# Mini-review: Anode modification for improved perform

Renewable and Sustainable Energy Reviews
73, 236-248
DOI: 10.1016/j.rser.2017.01.138

Citation Report

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Medium-chain-length poly-3-hydroxyalkanoates-carbon nanotubes composite anode enhances the performance of microbial fuel cell. Bioprocess and Biosystems Engineering, 2017, 40, 919-928. | 1.7 | 13 |
| 2 | Electrochemical communication between living cells and conductive surfaces. Current Opinion in Electrochemistry, 2017, 5, 193-202. | 2.5 | 71 |
| 3 | Advances towards understanding and engineering direct interspecies electron transfer in anaerobic digestion. Bioresource Technology, 2017, 244, 698-707. | 4.8 | 299 |
| 4 | Surface modification of carbon cloth anodes for microbial fuel cells using atmospheric-pressure plasma jet processed reduced graphene oxides. RSC Advances, 2017, 7, 56433-56439. | 1.7 | 24 |
| 5 | Development of a Bioanode for Microbial Fuel Cells Based on the Combination of a MWCNTâ€Auâ€Pt Hybrid Nanomaterial, an Osmium Redox Polymer and Gluconobacter oxydans DSM 2343 Cells. ChemistrySelect, 2017, 2, 12034-12040. | 0.7 | 16 |
| 6 | New Age of Wastewater Treatment Employing Bio-electrochemical Systems. Energy, Environment, and Sustainability, 2018, , 155-170. | 0.6 | 1 |
| 7 | Electricity from Microbial Fuel Cells. Green Energy and Technology, 2018, , 391-433. | 0.4 | 2 |
| 8 | Chemical Etching of TiO<sub>2</sub> Nanorods Greatly Improves Current Generation of S. loihica PV-4 on a Carbon Paper Electrode. Applied Mechanics and Materials, 2018, 875, 14-18. | 0.2 | 0 |
| 9 | Improvement of the Carbon Electrode Treatment to Obtain Bioanodes for Microbial Electrolysis Cell (MEC). International Journal of Electrochemical Science, 2018, , 3970-3985. | 0.5 | 7 |
| 10 | Recent advancements in real-world microbial fuel cell applications. Current Opinion in Electrochemistry, 2018, 11, 78-83. | 2.5 | 146 |
| 11 | PEDOT:PSS-based Multilayer Bacterial-Composite Films for Bioelectronics. Scientific Reports, 2018, 8, 15293. | 1.6 | 69 |
| 12 | Bioelectrochemical Systems for Energy Valorization of Waste Streams. , 0, , . | | 7 |
| 13 | Driving force of the better performance of metal-doped carbonaceous anodes in microbial fuel cells. Applied Energy, 2018, 225, 52-59. | 5.1 | 27 |
| 14 | Application of redox mediators in bioelectrochemical systems. Biotechnology Advances, 2018, 36, 1412-1423. | 6.0 | 86 |
| 15 | Application of Graphene-Cobalt/Nickel Composite-Carbon Cloth Modified Electrode in Microbial Fuel Cell. Environmental Engineering Science, 2018, 35, 1173-1184. | 0.8 | 8 |
| 16 | Integrated system approach to dark fermentative biohydrogen production for enhanced yield, energy efficiency and substrate recovery. Reviews in Environmental Science and Biotechnology, 2018, 17, 501-529. | 3.9 | 33 |
| 17 | Bioelectricity Generation in Soil Microbial Fuel Cells Using Organic Waste. , 2018, , 137-150. | | 0 |
| 18 | Plant Microbial Fuel Cell Technology: Developments and Limitations. , 2018, , 49-65. | | 3 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Algae cathode microbial fuel cells for cadmium removal with simultaneous electricity production using nickel foam/graphene electrode. Biochemical Engineering Journal, 2018, 138, 179-187. | 1.8 | 65 |
| 20 | Microbial Fuel Cell Technology for Bioelectricity. , 2018, , . | | 13 |
| 21 | Carbon-Based Polymer Nanocomposites as Electrodes for Microbial Fuel Cells. , 2018, , 361-390. | | 5 |
| 22 | Electrochemistry, a tool to enhance self-purification in water systems while preventing the emission of noxious gases (greenhouse gases, H2S, NH3). Current Opinion in Electrochemistry, 2018, 11, 25-33. | 2.5 | 9 |
| 23 | Overview of porous media/metal foam application in fuel cells and solar power systems. Renewable and Sustainable Energy Reviews, 2018, 96, 181-197. | 8.2 | 126 |
| 24 | The effect of chemical vapor deposition temperature on the performance of binder-free sewage sludge-derived anodes in microbial fuel cells. Science of the Total Environment, 2018, 635, 45-52. | 3.9 | 34 |
| 25 | Low-Cost Solutions for Fabrication of Microbial Fuel Cells: Ceramic Separator and Electrode Modifications. , 2018, , 95-124. | | 4 |
| 26 | Nanocellulose-based materials as components of polymer electrolyte fuel cells. Journal of Materials Chemistry A, 2019, 7, 20045-20074. | 5.2 | 85 |
| 27 | Oxygen-containing functional groups on bioelectrode surface enhance expression of c-type cytochromes in biofilm and boost extracellular electron transfer. Bioresource Technology, 2019, 292, 121995. | 4.8 | 24 |
| 28 | Factors affecting the efficiency of a bioelectrochemical system: a review. RSC Advances, 2019, 9, 19748-19761. | 1.7 | 62 |
| 29 | Enhancing power generation and treatment of dairy waste water in microbial fuel cell using Cu-doped iron oxide nanoparticles decorated anode. Energy, 2019, 172, 173-180. | 4.5 | 96 |
| 30 | Preparation of metal oxide/polyaniline/N-MWCNT hybrid composite electrodes for electrocatalytic synthesis of ammonia at atmospheric pressure. Sustainable Energy and Fuels, 2019, 3, 431-438. | 2.5 | 9 |
| 31 | Enhancing the performance of microbial fuel cells (MFCs) with nitrophenyl modified carbon nanotubes-based anodes. Applied Surface Science, 2019, 492, 661-668. | 3.1 | 32 |
