

DAFTAR PUSTAKA

- [1] Climate Transparency, "Climate Transparency Report 2021: Comparing G20 Climate Action Towards Net Zero - Indonesia Country Profile," 2021. Accessed: Jun. 28, 2025. [Online]. Available: www.climate-transparency.org
- [2] V. L. Trinh and C. K. Chung, "Renewable energy for SDG-7 and sustainable electrical production, integration, industrial application, and globalization: Review," *Clean Eng Technol*, vol. 15, p. 100657, Aug. 2023, doi: 10.1016/j.clet.2023.100657.
- [3] I. D. Widharyanti, M. A. Hendrawan, and M. Christwardana, "Membraneless Plant Microbial Fuel Cell using Water Hyacinth (*Eichhornia crassipes*) for Green Energy Generation and Biomass Production," *International Journal of Renewable Energy Development*, vol. 10, no. 1, pp. 71–78, Feb. 2021, doi: 10.14710/ijred.2021.32403.
- [4] T. A. Kurniawan *et al.*, "Microbial Fuel Cells (MFC): A Potential Game-Changer in Renewable Energy Development," Dec. 01, 2022, *MDPI*. doi: 10.3390/su142416847.
- [5] N. Ben David, M. Mafi, A. Nyska, A. Gross, A. Greiner, and B. Mizrahi, "Bacillus subtilis in PVA Microparticles for Treating Open Wounds," *ACS Omega*, vol. 6, no. 21, pp. 13647–13653, Jun. 2021, doi: 10.1021/acsomega.1c00790.
- [6] A. S. Rasal *et al.*, "Carbon Quantum Dots for Energy Applications: A Review," *ACS Appl Nano Mater*, vol. 4, no. 7, pp. 6515–6541, Jul. 2021, doi: 10.1021/acsanm.1c01372.
- [7] S. García-Mayagoitia *et al.*, "Energy Generation from Pharmaceutical Residual Water in Microbial Fuel Cells Using Ordered Mesoporous Carbon and *Bacillus subtilis* as Bioanode," *ACS Sustain Chem Eng*, p. acssuschemeng.9b01281, Jun. 2019, doi: 10.1021/acssuschemeng.9b01281.
- [8] M. Christwardana, J. Joelianingsih, and L. A. Yoshi, "Performance of Yeast Microbial Fuel Cell Integrated with Sugarcane Bagasse Fermentation for COD Reduction and Electricity Generation," *Bulletin of Chemical Reaction Engineering*

& *Catalysis*, vol. 16, no. 3, pp. 446–458, Sep. 2021, doi: 10.9767/bcrec.16.3.9739.446-458.

- [9] C. Ionescu, T. Baracu, G. E. Vlad, H. Necula, and A. Badea, “The historical evolution of the energy efficient buildings,” Sep. 01, 2015, *Elsevier Ltd.* doi: 10.1016/j.rser.2015.04.062.
- [10] B. E. Logan *et al.*, “Microbial fuel cells: Methodology and technology,” Sep. 01, 2006. doi: 10.1021/es0605016.
- [11] K. Rabaey and W. Verstraete, “Microbial fuel cells: Novel biotechnology for energy generation,” Jun. 2005. doi: 10.1016/j.tibtech.2005.04.008.
- [12] H. Liu, S. Cheng, and B. E. Logan, “Production of electricity from acetate or butyrate using a single-chamber microbial fuel cell,” *Environ Sci Technol*, vol. 39, no. 2, pp. 658–662, Jan. 2005, doi: 10.1021/es048927c.
- [13] N. Mokhtarian, “Effect of different substrate on performance of microbial fuel cell,” *Afr J Biotechnol*, vol. 11, no. 14, Feb. 2012, doi: 10.5897/ajb11.2844.
- [14] M. F. and A. A. M. Inamuddin and Ahmer, *Microbial Fuel Cells : Materials and Applications*, vol. 46. Materials Research Forum LLC, 2019. doi: 10.21741/9781644900116.
- [15] M. A. and K. M. R. and F. N. Fasha, “Analisis Pengaruh Ketebalan Proton Exchange Membrane berongga pada Microbial Fuel Cell Dual Chamber Terhadap hasil Produksi Energi Listrik,” *e-Proceeding of Engineering*, vol. 10, 2023.
- [16] Irpan, “Studi Perancangan Sistem Seri, Paralel Dan Kombinasi Pada Teknologi Microbial Fuel Cell Sebagai Produksi Energi Listrik Menggunakan Limbah Industri Tahu,” Universitas Muhammadiyah Yogyakarta, Yogyakarta, 2018.
- [17] C. Sato, N. E. Paucar, S. Chiu, M. Z. I. M. Mahmud, and J. Dudgeon, “Single-Chamber Microbial Fuel Cell with Multiple Plates of Bamboo Charcoal Anode: Performance Evaluation,” *Processes*, vol. 9, no. 12, p. 2194, Dec. 2021, doi: 10.3390/pr9122194.

