., & Gu, T. (2007). A state of the art review on microbial fuel cells: A promising technology for wastewater treatment and bioenergy. *Biotechnology Advances*, 25(5), 464–482. <https://doi.org/10.1016/j.biotechadv.2007.05.004>
- Exhelora, V. A. (2021). Kinerja Microbial Fuel Cell Menggunakan Substrat Sedimen Muara Sungai Batang Arau dan Identifikasi Bakteri (Doctoral dissertation, Universitas Andalas).
- Fardiaz, S. (2014). Struktur Sel Mikroorganisme. *Universitas Terbuka Repository*, 1–7.
- Franks, Ashley E & Nevin, Kelly P. (2010). Department of Microbiology. USA: University of Massachusetts, Amherst.
- Grimont, F., & Grimont, P. A. (2006). The genus enterobacter. *Prokaryotes*, 6, 197–214.
- Hassan, M.A., Yacob, S., Shirai, Y. dan Hung, Y.T. (2004). Treatment of Palm Oil Wastewaters. Dalam: Wang, L.K., Hung, Y.T., Lo, H.H. dan Yapijakis, C. (ed). *Handbook of Industrial and Hazardous Wastes Treatment*, hal 719- 735. Marcel Dekker, New York.
- Hatmanti A. (2000). Pengenalan Bacillus sp. Oseana 1 (25): 31-41.

- Hristoskova, S., Bardarov, I., Yankov, D., Danova, S., Hubenova, Y., & Mitov, M. (2018). Identification of bacterial community in a sediment microbial fuel cell. *Bulgarian Chemical Communications*, 50B(January), 147–153
- Hermayanti, A., & Nugraha, I. (2014). Potensi perolehan energi listrik dari limbah cair industri tahu dengan metode salt bridge microbial fuel cell. *J. Sains Dasar*, 3(2), 162–168.
- Hidayat, D., Suprianto, R., & Dewi, P. S. (2016). Penentuan kandungan zat padat (total dissolve solid dan total suspended solid) di perairan Teluk Lampung. *Analit: Analytical and Environmental Chemistry*, 1(1).
- Holmes, D. E., Bond, D. R., O'Neil, R. A., Reimers, C. E., Tender, L. R., & Lovley, D. R. (2004). Microbial communities associated with electrodes harvesting electricity from a variety of aquatic sediments. *Microbial Ecology*, 48(2), 178–190. <https://doi.org/10.1007/s00248-003-0004-4>
- Huang, S., Zhang, J., Pi, J., Gong, L., & Zhu, G. (2021). Long-term electricity generation and denitrification performance of MFCs with different exchange membranes and electrode materials. *Bioelectrochemistry*, 140. <https://doi.org/10.1016/j.bioelechem.2021.107748>
- Jong, B.C., Liew, P.W.Y., Juri, M.L., Kim, B.H., Dzomir, A.Z.M., Leo, K.W., Awang, M.R., (2011). Performance and microbial diversity of palm oil mill effluent microbial fuel cell. *Lett. Appl. Microbiol.* 53, 660–667.
- Khoirunnisa, N. S. *Performa Microbial Fuel Cell dengan Substrat Jerami Padi Hasil Pra-Perlakuan NaOH-Gelombang Mikro dan Inokulasi Bakteri Selulolitik* (Doctoral dissertation, IPB University).
- Kusuma, D. A., Fitria, L., & Kadaria, U. (2019). Pengolahan Limbah Laundry Dengan Metode Moving Bed Biofilm Reactor (MBBR). *Jurnal Teknologi Lingkungan*, 02(1), 1–10.
- Ibrahim B, Sutijah P, Adjani ZN. (2017). Kinerja microbial fuel cell penghasil biolistrik dengan perbedaan jenis elektroda pada limbah cair industri perikanan. *Jurnal Pengolahan Hasil Perikanan Indonesia*. 20(2) : 296-304.
- Ibrahim B, Sutijah P, Agung BS. (2017). Pengaruh Jarak Elektroda Microbial Fuel Cell pada Limbah Cair Pemindangan Ikan terhadap Elektrisitas dan Beban Pencemaran. *Jurnal Pengolahan Hasil Perikanan Indonesia*. 20(3) : 559- 567.
- Ibrahim B, Salamah E, Alwinsyah R. (2014). Pembangkit biolistrik dari limbah cair industri perikanan menggunakan microbial fuel cell dengan jumlah elektroda

