H V M Hamelers

List of Publications by Citations

135 papers	19,575 citations	68 h-index	138 g-index
138 ext. papers	21,486 ext. citations	9.4 avg, IF	6.83 L-index

#	Paper	IF	Citations
135	Microbial fuel cells: methodology and technology. *Environmental Science & Technology*, **2006**, 40, 5181-92	10.3	4214
134	Microbial electrolysis cells for high yield hydrogen gas production from organic matter. *Environmental Science & Technology*, **2008**, 42, 8630-40	10.3	932
133	Towards practical implementation of bioelectrochemical wastewater treatment. *Trends in Biotechnology*, **2008**, 26, 450-9	15.1	921
132	Effects of membrane cation transport on pH and microbial fuel cell performance. *Environmental Science & Technology*, **2006**, 40, 5206-11	10.3	603
131	Principle and perspectives of hydrogen production through biocatalyzed electrolysis. *International Journal of Hydrogen Energy*, **2006**, 31, 1632-1640	6.7	535
130	Salinity-gradient power: Evaluation of pressure-retarded osmosis and reverse electrodialysis. *Journal of Membrane Science*, **2007**, 288, 218-230	9.6	420
129	Hydrogen production with a microbial biocathode. *Environmental Science & Technology*, **2008**, 42, 629-34	10.3	391
128	Energy recovery from controlled mixing salt and fresh water with a reverse electrodialysis system. *Environmental Science & Technology*, **2008**, 42, 5785-90	10.3	372
127	Performance of single chamber biocatalyzed electrolysis with different types of ion exchange membranes. *Water Research*, **2007**, 41, 1984-94	12.5	315
126	Ammonium recovery and energy production from urine by a microbial fuel cell. *Water Research*, **2012**, 46, 2627-36	12.5	306
125	Chain Elongation with Reactor Microbiomes: Open-Culture Biotechnology To Produce Biochemicals. *Environmental Science & Technology*, **2016**, 50, 2796-810	10.3	281
124	Copper recovery combined with electricity production in a microbial fuel cell. *Environmental Science & Technology*, **2010**, 44, 4376-81	10.3	279
123	Biological formation of caproate and caprylate from acetate: fuel and chemical production from low grade biomass. *Energy and Environmental Science*, **2011**, 4, 216-224	35.4	263
122	A bipolar membrane combined with ferric iron reduction as an efficient cathode system in microbial fuel cells. *Environmental Science & Technology*, **2006**, 40, 5200-5	10.3	254
121	Effect of temperature on hydrolysis rates of selected biowaste components. *Bioresource Technology*, **1999**, 69, 249-254	11	234
120	Bioelectrochemical ethanol production through mediated acetate reduction by mixed cultures. *Environmental Science & Technology*, **2010**, 44, 513-7	10.3	232
119	Green electricity production with living plants and bacteria in a fuel cell. *International Journal of Energy Research*, **2008**, 32, 870-876	4.5	225

118	Microbial electrolysis cell with a microbial biocathode. *Bioelectrochemistry*, **2010**, 78, 39-43	5.6	218
117	New applications and performance of bioelectrochemical systems. *Applied Microbiology and Biotechnology*, **2010**, 85, 1673-85	5.7	204
116	Ion transport resistance in Microbial Electrolysis Cells with anion and cation exchange membranes. *International Journal of Hydrogen Energy*, **2009**, 34, 3612-3620	6.7	199
115	Bioelectrochemical systems: an outlook for practical applications. *ChemSusChem*, **2012**, 5, 1012-9	8.3	192
114	NH3, N2O and CH4 emissions during passively aerated composting of straw-rich pig manure. *Bioresource Technology*, **2007**, 98, 2659-70	11	192
113	Salinity Gradients for Sustainable Energy: Primer, Progress, and Prospects. *Environmental Science & Technology*, **2016**, 50, 12072-12094	10.3	188
112	Carbon flow electrodes for continuous operation of capacitive deionization and capacitive mixing energy generation. *Journal of Materials Chemistry A*, **2014**, 2, 9313	13	186
111	Microbial solar cells: applying photosynthetic and electrochemically active organisms. *Trends in Biotechnology*, **2011**, 29, 41-9	15.1	181
110	Effect of the type of ion exchange membrane on performance, ion transport, and pH in biocatalyzed electrolysis of wastewater. *Water Science and Technology*, **2008**, 57, 1757-62	2.2	173
109	Direct power production from a water salinity difference in a membrane-modified supercapacitor flow cell. *Environmental Science & Technology*, **2010**, 44, 5661-5	10.3	168
108	Effect of pH and VFA on Hydrolysis of Organic Solid Waste. *Journal of Environmental Engineering, ASCE*, **2000**, 126, 1076-1081	2	168
107	Performance of non-porous graphite and titanium-based anodes in microbial fuel cells. *Electrochimica Acta*, **2008**, 53, 5697-5703	6.7	167
106	Analysis and improvement of a scaled-up and stacked microbial fuel cell. *Environmental Science & Technology*, **2009**, 43, 9038-42	10.3	165
105	Concurrent bio-electricity and biomass production in three Plant-Microbial Fuel Cells using Spartina anglica, Arundinella anomala and Arundo donax. *Bioresource Technology*, **2010**, 101, 3541-7	11	158
104	Nernst-Planck transport theory for (reverse) electrodialysis: I. Effect of co-ion transport through the membranes. *Journal of Membrane Science*, **2016**, 510, 370-381	9.6	155
103	Ni foam cathode enables high volumetric H2 production in a microbial electrolysis cell. *International Journal of Hydrogen Energy*, **2010**, 35, 12716-12723	6.7	153
102	Microbial electrolysis cells for production of methane from CO2: long-term performance and perspectives. *International Journal of Energy Research*, **2012**, 36, 809-819	4.5	147
101	Renewable sustainable biocatalyzed electricity production in a photosynthetic algal microbial fuel cell (PAMFC). *Applied Microbiology and Biotechnology*, **2008**, 81, 659-68	5.7	147