| 32 | Biosynthetic graphene enhanced extracellular electron transfer for high performance anode in microbial fuel cell. Chemosphere, 2019, 232, 396-402. | 4.2 | 51 |
| 33 | Effect of pore size on the current produced by 3-dimensional porous microbial anodes: A critical review. Bioresource Technology, 2019, 289, 121641. | 4.8 | 67 |
| 34 | Fuel cell-based self-powered electrochemical sensors for biochemical detection. Nano Energy, 2019, 61, 173-193. | 8.2 | 121 |
| 35 | SiOC-based polymer derived-ceramic porous anodes for microbial fuel cells. Biochemical Engineering Journal, 2019, 148, 29-36. | 1.8 | 33 |
| 36 | Selective enrichment of biocatalysts for bioelectrochemical systems: A critical review. Renewable and Sustainable Energy Reviews, 2019, 109, 10-23. | 8.2 | 74 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Medium-chain-length poly-3-hydroxyalkanoates-carbon nanotubes composite as proton exchange membrane in microbial fuel cell. Chemical Engineering Communications, 2019, 206, 731-745. | 1.5 | 18 |
| 38 | Self-stratified and self-powered micro-supercapacitor integrated into a microbial fuel cell operating in human urine. Electrochimica Acta, 2019, 307, 241-252. | 2.6 | 38 |
| 39 | Superior carbon belts from Spirogyra for efficient extracellular electron transfer and sustainable microbial energy harvesting. Journal of Materials Chemistry A, 2019, 7, 6930-6938. | 5.2 | 33 |
| 40 | Challenges of Microbial Fuel Cell Architecture on Heavy Metal Recovery and Removal From Wastewater. Frontiers in Energy Research, 2019, 7, . | 1.2 | 105 |
| 41 | Improved Bioactivity on Substrate Degradation in Microbial Fuel Cells Using Tourmaline-Modified Anodes. Journal of Environmental Engineering, ASCE, 2019, 145, 06019003. | 0.7 | 5 |
| 42 | Electroactive biochar outperforms highly conductive carbon materials for biodegrading pollutants by enhancing microbial extracellular electron transfer. Carbon, 2019, 146, 597-609. | 5.4 | 79 |
| 43 | Recovering platinum from wastewater by charring biofilm of microbial fuel cells (MFCs). Journal of Saudi Chemical Society, 2019, 23, 338-345. | 2.4 | 27 |
| 44 | Synergistically promoting microbial biofilm growth and interfacial bioelectrocatalysis by molybdenum carbide nanoparticles functionalized graphene anode for bioelectricity production. Journal of Power Sources, 2019, 413, 174-181. | 4.0 | 40 |
| 45 | Amphiphilic Biopolyesterâ€Carbon Nanotube Anode Enhances Electrochemical Activities of Microbial Fuel Cell. Chemical Engineering and Technology, 2019, 42, 566-574. | 0.9 | 10 |
| 46 | Microbial fuel cell hybrid systems for wastewater treatment and bioenergy production: Synergistic effects, mechanisms and challenges. Renewable and Sustainable Energy Reviews, 2019, 103, 13-29. | 8.2 | 171 |
| 47 | Reduced graphene oxide/polyacrylamide composite hydrogel scaffold as biocompatible anode for microbial fuel cell. Chemical Engineering Journal, 2019, 361, 615-624. | 6.6 | 74 |
| 48 | Enhanced performance of microbial fuel cells by electrospinning carbon nanofibers hybrid carbon nanotubes composite anode. International Journal of Hydrogen Energy, 2019, 44, 3088-3098. | 3.8 | 80 |
| 49 | Enhancement of power generation by microbial fuel cells in treating toluene-contaminated groundwater: Developments of composite anodes with various compositions. Applied Energy, 2019, 233-234, 922-929. | 5.1 | 32 |
| 50 | A comparison of long-term fouling performance by zirconia ceramic filter and cation exchange in microbial fuel cells. International Biodeterioration and Biodegradation, 2019, 136, 63-70. | 1.9 | 33 |
| 51 | Effect of Zeolite-Fe on graphite anode in electroactive biofilm development for application in microbial fuel cells. Applied Surface Science, 2019, 467-468, 851-859. | 3.1 | 23 |
| 52 | Carbon-Based Materials in Microbial Fuel Cells. , 2019, , 49-74. | | 8 |
| 53 | Important Factors Influencing Microbial Fuel Cell Performance. , 2019, , 377-406. | | 30 |
| 54 | Fast expansion of graphite into superior three-dimensional anode for microbial fuel cells. Journal of Power Sources, 2019, 412, 86-92. | 4.0 | 27 |

| # | Article | IF | Citations |
|---|---|---|---|
| 55 | Tungsten oxide as electrocatalyst for improved power generation and wastewater treatment in microbial fuel cell. Environmental Technology (United Kingdom), 2020, 41, 2546-2553. | 1.2 | 30 |
| 56 | Feasibility of membrane processes for the recovery and purification of bio-based volatile fatty acids: A comprehensive review. Journal of Industrial and Engineering Chemistry, 2020, 81, 24-40. | 2.9 | 92 |
| 57 | Tubular ceramic performance as separator for microbial fuel cell: A review. International Journal of Hydrogen Energy, 2020, 45, 22340-22348. | 3.8 | 11 |
| 58 | Critical review on microbial fuel cells for concomitant reduction of hexavalent chromium and bioelectricity generation. Journal of Chemical Technology and Biotechnology, 2020, 95, 1298-1307. | 1.6 | 24 |
| 59 | Strategies for improving the electroactivity and specific metabolic functionality of microorganisms for various microbial electrochemical technologies. Biotechnology Advances, 2020, 39, 107468. | 6.0 | 84 |