- yang berbeda. *Jurnal Dinamika Maritim*. 4(1) : 1-9.
- Ilmannafian, A.G., (2020). Analisis Pemanfaatan Jembatan Garam Kcl Dan Nacl Terhadap Laju Korosi Elektroda Zn Pada Sel Volta Menggunakan Air Laut Sebagai Elektrolit. *Jurnal Teknologi Lingkungan*, 5(2), 86–94. <https://doi.org/10.29122/jtl.v2i2.4012>
- Inamuddin, (1980). Ahmer, M. F., & Asiri, A. M. (2019). *Microbial Fuel Cells : Materials and Applications*.
- Izzaty, R. E., Astuti, B., Cholimah, N., Maharani, R. D., Ii, B. A. B., Pustaka, T., Holderman, M. V., De Queljoe, E., Rondonuwu, S. B., Panjaitan, F. J., Bachtiar, T., Arsyad, I., Lele, O. K., Indriyani, W., Sayuti, I., Mahadi, I., Nur, M. I., Putra, H. E., Permana, D., Jember, U. (2020). *ALKIMIA : Jurnal Ilmu Kimia Dan Terapan*, 3(1), 1–9. <https://doi.org/10.31219/osf.io/w59j7>
- Kang, Y. L., Ibrahim, S., & Pichiah, S. (2015). Synergetic effect of conductive polymer poly (3, 4-ethylenedioxythiophene) with different structural configuration of anode for microbial fuel cell application. *Bioresource technology*, 189, 364-369.
- Kurniati, E., Haji, A. T. S., & Permatasari, C. A. (2020). Pengaruh Penambahan EM4 Dan Jarak Elektroda Terhadap Listrik Yang Dihasilkan MFC (Air Lindi). *Jurnal Sumberdaya Alam dan Lingkungan*, 6(3), 19-30.
- Liu, H. 2008. Microbial Fuel Cell; Novel anaerobic bioteknolgy for energy generation from wastewater. *Anaerobic biotecnology production : principles and application*. S. K. Khanal. Iowa, Blackwell Publishing: 221-234
- Logan, B. E., Hamelers, B., Rozendal, R., Schröder, U., Keller, J., Freguia, S., Aelterman, P., Verstraete, W., & Rabaey, K. (2006). Microbial fuel cells: Methodology and technology. *Environmental Science and Technology*, 40(17), 5181–5192. <https://doi.org/10.1021/es0605016>
- Logan, B.E., (2007). Microbial Fuel Cells. WileyInterscience. ISBN 978-0-470-23948.
- Logan, B., Cheng, S., Watson, V., & Estadt, G. (2007). Graphite fiber brush anodes for increased power production in air-cathode microbial fuel cells. *Environmental science & technology*, 41(9), 3341-3346.
- Lovley, D. R. (2006). Bug juice: Harvesting electricity with microorganisms. *Nature Reviews Microbiology*, 4(7), 497–508. <https://doi.org/10.1038/nrmicro1442>
- Lutterbeck, C. A., Colares, G. S., Oliveira, G. A., Mohr, G., Beckenkamp, F., Rieger, A., & Machado, E. L. (2022). Microbial fuel cells and constructed wetlands as a

- sustainable alternative for the treatment of hospital laundry wastewaters: Assessment of load parameters and genotoxicity. *Journal of Environmental Chemical Engineering*, 10(3), 108105.
- Maharani, R. D. (2019). *Pengolahan Air Buangan Limbah Menjadi Energi Listrik Dengan Microbial Fuel Cell (Mfc)*. <https://doi.org/10.31219/osf.io/w59j7>
- Marsidi, R., & Herlambang, A. (2002). Proses Nitrifikasi Dengan Sistem Biofilter untuk Pengolahan Air Limbah Yang Mengandung Amoniak Konsentrasi Tinggi. *Jurnal Teknologi Lingkungan*, 3(3), 195–205.
- Mays, L. W. (1996). Water Resources Handbook. McGraw Hill. NewYork (US)
- Mitruka, B. M., & Bonner, M. J. (2017). Methods of detection and identification of bacteria. In *Methods of Detection and Identification of Bacteria*. <https://doi.org/10.1201/9780203711347>
- Mosleh H, Naghiha A, Keshkaran AN, Khajavi M. (2014). Isolation and identification of tannin-degrading bacteria from native sheep and goat feces in Kohgiloye and Boyer-Ahmad Province. *Int J Adv Bio Biom Res* 2 (1): 176-180.
- Mulyani H. (2012). Pengaruh Pre-klorinasi Dan Pengaturan pH Terhadap Proses Aklimatisasi Dan Penurunan COD Pengolahan Limbah Cair Tapioka Sistem Anaerobic Baffled Reactor. [Tesis]. Semarang: Program Pascasarjana Universitas Diponegoro
- Nor, M. H. M., Mubarak, M. F. M., Elmi, H. S. A., Ibrahim, N., Wahab, M. F. A., & Ibrahim, Z. (2015). Bioelectricity generation in microbial fuel cell using natural microflora and isolated pure culture bacteria from anaerobic palm oil mill effluent sludge. *Bioresource technology*, 190, 458-465.
- Pamungkas, Y. P., Kirom, M. R., Salam, R. A., Prodi, S., Fisika, T., Elektro, F. T., & Telkom, U. (2020). *Sistem Semi Kontinyu Microbial Fuel Cell Microbial Fuel Cell Semi Continouos System*. 7(1), 1375–1381.
- Peighambarioust, S. J., Rowshanzamir, S., & Amjadi, M. (2010). Review of the proton exchange membranes for fuel cell applications. *International journal of hydrogen energy*, 35(17), 9349-9384.
- Pengolahan, Ditjen. Data dan Informasi Pengolahan dan Pemasaran Hasil Pertanian 2006.
- Prescott, L. M., & Klein, P. H. (2002). *Schizanthus 5 t h E d i t i o n*.
- Pungut, P., Al Kholif, M., & Pratiwi, W. D. I. (2021). Penurunan Kadar Chemical