100	Microbial fuel cell operation with continuous biological ferrous iron oxidation of the catholyte. *Environmental Science & Technology*, **2007**, 41, 4130-4	10.3	138
99	Alcohol production through volatile fatty acids reduction with hydrogen as electron donor by mixed cultures. *Water Research*, **2008**, 42, 4059-66	12.5	129
98	Capacitive bioanodes enable renewable energy storage in microbial fuel cells. *Environmental Science & Technology*, **2012**, 46, 3554-60	10.3	128
97	Long-term performance of a plant microbial fuel cell with Spartina anglica. *Applied Microbiology and Biotechnology*, **2010**, 86, 973-81	5.7	127
96	Towards implementation of reverse electrodialysis for power generation from salinity gradients. *Desalination and Water Treatment*, **2010**, 16, 182-193		126
95	Bioelectrochemical Production of Caproate and Caprylate from Acetate by Mixed Cultures. *ACS Sustainable Chemistry and Engineering*, **2013**, 1, 513-518	8.3	123
94	Two-stage medium chain fatty acid (MCFA) production from municipal solid waste and ethanol. *Applied Energy*, **2014**, 116, 223-229	10.7	120
93	Characterisation of NaOH-extracted humic acids during composting of a biowaste. *Bioresource Technology*, **2000**, 72, 33-41	11	120
92	Effect of operational parameters on Coulombic efficiency in bioelectrochemical systems. *Bioresource Technology*, **2011**, 102, 11172-6	11	111
91	Influence of multivalent ions on power production from mixing salt and fresh water with a reverse electrodialysis system. *Journal of Membrane Science*, **2009**, 330, 65-72	9.6	111
90	Cathode potential and mass transfer determine performance of oxygen reducing biocathodes in microbial fuel cells. *Environmental Science & Technology*, **2010**, 44, 7151-6	10.3	108
89	Exploiting the spontaneous potential of the electrodes used in the capacitive mixing technique for the extraction of energy from salinity difference. *Energy and Environmental Science*, **2012**, 5, 9870	35.4	107
88	Microbial community structure elucidates performance of Glyceria maxima plant microbial fuel cell. *Applied Microbiology and Biotechnology*, **2012**, 94, 537-48	5.7	105
87	Butler-Volmer-Monod model for describing bio-anode polarization curves. *Bioresource Technology*, **2011**, 102, 381-7	11	105
86	Chain elongation of acetate and ethanol in an upflow anaerobic filter for high rate MCFA production. *Bioresource Technology*, **2013**, 135, 440-5	11	104
85	Solar energy powered microbial fuel cell with a reversible bioelectrode. *Environmental Science & Technology*, **2010**, 44, 532-7	10.3	103
84	Effects of ammonium concentration and charge exchange on ammonium recovery from high strength wastewater using a microbial fuel cell. *Bioresource Technology*, **2011**, 102, 4376-82	11	98
83	Improved performance of porous bio-anodes in microbial electrolysis cells by enhancing mass and charge transport. *International Journal of Hydrogen Energy*, **2009**, 34, 9655-9661	6.7	96