| 60 | Antimony-tin based intermetallics supported on reduced graphene oxide as anode and MnO2@rGO as cathode electrode for the study of microbial fuel cell performance. Renewable Energy, 2020, 150, 156-166. | 4.3 | 41 |
| 61 | Pomelo peel-derived, N-doped biochar microspheres as an efficient and durable metal-free ORR catalyst in microbial fuel cells. Sustainable Energy and Fuels, 2020, 4, 1642-1653. | 2.5 | 59 |
| 62 | Improving electron transport efficiency and power density by continuous carbon fibers as anode in the microbial fuel cell. Journal of Electroanalytical Chemistry, 2020, 857, 113743. | 1.9 | 7 |
| 63 | Development and modification of materials to build cost-effective anodes for microbial fuel cells (MFCs): An overview. Biochemical Engineering Journal, 2020, 164, 107779. | 1.8 | 180 |
| 64 | Three-dimensional graphitic mesoporous carbon-doped carbon felt bioanodes enables high electric current production in microbial fuel cells. International Journal of Hydrogen Energy, 2020, 45, 32413-32422. | 3.8 | 24 |
| 65 | Electro-polymerized polyaniline modified conductive bacterial cellulose anode for supercapacitive microbial fuel cells and studying the role of anodic biofilm in the capacitive behavior. Journal of Power Sources, 2020, 478, 228822. | 4.0 | 41 |
| 66 | Is bioelectrochemical energy production from wastewater a reality? Identifying and standardising the progress made in scaling up microbial electrolysis cells. Renewable and Sustainable Energy Reviews, 2020, 133, 110279. | 8.2 | 34 |
| 67 | 3D-printing for electrolytic processes and electrochemical flow systems. Journal of Materials Chemistry A, 2020, 8, 21902-21929. | 5.2 | 37 |
| 68 | Fundamentals, Applications, and Future Directions of Bioelectrocatalysis. Chemical Reviews, 2020, 120, 12903-12993. | 23.0 | 227 |
| 69 | Microfluidic Microbial Bioelectrochemical Systems: An Integrated Investigation Platform for a More Fundamental Understanding of Electroactive Bacterial Biofilms. Microorganisms, 2020, 8, 1841. | 1.6 | 20 |
| 70 | Graphiteâ€"Metal Oxide Composites as Potential Anodic Catalysts for Microbial Fuel Cells. Catalysts, 2020, 10, 796. | 1.6 | 10 |
| 71 | Treatment of mixed dairy and dye wastewater in anode of microbial fuel cell with simultaneous electricity generation. Environmental Science and Pollution Research, 2020, 27, 43711-43723. | 2.7 | 16 |
| 72 | Bioelectrochemical chlorate reduction by Dechloromonas agitata CKB. Bioresource Technology, 2020, 315, 123818. | 4.8 | 15 |

| # | Article | IF | Citations |
|---|---|---|---|
| 73 | Enhanced Performance of Microbial Fuel Cells with Anodes from Ethylenediamine and Phenylenediamine Modified Graphite Felt. Processes, 2020, 8, 939. | 1.3 | 12 |
| 74 | A Carbon-Cloth Anode Electroplated with Iron Nanostructure for Microbial Fuel Cell Operated with Real Wastewater. Sustainability, 2020, 12, 6538. | 1.6 | 60 |
| 75 | Coreâ€“shell structured multiwall carbon nanotubeâ€“graphene oxide nanoribbon and its N-doped variant as anodes for high-power microbial fuel cells. Sustainable Energy and Fuels, 2020, 4, 5339-5351. | 2.5 | 25 |
| 76 | Influence of microbial fuel cell with porous anode on voltage generation, chemical oxygen demand, chloride content and total dissolved solids. Water Science and Technology, 2020, 82, 1285-1295. | 1.2 | 3 |
| 77 | Effect of Corncob Derived Biochar on Microbial Electroremediation of Dye Wastewater and Bioenergy Generation. ChemistrySelect, 2020, 5, 9793-9798. | 0.7 | 16 |
| 78 | Anode Modification as an Alternative Approach to Improve Electricity Generation in Microbial Fuel Cells. Energies, 2020, 13, 6596. | 1.6 | 31 |
| 79 | Performance of tungsten oxide/polypyrrole composite as cathode catalyst in single chamber microbial fuel cell. Journal of Environmental Chemical Engineering, 2020, 8, 104520. | 3.3 | 12 |
| 80 | 100th Anniversary of Macromolecular Science Viewpoint: Soft Materials for Microbial Bioelectronics. ACS Macro Letters, 2020, 9, 1590-1603. | 2.3 | 14 |
| 81 | Waste-derived biochar: Applications and future perspective in microbial fuel cells. Bioresource Technology, 2020, 312, 123587. | 4.8 | 107 |
| 82 | Bioelectricity generation using iron(II) molybdate nanocatalyst coated anode during treatment of sugar wastewater in microbial fuel cell. Fuel, 2020, 277, 118119. | 3.4 | 33 |
| 83 | Air-breathing cathode self-powered supercapacitive microbial fuel cell with human urine as electrolyte. Electrochimica Acta, 2020, 353, 136530. | 2.6 | 10 |
| 84 | Enhanced methane producing microbial electrolysis cells for wastewater treatment using poly(neutral red) and chitosan modified electrodes. Sustainable Energy and Fuels, 2020, 4, 4238-4248. | 2.5 | 15 |
| 85 | Idea paper: Communityâ€interaction analyses contribute to improving the performance of microbial fuel cells. Ecological Research, 2020, 35, 583-585. | 0.7 | 3 |
| 86 | A Review of Control-Oriented Bioelectrochemical Mathematical Models of Microbial Fuel Cells. Processes, 2020, 8, 583. | 1.3 | 27 |
| 87 | Up-scaling microbial fuel cell systems for the treatment of real textile dye wastewater and bioelectricity recovery. International Journal of Environmental Studies, 2020, 77, 692-702. | 0.7 | 19 |
| 88 | Biomass-Derived Carbon for Electrode Fabrication in Microbial Fuel Cells: A Review. Industrial & Engineering Chemistry Research, 2020, 59, 6391-6404. | 1.8 | 50 |
