Pascal Elias Saikaly

List of Publications by Year
in descending order

123 papers	6,671 citations	61857 43 h-index	66788 78 g-index
129 all docs	129 docs citations	129 times ranked	6378 citing authors

#	Article	IF	Citations
1	Electroactive microorganisms in bioelectrochemical systems. Nature Reviews Microbiology, 2019, 17, 307-319.	13.6	890
2	Assessment of Microbial Fuel Cell Configurations and Power Densities. Environmental Science and Technology Letters, 2015, 2, 206-214.	3.9	423
3	Microbial electrosynthesis from CO2: Challenges, opportunities and perspectives in the context of circular bioeconomy. Bioresource Technology, 2020, 302, 122863.	4.8	188
4	A Novel Anaerobic Electrochemical Membrane Bioreactor (AnEMBR) with Conductive Hollow-fiber Membrane for Treatment of Low-Organic Strength Solutions. Environmental Science & Technology, 2014, 48, 12833-12841.	4.6	183
5	Microbial Community Composition Is Unaffected by Anode Potential. Environmental Science & Technology, 2014, 48, 1352-1358.	4.6	171
6	Extracellular electron transfer-dependent anaerobic oxidation of ammonium by anammox bacteria. Nature Communications, 2020, 11, 2058.	5.8	168
7	Do biological-based strategies hold promise to biofouling control in MBRs?. Water Research, 2013, 47, 5447-5463.	5.3	146
8	A Hybrid Microbial Fuel Cell Membrane Bioreactor with a Conductive Ultrafiltration Membrane Biocathode for Wastewater Treatment. Environmental Science & Technology, 2013, 47, 11821-11828.	4.6	142
9	Wastewater treatment, energy recovery and desalination using a forward osmosis membrane in an air-cathode microbial osmotic fuel cell. Journal of Membrane Science, 2013, 428, 116-122.	4.1	131
10	Dissolved Organic Carbon Influences Microbial Community Composition and Diversity in Managed Aquifer Recharge Systems. Applied and Environmental Microbiology, 2012, 78, 6819-6828.	1.4	128
11	Porous Hollow Fiber Nickel Electrodes for Effective Supply and Reduction of Carbon Dioxide to Methane through Microbial Electrosynthesis. Advanced Functional Materials, 2018, 28, 1804860.	7.8	122
12	Use of 16S rRNA Gene Terminal Restriction Fragment Analysis To Assess the Impact of Solids Retention Time on the Bacterial Diversity of Activated Sludge. Applied and Environmental Microbiology, 2005, 71, 5814-5822.	1.4	120
13	Microbial Community Composition and Ultrastructure of Granules from a Full-Scale Anammox Reactor. Microbial Ecology, 2015, 70, 118-131.	1.4	115
14	Combining flow cytometry and 16S rRNA gene pyrosequencing: A promising approach for drinking water monitoring and characterization. Water Research, 2014, 63, 179-189.	5.3	111
15	Dynamics of bacterial communities before and after distribution in a full-scale drinking water network. Water Research, 2015, 74, 180-190.	5.3	109
16	The impact of new cathode materials relative to baseline performance of microbial fuel cells all with the same architecture and solution chemistry. Energy and Environmental Science, 2017, 10, 1025-1033.	15.6	105
17	Graphene-Coated Hollow Fiber Membrane as the Cathode in Anaerobic Electrochemical Membrane Bioreactors â€“ Effect of Configuration and Applied Voltage on Performance and Membrane Fouling. Environmental Science & Technology, 2016, 50, 4439-4447.	4.6	100
18	Dualâ€Function Electrocatalytic and Macroporous Hollowâ€Fiber Cathode for Converting Waste Streams to Valuable Resources Using Microbial Electrochemical Systems. Advanced Materials, 2018, 30, e1707072.	11.1	100

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19	Porous nickel hollow fiber cathodes coated with CNTs for efficient microbial electrosynthesis of acetate from CO₂usingSporomusa ovata. Journal of Materials Chemistry A, 2018, 6, 17201-17211.	5.2	100