82	Improving medium chain fatty acid productivity using chain elongation by reducing the hydraulic retention time in an upflow anaerobic filter. *Bioresource Technology*, **2013**, 136, 735-8	11	95
81	Clean energy generation using capacitive electrodes in reverse electrodialysis. *Energy and Environmental Science*, **2013**, 6, 643-651	35.4	92
80	Theory of Water Desalination by Porous Electrodes with Immobile Chemical Charge. *Colloids and Interface Science Communications*, **2015**, 9, 1-5	5.4	92
79	Water Desalination with Wires. *Journal of Physical Chemistry Letters*, **2012**, 3, 1613-8	6.4	90
78	Nernst-Planck transport theory for (reverse) electrodialysis: II. Effect of water transport through ion-exchange membranes. *Journal of Membrane Science*, **2017**, 531, 172-182	9.6	89
77	(Bio)electrochemical ammonia recovery: progress and perspectives. *Applied Microbiology and Biotechnology*, **2018**, 102, 3865-3878	5.7	88
76	Identifying charge and mass transfer resistances of an oxygen reducing biocathode. *Energy and Environmental Science*, **2011**, 4, 5035	35.4	88
75	Promoting chain elongation in mixed culture acidification reactors by addition of ethanol. *Biomass and Bioenergy*, **2013**, 48, 10-16	5.3	87
74	Sources of Cd, Cu, Pb and Zn in biowaste. *Science of the Total Environment*, **2002**, 300, 87-98	10.2	86
73	Effect of additional charging and current density on the performance of Capacitive energy extraction based on Donnan Potential. *Energy and Environmental Science*, **2012**, 5, 8642	35.4	85
72	Bipolar membranes: A review on principles, latest developments, and applications. *Journal of Membrane Science*, **2021**, 617, 118538	9.6	85
71	Effects of high calcium concentrations on the development of methanogenic sludge in upflow anaerobic sludge bed (UASB) reactors. *Water Research*, **1998**, 32, 1255-1263	12.5	84
70	Stabilizing the baseline current of a microbial fuel cell-based biosensor through overpotential control under non-toxic conditions. *Bioelectrochemistry*, **2010**, 78, 87-91	5.6	78
69	Selective short-chain carboxylates production: A review of control mechanisms to direct mixed culture fermentations. *Critical Reviews in Environmental Science and Technology*, **2016**, 46, 592-634	11.1	70
68	On-line detection of toxic components using a microbial fuel cell-based biosensor. *Journal of Process Control*, **2012**, 22, 1755-1761	3.9	69
67	Use of biocompatible buffers to reduce the concentration overpotential for hydrogen evolution. *Environmental Science & Technology*, **2009**, 43, 6882-7	10.3	68
66	Acetate enhances startup of a H2-producing microbial biocathode. *Biotechnology and Bioengineering*, **2012**, 109, 657-64	4.9	67
65	CAPMIX -Deploying Capacitors for Salt Gradient Power Extraction. *Energy Procedia*, **2012**, 20, 108-115	2.3	66

64	Performance of metal alloys as hydrogen evolution reaction catalysts in a microbial electrolysis cell. *International Journal of Hydrogen Energy*, **2011**, 36, 10482-10489	6.7	66
63	Electricity generation by a novel design tubular plant microbial fuel cell. *Biomass and Bioenergy*, **2013**, 51, 60-67	5.3	64
62	Impact of location of CaCO3 precipitation on the development of intact anaerobic sludge. *Water Research*, **2000**, 34, 437-446	12.5	62
61	Fluidized capacitive bioanode as a novel reactor concept for the microbial fuel cell. *Environmental Science & Technology*, **2015**, 49, 1929-35	10.3	61
60	Improving quality of composted biowaste to enhance disease suppressiveness of compost-amended, peat-based potting mixes. *Soil Biology and Biochemistry*, **2005**, 37, 2131-2140	7.5	60
59	High rate heptanoate production from propionate and ethanol using chain elongation. *Bioresource Technology*, **2013**, 136, 715-8	11	59
58	Hydrogen Gas Recycling for Energy Efficient Ammonia Recovery in Electrochemical Systems. *Environmental Science & Technology*, **2017**, 51, 3110-3116	10.3	56
57	Harvesting Energy from CO2 Emissions. *Environmental Science and Technology Letters*, **2014**, 1, 31-35	11	56
56	New plant-growth medium for increased power output of the Plant-Microbial Fuel Cell. *Bioresource Technology*, **2012**, 104, 417-23	11	55
55	The flat-plate plant-microbial fuel cell: the effect of a new design on internal resistances. *Biotechnology for Biofuels*, **2012**, 5, 70	7.8	55
54	Microbial communities and electrochemical performance of titanium-based anodic electrodes in a microbial fuel cell. *Applied and Environmental Microbiology*, **2011**, 77, 1069-75	4.8	55
53	Degradation of biomacromolecules during high-rate composting of wheat straw-amended feces. *Journal of Environmental Quality*, **2001**, 30, 1675-84	3.4	55
52	Load ratio determines the ammonia recovery and energy input of an electrochemical system. *Water Research*, **2017**, 111, 330-337	12.5	54
51	Influence of membrane type, current and potential on the response to chemical toxicants of a microbial fuel cell based biosensor. *Sensors and Actuators B: Chemical*, **2012**, 163, 1-7	8.5	54
50	Electricity-mediated biological hydrogen production. *Current Opinion in Microbiology*, **2010**, 13, 307-15	7.9	54
49	Resilience of roof-top Plant-Microbial Fuel Cells during Dutch winter. *Biomass and Bioenergy*, **2013**, 51, 1-7	5.3	52
48	Modeling composting kinetics: A review of approaches. *Reviews in Environmental Science and Biotechnology*, **2004**, 3, 331-342	13.9	52
47	Influence of the thickness of the capacitive layer on the performance of bioanodes in Microbial Fuel Cells. *Journal of Power Sources*, **2013**, 243, 611-616	8.9	51