- Oxygen Demand (Cod) Dan Fosfat Pada Limbah Laundry Dengan Metode Adsorpsi. *Jurnal Sains &Teknologi Lingkungan*, 13(2), 155–165. <https://doi.org/10.20885/jstl.vol13.iss2.art6>
- Rahmadoni, L. W., Bakri, B., & Sabaruddin, S. (2020). Perubahan karakteristik fisika dan kimia tanah akibat aplikasi limbah cair pabrik kelapa sawit pada budidaya kedelai (glycine max l.) (Doctoral dissertation, Sriwijaya University).
- Ramadan, B. S., Samudro, G., & Sumiyati, S. (2015). Pengaruh Konsentrasi Chemical Oxygen Demand (Cod) Dan Ragi Terhadap Kinerja Granular Activated Carbon Dual Chamber Microbial Fuel Cells (Gac-dcmfcs) (Doctoral dissertation, Diponegoro University)
- Reksohadiwinoto BS, Rosmalawati S, Cahyana PT, Hariyanto B. (2017). Enzim lakase dari edible mushroom untuk pemutihan sagu ramah lingkungan. *Jurnal Teknologi Lingkungan Hidup* 2 (18): 224-232.
- Sabbathini, G. C., & Pujiyanto, S. (2017). Isolasi dan identifikasi bakteri genus Sphingomonas dari daun padi (*Oryza sativa*) di area persawahan Cibinong. *Jurnal Akademika Biologi*, 6(1), 59-64.
- Salager, J. . (1999). Surfactants-type and Uses. Laboratorio FIRP Escuela de Ingeneira Quimica, Universidad Los Andes
- Sholeh, Q. N. (2018). *Penggunaan Limbah Cair yang Berbeda pada Sistem Microbial Fuel Cell (MFC) sebagai Penghasil Biolistrik*.
- SNI. (2009). Air dan air limbah-Bagian 2: Cara uji Kebutuhan Oksigen Kimia (Chemical Oxygen Demand/COD) dengan refluks tertutup secara spektrofotometri. Jakarta: Badan Standardisasi Nasional Indonesia
- SNI (2009). Air dan Air Limbah-Bagian 72: Cara Uji Kebutuhan Oksigen Biokimia (Biochemical Oxygen Demand/BOD). SNI, 6989, 2009.
- SNI (2008). Air dan Air Limbah-Bagian 59: Metode Pengambilan Contoh Air Limbah. SNI, 6989, 2008.
- SNI (2004). Spesifikasi kompos dari sampah organik domestik. *SNI: Jakarta*.
- Siahaan, J. Y., & Sudarmadji, S. (2016). Pengaruh Limbah Laundry Terhadap Kualitas Airtanah di Sebagian Wilayah Desa Sinduadi, Kecamatan Mlati, Sleman, Daerah Istimewa Yogyakarta. *Jurnal Bumi Indonesia*, 5(4)
- Singleton, P. and D. Sainsbury. 2006. Dictionary of Microbiology and Molecular Biology 3rd Edition. England: John Wiley and Sons. Ltd.