20	Aggregation ability of three phylogenetically distant anammox bacterial species. Water Research, 2018, 143, 10-18.	5.3	96
21	Importance of Species Sorting and Immigration on the Bacterial Assembly of Different-Sized Aggregates in a Full-Scale Aerobic Granular Sludge Plant. Environmental Science & Technology, 2019, 53, 8291-8301.	4.6	93
22	Vastly Enhanced BiVO₄ Photocatalytic OER Performance by NiCoO₂ as Cocatalyst. Advanced Materials Interfaces, 2017, 4, 1700540.	1.9	92
23	The role of microbial electrolysis cell in urban wastewater treatment: integration options, challenges, and prospects. Current Opinion in Biotechnology, 2019, 57, 101-110.	3.3	92
24	Microbial community evolution during simulated managed aquifer recharge in response to different biodegradable dissolved organic carbon (BDOC) concentrations. Water Research, 2013, 47, 2421-2430.	5.3	87
25	Bacterial community structure and variation in a full-scale seawater desalination plant for drinking water production. Water Research, 2016, 94, 62-72.	5.3	86
26	Characterization of bacterial and archaeal communities in air-cathode microbial fuel cells, open circuit and sealed-off reactors. Applied Microbiology and Biotechnology, 2013, 97, 9885-9895.	1.7	84
27	Mixing effect on thermophilic anaerobic digestion of source-sorted organic fraction of municipal solid waste. Bioresource Technology, 2012, 117, 63-71.	4.8	82
28	Reactor performance in terms of COD and nitrogen removal and bacterial community structure of a three-stage rotating bioelectrochemical contactor. Water Research, 2013, 47, 881-894.	5.3	82
29	Evaluation of Electrode and Solution Area-Based Resistances Enables Quantitative Comparisons of Factors Impacting Microbial Fuel Cell Performance. Environmental Science & Technology, 2019, 53, 3977-3986.	4.6	79
30	Impact of Ohmic Resistance on Measured Electrode Potentials and Maximum Power Production in Microbial Fuel Cells. Environmental Science & Technology, 2018, 52, 8977-8985.	4.6	73
31	Selenite Reduction by Anaerobic Microbial Aggregates: Microbial Community Structure, and Proteins Associated to the Produced Selenium Spheres. Frontiers in Microbiology, 2016, 7, 571.	1.5	63
32	Membrane biofilm communities in full-scale membrane bioreactors are not randomly assembled and consist of a core microbiome. Water Research, 2017, 123, 124-133.	5.3	62
33	Gradual adaptation to salt and dissolved oxygen: Strategies to minimize adverse effect of salinity on aerobic granular sludge. Water Research, 2017, 124, 702-712.	5.3	60
34	Pilot scale microbial fuel cells using air cathodes for producing electricity while treating wastewater. Water Research, 2022, 215, 118208.	5.3	60
35	Addition of a carbon fiber brush improves anaerobic digestion compared to external voltage application. Water Research, 2021, 188, 116575.	5.3	58
36	Assessment of the performance of SMFCs in the bioremediation of PAHs in contaminated marine sediments under different redox conditions and analysis of the associated microbial communities. Science of the Total Environment, 2017, 575, 1453-1461.	3.9	57

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37	Multiple paths of electron flow to current in microbial electrolysis cells fed with low and high concentrations of propionate. Applied Microbiology and Biotechnology, 2016, 100, 5999-6011.	1.7	56
38	NMR and MALDI-TOF MS based characterization of exopolysaccharides in anaerobic microbial aggregates from full-scale reactors. Scientific Reports, 2015, 5, 14316.	1.6	55
39	Set anode potentials affect the electron fluxes and microbial community structure in propionate-fed microbial electrolysis cells. Scientific Reports, 2016, 6, 38690.	1.6	54