| 89 | Renewable energies driven electrochemical wastewater/soil decontamination technologies: A critical review of fundamental concepts and applications. Applied Catalysis B: Environmental, 2020, 270, 118857. | 10.8 | 196 |
| 90 | Microbial Fuel Cells: Nanomaterials Based on Anode and Their Application. Energy Technology, 2020, 8, 2000206. | 1.8 | 61 |

| # | Article | IF | Citations |
|---|---|---|---|
| 92 | Microbial Fuel Cell stack performance enhancement through carbon veil anode modification with activated carbon powder. Applied Energy, 2020, 262, 114475. | 5.1 | 54 |
| 93 | Development and Application of Supported Ionic Liquid Membranes in Microbial Fuel Cell Technology: A Concise Overview. Membranes, 2020, 10, 16. | 1.4 | 31 |
| 94 | Application of advanced anodes in microbial fuel cells for power generation: A review. Chemosphere, 2020, 248, 125985. | 4.2 | 133 |
| 95 | Enhanced electron transfer on microbial electrosynthesis biocathode by polypyrrole-coated acetogens. Bioresource Technology, 2020, 309, 123322. | 4.8 | 29 |
| 96 | Anode surface modification regulates biofilm community population and the performance of micro-MFC based biochemical oxygen demand sensor. Chemical Engineering Science, 2020, 221, 115691. | 1.9 | 26 |
| 97 | Comparison of NiCo2O4, CoNiAl-LDH, and CoNiAl-LDH@NiCo2O4 performances as ORR catalysts in MFC cathode. Renewable Energy, 2020, 154, 1263-1271. | 4.3 | 49 |
| 98 | Composite of mediumâ€chainâ€length polyhydroxyalkanoatesâ€co â€methyl acrylate and carbon nanotubes as innovative electrodes modifier in microbial fuel cell. Biotechnology and Applied Biochemistry, 2021, 68, 307-318. | 1.4 | 7 |
| 99 | Microbial Fuel Cell â€“ A Sustainable Approach for Simultaneous Wastewater Treatment and Energy Recovery. Journal of Water Process Engineering, 2021, 40, 101768. | 2.6 | 32 |
| 100 | Boosting the anode performance of microbial fuel cells with a bacteria-derived biological iron oxide/carbon nanocomposite catalyst. Chemosphere, 2021, 268, 128800. | 4.2 | 28 |
| 101 | Reduced graphene oxide@polydopamine decorated carbon cloth as an anode for a high-performance microbial fuel cell in Congo red/saline wastewater removal. Bioelectrochemistry, 2021, 137, 107675. | 2.4 | 37 |
| 102 | Hierarchical N-doped C/Fe3O4 nanotube composite arrays grown on the carbon fiber cloth as a bioanode for high-performance bioelectrochemical system. Chemical Engineering Journal, 2021, 406, 126832. | 6.6 | 28 |
| 103 | Minimizing mass transfer losses in microbial fuel cells: Theories, progresses and prospectives. Renewable and Sustainable Energy Reviews, 2021, 136, 110460. | 8.2 | 28 |
| 104 | Preparation, characterization, and optimization of a porous polyaniline-copper anode microbial fuel cell. Journal of Solid State Electrochemistry, 2021, 25, 639-650. | 1.2 | 11 |
| 105 | Bio-functional metal organic framework composite as bioanode for enhanced electricity generation by a microbial fuel cell. Electrochimica Acta, 2021, 368, 137622. | 2.6 | 23 |
| 106 | Enhancing Biosynthesis and Manipulating Flux in Whole Cells with Abiotic Catalysis. ChemBioChem, 2021, 22, 469-477. | 1.3 | 5 |
| 107 | Modification of the anodes using MoS2 nanoflowers for improving microbial fuel cells performance. Catalysis Today, 2021, 364, 111-117. | 2.2 | 18 |
| 108 | Biosynthesized Î±-MnO<sub>2</sub>-based polyaniline binary composite as efficient bioanode catalyst for high-performance microbial fuel cell. International Journal of Transgender Health, 2021, 14, 541-568. | 1.1 | 13 |
| 109 | Status Update on Bioelectrochemical Systems: Prospects for Carbon Electrode Design and Scale-Up. Catalysts, 2021, 11, 278. | 1.6 | 19 |

| # | Article | IF | Citations |
|---|---|---|---|
| 110 | Bimetallic oxide MnFe2O4 modified carbon felt anode by drip coating: an effective approach enhancing power generation performance of microbial fuel cell. Bioprocess and Biosystems Engineering, 2021, 44, 1119-1130. | 1.7 | 12 |
| 111 | Towards Bio-Hybrid Energy Harvesting in the Real-World: Pushing the Boundaries of Technologies and Strategies Using Bio-Electrochemical and Bio-Mechanical Processes. Applied Sciences (Switzerland), 2021, 11, 2220. | 1.3 | 10 |
| 112 | Recent Advances on the Development of Functional Materials in Microbial Fuel Cells: From Fundamentals to Challenges and Outlooks. Energy and Environmental Materials, 2022, 5, 401-426. | 7.3 | 17 |
| 113 | Electrospun carbon fibers for microbial fuel cells: A novel bioanode design applied to wastewater treatment. Electrochimica Acta, 2021, 373, 137864. | 2.6 | 16 |
| 114 | Improved decolorization of dye wastewater and enhanced power output in the electrically stacked microbial fuel cells with <scp>H<sub>2</sub>O<sub>2</sub></scp> modified corncob anodes. Environmental Progress and Sustainable Energy, 2021, 40, e13638. | 1.3 | 8 |
| 115 | Research progress of magnetic materials in microbial fuel cell applications. IOP Conference Series: Earth and Environmental Science, 2021, 687, 012102. | 0.2 | 0 |
| 116 | From Microorganism-Based Amperometric Biosensors towards Microbial Fuel Cells. Sensors, 2021, 21, 2442. | 2.1 | 36 |
| 117 | Effect of Polypyrrole-Fe3O4 Composite Modified Anode and Its Electrodeposition Time on the Performance of Microbial Fuel Cells. Energies, 2021, 14, 2461. | 1.6 | 11 |