- Stambouli, A. B., & Traversa, E. (2002). Fuel cells, an alternative to standard sources of energy. *Renewable and sustainable energy reviews*, 6(3), 295-304
- Sudaryati NL, Kasa IW, Suyasa IWB. (2012). Pemanfaatan sedimen perairan tercemar sebagai bahan lumpur aktif dalam pengolahan limbah cair industry tahu. *Jurnal Echotropic*. 3(1) : 21-29
- Sutanto, R., (2002), Penerapan Pertanian Organik, Kanisius, Yogyakarta.
- Sholeh, Q. N. 2018. Penggunaan Limbah Cair yang Berbeda pada Sistem Microbial Fuel Cell (MFC) sebagai Penghasil Biolistrik.
- Thomas, Y. R. J., Picot, M., Carer, A., Berder, O., Sentieys, O., & Barrière, F. (2013). A single sediment-microbial fuel cell powering a wireless telecommunication system. *Journal of Power Sources*, 241, 703–708. <https://doi.org/10.1016/j.jpowsour.2013.05.016>
- Tyson, R. (2006). KILLOPS, S. & KILLOPS, V. 2005. Introduction to Organic Geochemistry, ix+ 393 pp. Oxford: Blackwell Publishing. Price£ 29.99 (paperback). ISBN 0 632 06504 4. *Geological Magazine*, 143(2), 250-250.
- Sujiwo B, Syafrudin, Samudro G. (2012). Pemanfaatan lumpur aktif dan em4 sebagai aktivator dalam proses pengomposan limbah kulit bawang dengan sludge. *Jurnal Presipitasi*. 9(2) : 51-63
- Utami, L., Lazulva, L., Fatisa, Y. (2018). Produksi Energi Listrik Dari Limbah Kulit Pisang Menggunakan Teknologi Microbial Fuel Cell Dengan Permanganat Sebagai Katolit. *Al-kimiya*, 5 (2), 62-67. <https://doi.org/10.1016/B978-0-444-53199-5.00098-1>
- Van Eerten-Jansen, M.C.A.A. et al., (2013). Bioelectrochemical production of caproate and caprylate from acetate by mixed cultures. *ACS Sustainable Chemistry and Engineering*.
- Widarti, B. N., Wardhini, W. K., & Sarwono, E. (2015). Pengaruh Rasio C/N Bahan Baku Pada Pembuatan Kompos Dari Kubis dan Kulit Pisang. *Jurnal Integrasi Proses*, 5(2), 75–80.
- Wijono, A. (2017). Dampak Pengurangan Emisi Gas Rumah Kaca. *Jurnal Sains Dan Teknologi*, November, 1–9.
- Wu, Z., An, Y., Wang, Z., Yang, S., Chen, H., Zhou, Z., & Mai, S. (2008). Study on zeolite enhanced contact-adsorption regeneration-stabilization process for nitrogen removal. *Journal of Hazardous Materials*, 156(1–3), 317–326.

<https://doi.org/10.1016/j.jhazmat.2007.12.029>

- Yang, Z., Pei, H., Hou, Q., Jiang, L., Zhang, L., & Nie, C. (2018). Algal biofilm-assisted microbial fuel cell to enhance domestic wastewater treatment: nutrient, organics removal and bioenergy production. *Chemical Engineering Journal*, 332, 277-285.
- Yejian, Z., Li, Y., Xiangli, Q., Lina, C., Xiangjun, N., Zhijian, M., & Zhenjia, Z. (2014). Integration of Biological Method and Membrane Technology in Treating Palm Oil Mill Effluent, (April). [https://doi.org/10.1016/S1001-0742\(08\)62094-X](https://doi.org/10.1016/S1001-0742(08)62094-X)
- Yogaswara, R. R., Farha, A. S., Khairunnisa, K., Pusfitasari, M. D., & Gunawan, A. (2017). Studi Penambahan Mikroorganisme Pada Substrat Limbah Pome Terhadap Kinerja Microbial Fuel Cell. *Jurnal Teknik Kimia*, 12(1), 14–18. <https://doi.org/10.33005/tekkim.v12i1.839>
- Yunilas, D. I. M. . (2017). Penuntun Praktikum Mikrobiologi Peternakan. Universitas Sumatera Utara.
- Yusoff, M.Z.M., Hu, A., Feng, C., Maeda, T., Shirai, Y., Hassan, M.A., Yu, C.-P., (2013). Influence of pretreated activated sludge for electricity generation in microbial fuel cell application. *Bioresour. Technol.* 145, 90–96.
- Zabihallahpoor, A., Rahimnejad, M., & Talebnia, F. (2015). Sediment microbial fuel cells as a new source of renewable and sustainable energy: present status and future prospects. *RSC Advances*, 5(114), 94171–94183. <https://doi.org/10.1039/c5ra15279h>
- Zinatizadeh, A.A.L., Mohamed, A.R., Mashitah, M.D., Abdullahmm, A.Z. dan Najidfour, G.D. (2006). Effect of physical and pretreatment on pome digestion in an upflow anaerobic sludge fixed film
- Zhang, T., Cui, C., Chen, S., Ai, X., Yang, H., Shen, P., & Peng, Z. (2006). A novel mediatorless microbial fuel cell based on direct biocatalysis of Escherichia coli. *Chemical Communications*, 21, 2257–2259. <https://doi.org/10.1039/b600876c>
- Zulkarnaen, I. R. (2018). *Pengaruh rasio karbon dan nitrogen (C/N ratio) pada kotoran sapi terhadap produksi biogas dari proses anaerob* (Doctoral dissertation, Universitas Mataram).