- [18] S. and P. N. Shaikh, "Microbial Fuel Cell: Design and Operation," *Res Rev J Microbiol Biotechnol*, Sep. 2016.
- [19] D. A. and W. D. R. and N. I. Syafaati, "Potensi Perolehan Energi Listrik dalam Proses Pengolahan Limbah Tahu Melalui Microbial Fuel Cell (MFC)," *Jurnal Ilmu Kimia dan Terapan*, vol. 3, 2019.
- [20] D. Das, *Microbial Fuel Cell: A Bioelectrochemical System that Converts Waste to Watts*. Cham: Springer International Publishing, 2018. doi: 10.1007/978-3-319-66793-5.
- [21] Sunarto, "Peranan Dekomposisi Dalam Proses," Nov. 2003.
- [22] D. R. Lovley, "Bug juice: harvesting electricity with microorganisms," *Nat Rev Microbiol*, vol. 4, no. 7, pp. 497–508, Jul. 2006, doi: 10.1038/nrmicro1442.
- [23] B. E. Logan, "Microbial Fuel Cells," New Jersey, 2008.
- [24] J. Wei, P. Liang, and X. Huang, "Recent progress in electrodes for microbial fuel cells," *Bioresour Technol*, vol. 102, no. 20, pp. 9335–9344, Oct. 2011, doi: 10.1016/j.biortech.2011.07.019.
- [25] A. Greiner and J. H. Wendorff, "Electrospinning: A Fascinating Method for the Preparation of Ultrathin Fibers," *Angewandte Chemie International Edition*, vol. 46, no. 30, pp. 5670–5703, Jul. 2007, doi: 10.1002/anie.200604646.
- [26] B. Ding, M. Wang, X. Wang, J. Yu, and G. Sun, "Electrospun nanomaterials for ultrasensitive sensors," *Materials Today*, vol. 13, no. 11, pp. 16–27, Nov. 2010, doi: 10.1016/S1369-7021(10)70200-5.
- [27] S. N. Baker and G. A. Baker, "Luminescent Carbon Nanodots: Emergent Nanolights," *Angewandte Chemie International Edition*, vol. 49, no. 38, pp. 6726–6744, Sep. 2010, doi: 10.1002/anie.200906623.
- [28] Y. Liu, H. Liu, C. Wang, S.-X. Hou, and N. Yang, "Sustainable Energy Recovery in Wastewater Treatment by Microbial Fuel Cells: Stable Power Generation with Nitrogen-doped Graphene Cathode," *Environ Sci Technol*, vol. 47, no. 23, pp. 13889–13895, Dec. 2013, doi: 10.1021/es4032216.