46	Performance of a scaled-up Microbial Fuel Cell with iron reduction as the cathode reaction. *Journal of Power Sources*, **2011**, 196, 7572-7577	8.9	48
45	The effect of different control mechanisms on the sensitivity and recovery time of a microbial fuel cell based biosensor. *Sensors and Actuators B: Chemical*, **2012**, 171-172, 816-821	8.5	47
44	Selective inhibition of methanogenesis to enhance ethanol and n-butyrate production through acetate reduction in mixed culture fermentation. *Bioresource Technology*, **2009**, 100, 3261-7	11	47
43	Passively Aerated Composting of Straw-Rich Pig Manure: Effect of Compost Bed Porosity. *Compost Science and Utilization*, **2002**, 10, 114-128	1.2	47
42	Gas-permeable hydrophobic tubular membranes for ammonia recovery in bio-electrochemical systems. *Environmental Science: Water Research and Technology*, **2016**, 2, 261-265	4.2	46
41	Kinetic models for detection of toxicity in a microbial fuel cell based biosensor. *Biosensors and Bioelectronics*, **2011**, 26, 3115-20	11.8	46
40	Effect of hydrogen and carbon dioxide on carboxylic acids patterns in mixed culture fermentation. *Bioresource Technology*, **2012**, 118, 227-34	11	43
39	Electrochemical characterization of a supercapacitor flow cell for power production from salinity gradients. *Electrochimica Acta*, **2012**, 86, 298-304	6.7	40
38	Solvent-Free CO Capture Using Membrane Capacitive Deionization. *Environmental Science & Technology*, **2018**, 52, 9478-9485	10.3	38
37	Steady-state performance and chemical efficiency of Microbial Electrolysis Cells. *International Journal of Hydrogen Energy*, **2013**, 38, 7201-7208	6.7	38
36	Effect of mass and charge transport speed and direction in porous anodes on microbial electrolysis cell performance. *Bioresource Technology*, **2011**, 102, 399-403	11	38
35	Rhizosphere anode model explains high oxygen levels during operation of a Glyceria maxima PMFC. *Bioresource Technology*, **2012**, 108, 60-7	11	37
34	Faster Time Response by the Use of Wire Electrodes in Capacitive Salinity Gradient Energy Systems. *Journal of Physical Chemistry C*, **2012**, 116, 19203-19210	3.8	37
33	Electricity production with living plants on a green roof: environmental performance of the plant-microbial fuel cell. *Biofuels, Bioproducts and Biorefining*, **2013**, 7, 52-64	5.3	35
32	Impact of wire geometry in energy extraction from salinity differences using capacitive technology. *Environmental Science & Technology*, **2012**, 46, 12203-8	10.3	34
31	Analysis of bio-anode performance through electrochemical impedance spectroscopy. *Bioelectrochemistry*, **2015**, 106, 64-72	5.6	33
30	Characterization of the internal resistance of a plant microbial fuel cell. *Electrochimica Acta*, **2012**, 72, 165-171	6.7	33
29	Effect of toxic components on microbial fuel cell-polarization curves and estimation of the type of toxic inhibition. *Biosensors*, **2012**, 2, 255-68	5.9	31