| 118 | Insights into the mechanism, performance and electrode modification of BES-AD combined systems for refractory wastewater treatment: A review. Journal of Water Process Engineering, 2021, 40, 101895. | 2.6 | 12 |
| 119 | 3-Aminopropyltriethoxysilane Complexation with Iron Ion Modified Anode in Marine Sediment Microbial Fuel Cells with Enhanced Electrochemical Performance. Journal of Ocean University of China, 2021, 20, 581-589. | 0.6 | 0 |
| 120 | Carbon materialâ€based anodes in the microbial fuel cells. , 2021, 3, 449-472. | | 64 |
| 121 | A Mini-Review on Applications of 3D Printing for Microbial Electrochemical Technologies. Frontiers in Energy Research, 2021, 9, . | 1.2 | 13 |
| 122 | How Comparable are Microbial Electrochemical Systems around the Globe? An Electrochemical and Microbiological Crossâ€Laboratory Study. ChemSusChem, 2021, 14, 2313-2330. | 3.6 | 13 |
| 123 | Assessing the Surface Water Quality of Ana Sagar Lake and its Bioremediation in Modified Constructed Wetland. IOP Conference Series: Earth and Environmental Science, 2021, 796, 012026. | 0.2 | 0 |
| 125 | Recent advances in the improvement of bi-directional electron transfer between abiotic/biotic interfaces in electron-assisted biosynthesis system. Biotechnology Advances, 2022, 54, 107810. | 6.0 | 7 |
| 126 | Effect of modified anode on bioenergy harvesting and nutrients removal in a microbial nutrient recovery cell. Bioresource Technology, 2021, 332, 125077. | 4.8 | 10 |
| 127 | Additive manufactured graphene-based electrodes exhibit beneficial performances in Pseudomonas aeruginosa microbial fuel cells. Journal of Power Sources, 2021, 499, 229938. | 4.0 | 15 |
| 128 | MXene@Poly(diallyldimethylammonium chloride) Decorated Carbon Cloth for Highly Electrochemically Active Biofilms in Microbial Fuel Cells. ChemElectroChem, 2021, 8, 2583-2589. | 1.7 | 9 |

| # | Article | IF | Citations |
|---|---|---|---|
| 129 | Integrated Constructed Wetlandâ€Microbial Fuel Cell using Biochar as Wetland Matrix: Influence on Power Generation and Textile Wastewater Treatment. ChemistrySelect, 2021, 6, 8323-8328. | 0.7 | 14 |
| 130 | Enhancing power generation in microbial fuel cell using tungsten carbide on reduced graphene oxide as an efficient anode catalyst material. Energy, 2021, 229, 120702. | 4.5 | 32 |
| 131 | Carbonâ€Based Composites as Anodes for Microbial Fuel Cells: Recent Advances and Challenges. ChemPlusChem, 2021, 86, 1322-1341. | 1.3 | 6 |
| 132 | Modern trend of anodes in microbial fuel cells (MFCs): An overview. Environmental Technology and Innovation, 2021, 23, 101579. | 3.0 | 124 |
| 133 | Using a three-dimensional hydroxyapatite/graphene aerogel as a high-performance anode in microbial fuel cells. Journal of Environmental Chemical Engineering, 2021, 9, 105441. | 3.3 | 17 |
| 134 | Stainless steel cloth modified by carbon nanoparticles of Chinese ink as scalable and high-performance anode in microbial fuel cell. Chinese Chemical Letters, 2021, 32, 2499-2502. | 4.8 | 15 |
| 135 | Full cell mathematical models of air cathode microbial fuel cells. Experimental and Computational Multiphase Flow, 2023, 5, 111-121. | 1.9 | 5 |
| 136 | The influential role of external electrical load in microbial fuel cells and related improvement strategies: A review. Bioelectrochemistry, 2021, 140, 107749. | 2.4 | 27 |
| 137 | Developments in fuel cells and electrochemical batteries using nanoparticles and nanofluids. Energy Storage, 2022, 4, e288. | 2.3 | 4 |
| 138 | A new modification method of metal substrates via candle soot to prepare effective anodes in airâ€cathode microbial fuel cells. Journal of Chemical Technology and Biotechnology, 2022, 97, 189-198. | 1.6 | 10 |
| 139 | Principles and advancements in improving anaerobic digestion of organic waste via direct interspecies electron transfer. Renewable and Sustainable Energy Reviews, 2021, 148, 111367. | 8.2 | 61 |
| 140 | Empowering electroactive microorganisms for soil remediation: Challenges in the bioelectrochemical removal of petroleum hydrocarbons. Chemical Engineering Journal, 2021, 419, 130008. | 6.6 | 30 |
| 141 | Stainless steel and carbon brushes as high-performance anodes for energy production and nutrient recovery using the microbial nutrient recovery system. Energy, 2021, 233, 121213. | 4.5 | 3 |
| 142 | Single-step inkjet-printed paper-origami arrayed air-breathing microfluidic microbial fuel cell and its validation. International Journal of Hydrogen Energy, 2021, 46, 35408-35419. | 3.8 | 20 |
| 143 | Miniature microbial fuel cells integrated with triggered power management systems to power wastewater sensors in an uninterrupted mode. Applied Energy, 2021, 302, 117556. | 5.1 | 15 |
| 144 | A review of recent advances in electrode materials for emerging bioelectrochemical systems: From biofilm-bearing anodes to specialized cathodes. Chemosphere, 2021, 283, 131138. | 4.2 | 61 |
| 145 | Recent trends in upgrading the performance of yeast as electrode biocatalyst in microbial fuel cells. Chemosphere, 2021, 284, 131383. | 4.2 | 29 |
| 146 | Improving the anode performance of microbial fuel cell with carbon nanotubes supported cobalt phosphate catalyst. Bioelectrochemistry, 2021, 142, 107941. | 2.4 | 19 |