40	Development of Quantitative Real-Time PCR Assays for Detection and Quantification of Surrogate Biological Warfare Agents in Building Debris and Leachate. Applied and Environmental Microbiology, 2007, 73, 6557-6565.	1.4	49
41	Effects of selenium oxyanions on the white-rot fungus Phanerochaete chrysosporium. Applied Microbiology and Biotechnology, 2015, 99, 2405-2418.	1.7	47
42	Membrane biofouling in a wastewater nitrification reactor: Microbial succession from autotrophic colonization to heterotrophic domination. Water Research, 2016, 88, 337-345.	5.3	47
43	Bioinspired Synthesis of Reduced Graphene Oxide-Wrapped Geobacter sulfurreducens as a Hybrid Electrocatalyst for Efficient Oxygen Evolution Reaction. Chemistry of Materials, 2019, 31, 3686-3693.	3.2	47
44	Metatranscriptomics reveals the molecular mechanism of large granule formation in granular anammox reactor. Scientific Reports, 2016, 6, 28327.	1.6	46
45	Electricity generation and microbial community structure of air-cathode microbial fuel cells powered with the organic fraction of municipal solid waste and inoculated with different seeds. Biomass and Bioenergy, 2014, 67, 24-31.	2.9	45
46	Enrichment of extremophilic exoelectrogens in microbial electrolysis cells using Red Sea brine pools as inocula. Bioresource Technology, 2017, 239, 82-86.	4.8	43
47	Bacterial Competition in Activated Sludge: Theoretical Analysis of Varying Solids Retention Times on Diversity. Microbial Ecology, 2004, 48, 274-284.	1.4	42
48	Temporal changes in extracellular polymeric substances on hydrophobic and hydrophilic membrane surfaces in a submerged membrane bioreactor. Water Research, 2016, 95, 27-38.	5.3	41
49	Diversity of Dominant Bacterial Taxa in Activated Sludge Promotes Functional Resistance following Toxic Shock Loading. Microbial Ecology, 2011, 61, 557-567.	1.4	40
50	Impact of SRT on the performance of MBRs for the treatment of high strength landfill leachate. Waste Management, 2018, 73, 165-180.	3.7	40
51	Application of an enrichment culture of the marine anammox bacterium â€œCa. Scalindua sp. AMX11â€•for nitrogen removal under moderate salinity and in the presence of organic carbon. Water Research, 2020, 170, 115345.	5.3	38
52	Comparative Genome-Centric Analysis of Freshwater and Marine ANAMMOX Cultures Suggests Functional Redundancy in Nitrogen Removal Processes. Frontiers in Microbiology, 2020, 11, 1637.	1.5	37
53	Electroactive biofilms on surface functionalized anodes: The anode respiring behavior of a novel electroactive bacterium, Desulfuromonas acetexigens. Water Research, 2020, 185, 116284.	5.3	36
54	Anaerobic bioleaching of metals from waste activated sludge. Science of the Total Environment, 2015, 514, 60-67.	3.9	35

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55	A Microfiltration Polymerâ€Based Hollowâ€Fiber Cathode as a Promising Advanced Material for Simultaneous Recovery of Energy and Water. Advanced Materials, 2016, 28, 9504-9511.	11.1	35
56	Impact of Distribution and Network Flushing on the Drinking Water Microbiome. Frontiers in Microbiology, 2018, 9, 2205.	1.5	35
57	Enhanced water desalination efficiency in an air-cathode stacked microbial electrodeionization cell (SMEDIC). Journal of Membrane Science, 2014, 469, 364-370.	4.1	34
58	Attenuation of trace organic compounds (TOrCs) inÂbioelectrochemical systems. Water Research, 2015, 73, 56-67.	5.3	34
59	A two-staged system to generate electricity in microbial fuel cells using methane. Chemical Engineering Journal, 2018, 352, 262-267.	6.6	31
60	Performance and Microbial Diversity of a Trickle-Bed Air Biofilter under Interchanging Contaminants. Engineering in Life Sciences, 2006, 6, 37-42.	2.0	30
61	Critical variables in the performance of a productivity-enhanced solar still. Solar Energy, 2013, 98, 472-484.	2.9	30