- [29] F. A. Prayogo, A. Supriyadi, and B. Raharjo, "MICROBIAL FUEL CELL (MFC) MENGGUNAKAN BAKTERI BACILLUS SUBTILIS DENGAN SUBSTRAT LIMBAH SEPTIC TANK SERTA PENGARUHNYA TERHADAP KUALITAS LIMBAH," 2017.
- [30] X. Fan, Y. Zhou, X. Jin, R. Bin Song, Z. Li, and Q. Zhang, "Carbon material-based anodes in the microbial fuel cells," Jul. 01, 2021, *John Wiley and Sons Inc.* doi: 10.1002/cey2.113.
- [31] H. N. Dai, T. A. Duong Nguyen, L. P. My LE, M. Van Tran, T. H. Lan, and C. T. Wang, "Power generation of *Shewanella oneidensis* MR-1 microbial fuel cells in bamboo fermentation effluent," *Int J Hydrogen Energy*, vol. 46, no. 31, pp. 16612–16621, May 2021, doi: 10.1016/j.ijhydene.2020.09.264.
- [32] Suman, G. Rani, R. Ahlawat, and H. Kumar, "Green source-based carbon quantum dots, composites, and key factors for high-performance of supercapacitors," *J Power Sources*, vol. 617, p. 235170, Oct. 2024, doi: 10.1016/j.jpowsour.2024.235170.
- [33] E. Diep and J. D. Schiffman, "Electrospinning Living Bacteria: A Review of Applications from Agriculture to Health Care," Mar. 20, 2023, *American Chemical Society*. doi: 10.1021/acsabm.2c01055.
- [34] S. García-Mayagotia *et al.*, "CONTENIDO Bioelectrochemical behavior of Ordered Mesoporous Carbon + *B. subtilis* as bioanode for the Volumenproduction8, númeroof bioenergy3, 2009 /Volumein a Microbial8, numberFuel3, 2009Cell (MFC)," *Revista Mexicana de Ingeniera Quimica*, vol. 22, no. 2, 2023, doi: 10.24275/rmiq/Ener2320.
- [35] A. Partovi, M. Khedrinia, S. Arjmand, and S. O. Ranaei Siadat, "Electrospun nanofibrous wound dressings with enhanced efficiency through carbon quantum dots and citrate incorporation," *Sci Rep*, vol. 14, no. 1, Dec. 2024, doi: 10.1038/s41598-024-70295-9.
- [36] B. E. Logan and K. Rabaey, "Conversion of Wastes into Bioelectricity and Chemicals by Using Microbial Electrochemical Technologies," *Science* (1979), vol. 337, no. 6095, pp. 686–690, Aug. 2012, doi: 10.1126/science.1217412.

- [37] K. Obileke, H. Onyeaka, E. L. Meyer, and N. Nwokolo, "Microbial fuel cells, a renewable energy technology for bio-electricity generation: A mini-review," *Electrochem commun*, vol. 125, p. 107003, Apr. 2021, doi: 10.1016/j.elecom.2021.107003.
- [38] A. K. Manohar, O. Bretschger, K. H. Nealson, and F. Mansfeld, "The use of electrochemical impedance spectroscopy (EIS) in the evaluation of the electrochemical properties of a microbial fuel cell," *Bioelectrochemistry*, vol. 72, no. 2, pp. 149–154, Apr. 2008, doi: 10.1016/j.bioelechem.2008.01.004.
- [39] B. Pandya, L. Chaudhari, and N. R. Vaghela, "Enhanced Performance of a Microbial Fuel Cell Using Double Oxidant-Treated Carbon Felts," *Electrochem*, vol. 6, no. 2, Jun. 2025, doi: 10.3390/electrochem6020012.
- [40] G. Bampos, Z. Gargala, I. Apostolopoulos, and G. Antonopoulou, "Electrochemical Characteristics of Microbial Fuel Cells Operating with Various Food Industry Wastewaters," *Processes*, vol. 12, no. 6, Jun. 2024, doi: 10.3390/pr12061244.