| # | Article | IF | Citations |
|---|---|---|---|
| 147 | Shewanella putrefaciens powered microfluidic microbial fuel cell with printed circuit board electrodes and soft-lithographic microchannel. Chemosphere, 2022, 286, 131855. | 4.2 | 11 |
| 148 | Microbial fuel cells for bioelectricity production from waste as sustainable prospect of future energy sector. Chemosphere, 2022, 287, 132285. | 4.2 | 62 |
| 149 | Effects of carbon cloth on anaerobic digestion of high concentration organic wastewater under various mixing conditions. Journal of Hazardous Materials, 2022, 423, 127100. | 6.5 | 49 |
| 150 | Recent advancements in microbial fuel cells: A review on its electron transfer mechanisms, microbial community, types of substrates and design for bio-electrochemical treatment. Chemosphere, 2022, 286, 131856. | 4.2 | 80 |
| 151 | Efficient decolorization of azo dye wastewater with polyaniline/graphene modified anode in microbial electrochemical systems. Journal of Hazardous Materials, 2022, 421, 126740. | 6.5 | 42 |
| 152 | Fungi mediated pollutant degradation and bioelectricity generation: An overview of current status. , 2021, , 101-119. | | 0 |
| 153 | Treatment of dark fermentative H2 production effluents by microbial fuel cells: A tutorial review on promising operational strategies and practices. International Journal of Hydrogen Energy, 2021, 46, 5556-5569. | 3.8 | 10 |
| 154 | Bioelectrochemical Systems for Remediation and Recovery of Nutrients From Industrial Wastewater. , 2021, , 445-474. | | 1 |
| 155 | Evaluation of photoanode materials used in biophotovoltaic systems for renewable energy generation. Sustainable Energy and Fuels, 2021, 5, 4209-4232. | 2.5 | 20 |
| 156 | A new method for urine electrofiltration and long term power enhancement using surface modified anodes with activated carbon in ceramic microbial fuel cells. Electrochimica Acta, 2020, 353, 136388. | 2.6 | 20 |
| 157 | Bioelectricity generation in a microbial fuel cell using polypyrrole-molybdenum oxide composite as an effective cathode catalyst. Fuel, 2020, 275, 117994. | 3.4 | 40 |
| 158 | Green Synthetic Fuels: Renewable Routes for the Conversion of Non-Fossil Feedstocks into Gaseous Fuels and Their End Uses. Energies, 2020, 13, 420. | 1.6 | 54 |
| 159 | Poorly conductive biochar boosting extracellular electron transfer for efficient volatile fatty acids oxidation via redox-mediated mechanism. Science of the Total Environment, 2022, 809, 151113. | 3.9 | 15 |
| 160 | Promoting the anode performance of microbial fuel cells with nano-molybdenum disulfide/carbon nanotubes composite catalyst. Bioprocess and Biosystems Engineering, 2022, 45, 159-170. | 1.7 | 10 |
| 161 | Potential Use of Papaya Waste as a Fuel for Bioelectricity Generation. Processes, 2021, 9, 1799. | 1.3 | 8 |
| 162 | Structure design of 3D hierarchical porous anode for high performance microbial fuel cells: From macro-to micro-scale. Journal of Power Sources, 2021, 516, 230687. | 4.0 | 21 |
| 163 | Microbial Fuel Cell (MFC)-A review of Design components, Selection of Substrate and Microbes, Parameters affecting the Design and Applications. Gedrag En Organisatie, 2020, 33, . | 0.0 | 1 |
| 164 | Electricity-Driven Microbial Factory for Value-Added Resources Recovery from Waste Streams. , 2020, , 119-138. | | 1 |

| # | Article | IF | Citations |
|---|---|---|---|
| 165 | Enhancement of Electrochemical Activity in Bioelectrochemical Systems by Using Bacterial Anodes: An Overview. , 2020, , 211-238. | | 2 |
| 166 | Electricity generation in simulated benthic microbial fuel cell with conductive polyaniline-polypyrole composite hydrogel anode. Renewable Energy, 2022, 183, 242-250. | 4.3 | 15 |
| 167 | Electrode Material as Anode for Improving the Electrochemical Performance of Microbial Fuel Cells. , 0, , . | | 3 |
| 168 | Î²-FeOOH modified carbon monolith anode derived from wax gourd for microbial fuel cells. International Journal of Hydrogen Energy, 2022, 47, 4838-4845. | 3.8 | 9 |
| 169 | Advances in interfacial engineering for enhanced microbial extracellular electron transfer. Bioresource Technology, 2022, 345, 126562. | 4.8 | 11 |
| 170 | Advances in the development of electrode materials for improving the reactor kinetics in microbial fuel cells. Chemosphere, 2022, 290, 133184. | 4.2 | 30 |
| 172 | Solutionâ€Deposited and Patternable Conductive Polymer Thinâ€Film Electrodes for Microbial Bioelectronics. Advanced Materials, 2022, 34, e2109442. | 11.1 | 20 |
| 173 | Use of Onion Waste as Fuel for the Generation of Bioelectricity. Molecules, 2022, 27, 625. | 1.7 | 21 |
| 175 | Improved degradation of dye wastewater and enhanced power output in microbial fuel cells with chemically treated corncob anodes. Biomass Conversion and Biorefinery, 2024, 14, 375-386. | 2.9 | 5 |
| 176 | Thermally Expanded Graphite Incorporated with PEDOT:PSS Based Anode for Microbial Fuel Cells with High Bioelectricity Production. Journal of the Electrochemical Society, 2022, 169, 017515. | 1.3 | 10 |
| 177 | Impact of plasma-induced surface chemistry on electrochemical properties of microfabricated pyrolytic carbon electrodes. Electrochimica Acta, 2022, 410, 139987. | 2.6 | 6 |