62	Efficient solar-to-acetate conversion from CO2 through microbial electrosynthesis coupled with stable photoanode. Applied Energy, 2020, 278, 115684.	5.1	30
63	Resistance assessment of microbial electrosynthesis for biochemical production to changes in delivery methods and CO2 flow rates. Bioresource Technology, 2021, 319, 124177.	4.8	30
64	Startup and Stability of Thermophilic Anaerobic Digestion of OFMSW. Critical Reviews in Environmental Science and Technology, 2013, 43, 2685-2721.	6.6	29
65	Draft Genome Sequence of the Anaerobic Ammonium-Oxidizing Bacterium â€œ Candidatus Brocadia sp. 40â€• Genome Announcements, 2016, 4, .	0.8	28
66	Temporal Microbial Community Dynamics in Microbial Electrolysis Cells â€“ Influence of Acetate and Propionate Concentration. Frontiers in Microbiology, 2017, 8, 1371.	1.5	27
67	Enrichment of Marinobacter sp. and Halophilic Homoacetogens at the Biocathode of Microbial Electrosynthesis System Inoculated With Red Sea Brine Pool. Frontiers in Microbiology, 2019, 10, 2563.	1.5	24
68	Performance optimization and validation of ADM1 simulations under anaerobic thermophilic conditions. Bioresource Technology, 2014, 174, 243-255.	4.8	23
69	Copper current collectors reduce long-term fouling of air cathodes in microbial fuel cells. Environmental Science: Water Research and Technology, 2018, 4, 513-519.	1.2	22
70	Correlation between system performance and bacterial composition under varied mixing intensity in thermophilic anaerobic digestion of food waste. Journal of Environmental Management, 2018, 206, 472-481.	3.8	22
71	Leaching and accumulation of trace elements in sulfate reducing granular sludge under concomitant thermophilic and low pH conditions. Bioresource Technology, 2012, 126, 238-246.	4.8	21
72	The combined effect of step-feed and recycling on RBC performance. Water Research, 2004, 38, 3009-3016.	5.3	20

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73	Effect of specific cathode surface area on biofouling in an anaerobic electrochemical membrane bioreactor: Novel insights using high-speed video camera. Journal of Membrane Science, 2019, 577, 176-183.	4.1	20
74	Critical evaluation of solid waste sample processing for DNA-based microbial community analysis. Biodegradation, 2011, 22, 189-204.	1.5	19
75	Improving the stability of thermophilic anaerobic digesters treating SS-OFMSW through enrichment with compost and leachate seeds. Bioresource Technology, 2013, 131, 53-59.	4.8	19
76	High denitrification and anaerobic ammonium oxidation contributes to net nitrogen loss in a seagrass ecosystem in the central Red Sea. Biogeosciences, 2018, 15, 7333-7346.	1.3	19
77	Evidence of Spatial Homogeneity in an Electromethanogenic Cathodic Microbial Community. Frontiers in Microbiology, 2019, 10, 1747.	1.5	19
78	Continuous Flow Microbial Flow Cell with an Anion Exchange Membrane for Treating Low Conductivity and Poorly Buffered Wastewater. ACS Sustainable Chemistry and Engineering, 2021, 9, 2946-2954.	3.2	19
79	Physicochemical Properties of Extracellular Polymeric Substances Produced by Three Bacterial Isolates From Biofouled Reverse Osmosis Membranes. Frontiers in Microbiology, 2021, 12, 668761.	1.5	19
80	The impact of different types of high surface area brush fibers with different electrical conductivity and biocompatibility on the rates of methane generation in anaerobic digestion. Science of the Total Environment, 2021, 787, 147683.	3.9	19
81	Continuous extraction and concentration of secreted metabolites from engineered microbes using membrane technology. Green Chemistry, 2022, 24, 5479-5489.	4.6	18
82	Enrichment of salt-tolerant CO2â€“fixing communities in microbial electrosynthesis systems using porous ceramic hollow tube wrapped with carbon cloth as cathode and for CO2 supply. Science of the Total Environment, 2021, 766, 142668.	3.9	17