28	Membrane Selectivity Determines Energetic Losses for Ion Transport in Bioelectrochemical Systems. *ChemistrySelect*, **2017**, 2, 3462-3470	1.8	30
27	Energy from CO2 using capacitive electrodes--theoretical outline and calculation of open circuit voltage. *Journal of Colloid and Interface Science*, **2014**, 418, 200-7	9.3	30
26	Energy from CO2 using capacitive electrodes - a model for energy extraction cycles. *Journal of Colloid and Interface Science*, **2015**, 442, 103-9	9.3	28
25	Reduction of pH buffer requirement in bioelectrochemical systems. *Environmental Science & Technology*, **2010**, 44, 8259-63	10.3	28
24	Extraction of Energy from Small Thermal Differences near Room Temperature Using Capacitive Membrane Technology. *Environmental Science and Technology Letters*, **2014**, 1, 356-360	11	26
23	Role of ion exchange membranes and capacitive electrodes in membrane capacitive deionization (MCDI) for CO capture. *Journal of Colloid and Interface Science*, **2020**, 564, 478-490	9.3	25
22	Selective carboxylate production by controlling hydrogen, carbon dioxide and substrate concentrations in mixed culture fermentation. *Bioresource Technology*, **2013**, 136, 452-60	11	23
21	Energy-Efficient Ammonia Recovery in an Up-Scaled Hydrogen Gas Recycling Electrochemical System. *ACS Sustainable Chemistry and Engineering*, **2018**, 6, 7638-7644	8.3	20
20	Electrochemical Regeneration of Spent Alkaline Absorbent from Direct Air Capture. *Environmental Science & Technology*, **2020**, 54, 8990-8998	10.3	14
19	Parallel up-scaling of Capacitive Mixing (CapMix) system enhances the specific performance. *Electrochimica Acta*, **2016**, 187, 104-112	6.7	14
18	Feasibility Study on Electrochemical Impedance Spectroscopy for Microbial Fuel Cells: Measurement Modes & Data Validation. *ECS Transactions*, **2008**, 13, 27-41	1	14
17	Revisiting Morrison and Osterle 1965: the efficiency of membrane-based electrokinetic energy conversion. *Journal of Physics Condensed Matter*, **2016**, 28, 324001	1.8	13
16	Advanced bioconversion of biowaste for production of a peat substitute and renewable energy. *Bioresource Technology*, **2004**, 92, 121-31	11	13
15	Gas-permeable hydrophobic membranes enable transport of CO2 and NH3 to improve performance of bioelectrochemical systems. *Environmental Science: Water Research and Technology* , **2016**, 2, 743-748	4.2	12
14	Minimal Bipolar Membrane Cell Configuration for Scaling Up Ammonium Recovery. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 17359-17367	8.3	12
13	The RED Fouling Monitor: A novel tool for fouling analysis. *Journal of Membrane Science*, **2019**, 570-571, 294-302	9.6	12
12	Increase of power output by change of ion transport direction in a plant microbial fuel cell. *International Journal of Energy Research*, **2013**, 37, 1103-1111	4.5	11
11	Exploiting Donnan Dialysis to enhance ammonia recovery in an electrochemical system. *Chemical Engineering Journal*, **2020**, 395, 125143	14.7	9

10	Auto Generative Capacitive Mixing for Power Conversion of Sea and River Water by the Use of Membranes. *Journal of Energy Resources Technology, Transactions of the ASME*, **2013**, 135,	2.6	7
9	New Insights on the Estimation of the Anaerobic Biodegradability of Plant Material: Identifying Valuable Plants for Sustainable Energy Production. *Processes*, **2020**, 8, 806	2.9	4
8	Donnan Dialysis for scaling mitigation during electrochemical ammonium recovery from complex wastewater. *Water Research*, **2021**, 201, 117260	12.5	3
7	Auto Generative Capacitive Mixing for Power Conversion of Sea and River Water by the Use of Membranes **2011**,		2
6	Fouling fractionation in reverse electrodialysis with natural feed waters demonstrates dual media rapid filtration as an effective pre-treatment for fresh water. *Desalination*, **2021**, 518, 115277	10.3	2
5	Reverse Electrodialysis **2013**, 1		1
4	Electrostatic cooling at electrolyte-electrolyte junctions. *Physical Review Research*, **2019**, 1,	3.9	1
3	Enhanced Phototrophic Biomass Productivity through Supply of Hydrogen Gas. *Environmental Science and Technology Letters*, **2020**, 7, 861-865	11	1
2	Real-time monitoring of biofilm thickness allows for determination of acetate limitations in bio-anodes. *Bioresource Technology Reports*, **2022**, 18, 101028	4.1	1
1	The effect of intermittent anode potential regimes on the morphology and extracellular matrix composition of electro-active bacteria.. *Biofilm*, **2022**, 4, 100064	5.9	0