| 178 | A mini review on bio-electrochemical systems for the treatment of azo dye wastewater: State-of-the-art and future prospects. Chemosphere, 2022, 294, 133801. | 4.2 | 48 |
| 179 | Metabolic engineering and synthetic biology key players for improving efficacy of microbial fuel cell technology. , 2022, , 217-238. | | 0 |
| 180 | Microbial fuel cellsâ€"Challenges for commercialization and how they can be addressed. , 2022, , 393-418. | | 2 |
| 181 | Nanomaterial and nanocatalysts in microbial fuel cells. , 2022, , 261-284. | | 3 |
| 182 | Bio-electrochemical frameworks governing microbial fuel cell performance: technical bottlenecks and proposed solutions. RSC Advances, 2022, 12, 5749-5764. | 1.7 | 25 |
| 183 | Development of Low-Cost Microbial Fuel Cell for Converting Waste to Electricity and Abating Pollution. , 2022, , 167-198. | | 0 |
| 185 | Nanomaterials in biofuel cells. , 2022, , 411-444. | | 0 |

| # | Article | IF | Citations |
|---|---|---|---|
| 186 | Recent advances in improving the remediation performance of microbial electrochemical systems for contaminated soil and sediments. Critical Reviews in Environmental Science and Technology, 2023, 53, 137-160. | 6.6 | 14 |
| 187 | Enhanced bioenergy and nutrients recovery from wastewater using hybrid anodes in microbial nutrient recovery system. , 2022, 15, 19. | | 1 |
| 188 | Review on Material and Design of Anode for Microbial Fuel Cell. Energies, 2022, 15, 2283. | 1.6 | 13 |
| 189 | Effect of Î²-cyclodextrin/polydopamine composite modified anode on the performance of microbial fuel cell. Bioprocess and Biosystems Engineering, 2022, , 1. | 1.7 | 2 |
| 190 | Electroactive biofilms: how microbial electron transfer enables bioelectrochemical applications. Journal of Industrial Microbiology and Biotechnology, 2022, 49, . | 1.4 | 16 |
| 191 | Microbial fuel cells: Insight into simultaneous wastewater treatment and bioelectricity generation. Chemical Engineering Research and Design, 2022, 161, 357-373. | 2.7 | 59 |
| 192 | Real-time monitoring of biofilm thickness allows for determination of acetate limitations in bio-anodes. Bioresource Technology Reports, 2022, 18, 101028. | 1.5 | 6 |
| 193 | A Sustainable Approach for the Production of Green Energy With the Holistic Treatment of Wastewater Through Microbial Electrochemical Technologies: A Review. Frontiers in Sustainability, 2021, 2, . | 1.3 | 8 |
| 194 | Microbial Fuel Cell for Wastewater Treatment as Power Plant in Smart Grids: Utopia or Reality?. Frontiers in Energy Research, 2022, 10, . | 1.2 | 24 |
| 195 | High-performance free-standing microbial fuel cell anode derived from Chinese date for enhanced electron transfer rates. Bioresource Technology, 2022, 353, 127151. | 4.8 | 21 |
| 196 | Accelerated start-up and improved performance of wastewater microbial fuel cells in four circuit modes: Role of anodic potential. Journal of Power Sources, 2022, 535, 231403. | 4.0 | 12 |
| 197 | Insights into the development of microbial fuel cells for generating biohydrogen, bioelectricity, and treating wastewater. Energy, 2022, 254, 124163. | 4.5 | 25 |
| 198 | In-situ growth of N@MoO2 microflowers on carbon cloth for high-performance anodes in microbial fuel cells. Journal of Environmental Chemical Engineering, 2022, 10, 107869. | 3.3 | 7 |
| 199 | Bioelectrochemical systems-based metal removal and recovery from wastewater and polluted soil: Key factors, development, and perspective. Journal of Environmental Management, 2022, 317, 115333. | 3.8 | 13 |
| 200 | Golden Berry Waste for Electricity Generation. Fermentation, 2022, 8, 256. | 1.4 | 13 |
| 201 | Scalability of biomass-derived graphene derivative materials as viable anode electrode for a commercialized microbial fuel cell: A systematic review. Chinese Journal of Chemical Engineering, 2023, 55, 277-292. | 1.7 | 19 |
| 202 | Opportunities for visual techniques to determine characteristics and limitations of electro-active biofilms. Biotechnology Advances, 2022, 60, 108011. | 6.0 | 4 |
| 203 | Influence of electrode surface charge on current production by Geobacter sulfurreducens microbial anodes. Bioelectrochemistry, 2022, 147, 108213. | 2.4 | 6 |

| # | Article | IF | Citations |
|---|---|---|---|
| 204 | Electrochemical impedance spectroscopy applied to microbial fuel cells: A review. Frontiers in Microbiology, 0, 13, . | 1.5 | 14 |
| 205 | Quantification of Internal Resistance Contributions of Sediment Microbial Fuel Cells Using Petroleum-Contaminated Sediment Enriched with Kerosene. Catalysts, 2022, 12, 871. | 1.6 | 1 |
| 206 | Riboflavin-rich agar enhances the rate of extracellular electron transfer from electrogenic bacteria inside a thin-layer system. Bioelectrochemistry, 2022, 148, 108252. | 2.4 | 2 |
| 207 | Establishment of Low-Carbon Microbial Network to Enhance Phenol Removal in Microbial Electrochemical Systems with Whole Process Carbon Source Limitation. SSRN Electronic Journal, 0, , . | 0.4 | 0 |
| 208 | Conventional Electrode Materials for Microbial Fuel Cells. , 2022, , 83-117. | | 0 |
| 209 | Establishment of low-carbon microbial network to enhance phenol removal in microbial electrochemical systems with whole process carbon source limitation. Chemical Engineering Journal, 2023, 452, 139530. | 6.6 | 5 |