83	A propidium monoazideâ€“quantitative PCR method for the detection and quantification of viable Enterococcus faecalis in large-volume samples of marine waters. Applied Microbiology and Biotechnology, 2014, 98, 8707-8718.	1.7	16
84	Diversity and dynamics of dominant and rare bacterial taxa in replicate sequencing batch reactors operated under different solids retention time. Applied Microbiology and Biotechnology, 2015, 99, 2361-2370.	1.7	16
85	Competition of two highly specialized and efficient acetoclastic electroactive bacteria for acetate in biofilm anode of microbial electrolysis cell. Npj Biofilms and Microbiomes, 2021, 7, 47.	2.9	16
86	High-rate microbial electrosynthesis using a zero-gap flow cell and vapor-fed anode design. Water Research, 2022, 219, 118597.	5.3	16
87	Simultaneous nitrogen and organics removal using membrane aeration and effluent ultrafiltration in an anaerobic fluidized membrane bioreactor. Bioresource Technology, 2017, 244, 456-462.	4.8	15
88	Electrochemically active polymeric hollow fibers based on poly(ether-b-amide)/carbon nanotubes. Journal of Membrane Science, 2018, 545, 323-328.	4.1	15
89	Population dynamics during startup of thermophilic anaerobic digesters: The mixing factor. Waste Management, 2013, 33, 2211-2218.	3.7	14
90	Effects of set cathode potentials on microbial electrosynthesis system performance and biocathode methanogen function at a metatranscriptional level. Scientific Reports, 2020, 10, 19824.	1.6	13

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91	Seawater desalination based drinking water: Microbial characterization during distribution with and without residual chlorine. Water Research, 2022, 210, 117975.	5.3	13
92	Synthesis of an amorphous Geobacter-manganese oxide biohybrid as an efficient water oxidation catalyst. Green Chemistry, 2020, 22, 5610-5618.	4.6	11
93	Harnessing the Extracellular Electron Transfer Capability of Geobacter sulfurreducens for Ambient Synthesis of Stable Bifunctional Singleâ€Atom Electrocatalyst for Water Splitting. Advanced Functional Materials, 2021, 31, 2010916.	7.8	11
94	Ecological engineering of bioaugmentation from side-stream nitrification. Water Science and Technology, 2008, 57, 1927-1933.	1.2	10
95	Draft Genome Sequence of Desulfuromonas acetexigens Strain 2873, a Novel Anode-Respiring Bacterium. Genome Announcements, 2017, 5, .	0.8	10
96	Effect of Salt on the Metabolism of â€˜Candidatus Accumulibacterâ€™ Clade I and II. Frontiers in Microbiology, 2018, 9, 479.	1.5	10
97	Characterization of the microbial community diversity and composition of the coast of Lebanon: Potential for petroleum oil biodegradation. Marine Pollution Bulletin, 2019, 149, 110508.	2.3	10
98	Relative Importance of Stochastic Assembly Process of Membrane Biofilm Increased as Biofilm Aged. Frontiers in Microbiology, 2021, 12, 708531.	1.5	10
99	Ammonia Nitrogen Removal in Step-Feed Rotating Biological Contactors. Water, Air, and Soil Pollution, 2003, 150, 177-191.	1.1	9
100	Microbial Electrodeionization Cell Stack for Sustainable Desalination, Wastewater Treatment and Energy Recovery. Proceedings of the Water Environment Federation, 2013, 2013, 222-227.	0.0	9
101	An aerated and fluidized bed membrane bioreactor for effective wastewater treatment with low membrane fouling. Environmental Science: Water Research and Technology, 2016, 2, 994-1003.	1.2	9
102	Eukaryotic community diversity and spatial variation during drinking water production (by seawater) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5 Technology, 2017, 3, 92-105.	1.2	9
103	Draft Genome Sequence of a Novel Marine Anaerobic Ammonium-Oxidizing Bacterium, â€œ Candidatus Scalindua sp.â€• Microbiology Resource Announcements, 2019, 8, .	0.3	8