| 210 | Nanomaterials Facilitating Conversion Efficiency Strategies for Microbial CO<sub>2</sub> Reduction. Chemistry - A European Journal, 2022, 28, . | 1.7 | 2 |
| 211 | Advances in Anode Materials for Microbial Fuel Cells. Energy Technology, 2022, 10, . | 1.8 | 5 |
| 212 | Functional Nanomaterialâ€Modified Anodes in Microbial Fuel Cells: Advances and Perspectives. Chemistry - A European Journal, 2023, 29, . | 1.7 | 2 |
| 213 | Detailed investigation the impact of biofilm formation and cathode limitations on electrochemical performance of biofuel cell. Journal of Electroanalytical Chemistry, 2022, 924, 116821. | 1.9 | 1 |
| 214 | Enhanced performance of microbial fuel cells with a bacteria/shape-controllable aligned carbon nanofibers hybrid biofilm. International Journal of Hydrogen Energy, 2023, 48, 1107-1119. | 3.8 | 6 |
| 215 | Application of Surface Modified Carbon Nanotubes in Fuel Cells. ACS Symposium Series, 0, , 121-150. | 0.5 | 0 |
| 216 | Applications of Nanomaterials in Microbial Fuel Cells: A Review. Molecules, 2022, 27, 7483. | 1.7 | 16 |
| 217 | Bioelectrochemical cells as a green energy source for electrochemical treatment of water and wastewater. Journal of Water Process Engineering, 2022, 50, 103232. | 2.6 | 9 |
| 218 | Design, optimization and application of a highly sensitive microbial electrolytic cell-based BOD biosensor. Environmental Research, 2023, 216, 114533. | 3.7 | 6 |
| 219 | The preparation of PANI-doped Co-Ni-ZIF carbonized derivatives and the exploration of EET process by the DFT calculation and the prediction of related functional genes. Fuel, 2023, 333, 126356. | 3.4 | 5 |
| 220 | Maximum thickness of non-buffer limited electro-active biofilms decreases at higher anode potentials. Biofilm, 2022, 4, 100092. | 1.5 | 1 |
| 221 | Binder-free NiO/MnO2 coated carbon based anodes for simultaneous norfloxacin removal, wastewater treatment and power generation in dual-chamber microbial fuel cell. Environmental Pollution, 2023, 317, 120578. | 3.7 | 7 |

| # | Article | IF | Citations |
|---|---|---|---|
| 222 | A three-dimensional phenolic-based carbon anode for microbial electrochemical system with customized macroscopic pore structure to promote interior bacteria colonization. Science of the Total Environment, 2023, 859, 160131. | 3.9 | 3 |
| 223 | Results on control of bio-electrochemical models in microbial fuel cells. AIP Conference Proceedings, 2022, , . | 0.3 | 0 |
| 224 | Bio-hydrogen production through microbial electrolysis cell: Structural components and influencing factors. Chemical Engineering Journal, 2023, 455, 140535. | 6.6 | 36 |
| 225 | Enhancement of electrode properties using carbon dots functionalized magnetite nanoparticles for azo dye decolorization in microbial fuel cell. Chemosphere, 2023, 313, 137601. | 4.2 | 5 |
| 226 | Recent Implementations of Hydrogel-Based Microbial Electrochemical Technologies (METs) in Sensing Applications. Sensors, 2023, 23, 641. | 2.1 | 4 |
| 228 | Anode modification: An approach to improve power generation in microbial fuel cells (MFCs). , 2023, , 133-152. | | 0 |
| 229 | Bacterial community structure of electrogenic biofilm developed on modified graphite anode in microbial fuel cell. Scientific Reports, 2023, 13, . | 1.6 | 15 |
| 230 | Electrochemical Characterization of Biomolecular Electron Transfer at Conductive Polymer Interfaces. Journal of the Electrochemical Society, 2023, 170, 016509. | 1.3 | 1 |
| 231 | Microbial Fuel Cell Formulation from Nano-Composites. , 0, , . | | 0 |
| 232 | Integration of third generation biofuels with bio-electrochemical systems: Current status and future perspective. Frontiers in Plant Science, 0, 14, . | 1.7 | 1 |
| 233 | Microbial Biofuel Cells: Fundamental Principles, Development and Recent Obstacles. Biosensors, 2023, 13, 221. | 2.3 | 7 |
| 234 | W2N-MXene composite anode catalyst for efficient microbial fuel cells using domestic wastewater. Chemical Engineering Journal, 2023, 461, 141821. | 6.6 | 17 |
| 235 | Carbon Fibers for Bioelectrochemical: Precursors, Bioelectrochemical System, and Biosensors. Advanced Fiber Materials, 2023, 5, 699-730. | 7.9 | 6 |
| 236 | Three-Dimensional Carbon Monolith Coated by Nano-TiO2 for Anode Enhancement in Microbial Fuel Cells. International Journal of Environmental Research and Public Health, 2023, 20, 3437. | 1.2 | 1 |
| 237 | <scp>Microbeâ€“Anode Interactions</scp>: Comparing the impact of genetic and material engineering approaches to improve the performance of microbial electrochemical systems (<scp>MES</scp>). Microbial Biotechnology, 2023, 16, 1179-1202. | 2.0 | 6 |
| 238 | Spent Tea Leaves and Coffee Grounds as Potential Biocathode for Improved Microbial Electrosynthesis Performance. International Journal of Energy Research, 2023, 2023, 1-9. | 2.2 | 0 |
| 239 | Nano-Fe3O4 coated on carbon monolith for anode enhancement in microbial fuel cells. Journal of Environmental Chemical Engineering, 2023, 11, 109608. | 3.3 | 2 |
| 240 | Synthesis and application of carbon-based nanomaterials for bioelectrochemical systems. , 2023, , 327-356. | | 3 |

| # | Article | IF | Citations |
|---|---|---|---|
| 241 | Anode electrodes in MFCs. , 2023, , 67-91. | | 0 |
| 284 | An Overview of Anode in Microbial Fuel Cell: Current Challenges and Opportunities. , 2023, , 407-419. | | 0 |