104	Response to Comment on Microbial Community Composition Is Unaffected by Anode Potential. Environmental Science & Technology, 2014, 48, 14853-14854.	4.6	7
105	Long-Term Continuous Extraction of Medium-Chain Carboxylates by Pertraction With Submerged Hollow-Fiber Membranes. Frontiers in Bioengineering and Biotechnology, 2021, 9, 726946.	2.0	7
106	Coupling anaerobic fluidized membrane bioreactors with microbial electrolysis cells towards improved wastewater reuse and energy recovery. Journal of Environmental Chemical Engineering, 2021, 9, 105974.	3.3	7
107	Hollow-fiber membrane bioreactor for the treatment of high-strength landfill leachate. Waste Management and Research, 2013, 31, 1041-1051.	2.2	6
108	Impact of acclimation methods on microbial communities and performance of anaerobic fluidized bed membrane bioreactors. Environmental Science: Water Research and Technology, 2016, 2, 1041-1048.	1.2	6

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109	Modelling the competition of planktonic and sessile aerobic heterotrophs for complementary nutrients in biofilm reactor. Water Science and Technology, 2007, 55, 227-235.	1.2	5
110	Comparison of Single-Stage and Two-Stage Thermophilic Anaerobic Digestion of SS-OFMSW During the Start-Up Phase. Waste and Biomass Valorization, 2020, 11, 6709-6716.	1.8	5
111	Impact of Step-Feed on COD and BOD5 Removal in Rotating Biological Contactors. Environmental Engineering Science, 2004, 21, 558-568.	0.8	4
112	Dynamic Growth Rates of Microbial Populations in Activated Sludge Systems. Journal of Environmental Engineering, ASCE, 2005, 131, 1698-1705.	0.7	4
113	Transport Behavior of Surrogate Biological Warfare Agents in a Simulated Landfill: Effect of Leachate Recirculation and Water Infiltration. Environmental Science & Technology, 2010, 44, 8622-8628.	4.6	4
114	Effect of Changing VOC Influent Composition on the Microbial Community Structure of TBABs. Water, Air and Soil Pollution, 2008, 8, 311-321.	0.8	3
115	Performance of thermophilic anaerobic digesters using inoculum mixes with enhanced methanogenic diversity. Journal of Chemical Technology and Biotechnology, 2018, 93, 207-214.	1.6	3
116	Evaluation of DNA extraction yield from a chlorinated drinking water distribution system. PLoS ONE, 2021, 16, e0253799.	1.1	3
117	Draft Genome Sequence of Methanobacterium sp. Strain 34x, Reconstructed from an Enriched Electromethanogenic Biocathode. Microbiology Resource Announcements, 2019, 8, .	0.3	2
118	A NOVEL MODEL OF ACTIVATED SLUDGE USING MONOD KINETICS TO DESCRIBE THE COMPETITION OF MICROBIAL POPULATIONS ON GROWTH LIMITING SUBSTRATE. Proceedings of the Water Environment Federation, 2002, 2002, 90-101.	0.0	0
119	Modeling Bacterial Diversity in Activated Sludge System Using Trade-Off-Based Resource Competition Model. Proceedings of the Water Environment Federation, 2010, 2010, 5656-5663.	0.0	0
120	Effect of SRT on Floc Biodiversity in Activated Sludge Model. Proceedings of the Water Environment Federation, 2011, 2011, 3245-3255.	0.0	0
121	Photoanodes: Vastly Enhanced BiVO₄ Photocatalytic OER Performance by NiCoO₂ as Cocatalyst (Adv. Mater. Interfaces 19/2017). Advanced Materials Interfaces, 2017, 4, .	1.9	0
122	Electrochemical Energy Storage: Harnessing the Extracellular Electron Transfer Capability of Geobacter sulfurreducens for Ambient Synthesis of Stable Bifunctional Singleâ€Atom Electrocatalyst for Water Splitting (Adv. Funct. Mater. 22/2021). Advanced Functional Materials, 2021, 31, 2170161.	7.8	0
123	Biodiversity Enhances Resistance of Activated Sludge to Toxic Shock Loads. Proceedings of the Water Environment Federation, 2009, 2009, 4022-4032.	0.0	0