Mohamed Y El-Naggar

List of Publications by Year
in descending order

65 papers	4,092 citations	159585 30 h-index	118850 62 g-index
79 all docs	79 docs citations	79 times ranked	4085 citing authors

#	Article	IF	Citations
1	Single molecule tracking of bacterial cell surface cytochromes reveals dynamics that impact long-distance electron transport. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2119964119.	7.1	18
2	Light-Induced Patterning of Electroactive Bacterial Biofilms. ACS Synthetic Biology, 2022, 11, 2327-2338.	3.8	14
3	Electrochemical evidence for in situ microbial activity at the Deep Mine Microbial Observatory (DeMMO), South Dakota, USA. Geobiology, 2021, 19, 173-188.	2.4	7
4	Roadmap on emerging concepts in the physical biology of bacterial biofilms: from surface sensing to community formation. Physical Biology, 2021, 18, 051501.	1.8	46
5	Engineering Biological Electron Transfer and Redox Pathways for Nanoparticle Synthesis. Bioelectricity, 2021, 3, 126-135.	1.1	9
6	Carbonate-hosted microbial communities are prolific and pervasive methane oxidizers at geologically diverse marine methane seep sites. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	8
7	A bacterial membrane sculpting protein with BAR domain-like activity. ELife, 2021, 10, .	6.0	6
8	Electrolocation? The evidence for redoxâ€mediated taxis in Shewanella oneidensis. Molecular Microbiology, 2020, 115, 1069-1079.	2.5	13
9	Spatiotemporal mapping of bacterial membrane potential responses to extracellular electron transfer. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 20171-20179.	7.1	41
10	A Mechanistic Study of Carbonic Anhydraseâ€Enhanced Calcite Dissolution. Geophysical Research Letters, 2020, 47, e2020GL089244.	4.0	2
11	Type IV Pili-Independent Photocurrent Production by the Cyanobacterium Synechocystis sp. PCC 6803. Frontiers in Microbiology, 2020, 11, 1344.	3.5	29
12	An atomic force microscopy study of calcite dissolution in seawater. Geochimica Et Cosmochimica Acta, 2020, 283, 40-53.	3.9	13
13	Novel Extracellular Electron Transfer Channels in a Gram-Positive Thermophilic Bacterium. Frontiers in Microbiology, 2020, 11, 597818.	3.5	14
14	In situ Electrochemical Studies of the Terrestrial Deep Subsurface Biosphere at the Sanford Underground Research Facility, South Dakota, USA. Frontiers in Energy Research, 2019, 7, .	2.3	11
15	Spin-Dependent Electron Transport through Bacterial Cell Surface Multiheme Electron Conduits. Journal of the American Chemical Society, 2019, 141, 19198-19202.	13.7	67
16	Surface-Induced Formation and Redox-Dependent Staining of Outer Membrane Extensions in Shewanella oneidensis MR-1. Frontiers in Energy Research, 2019, 7, .	2.3	12
17	An electrochemical investigation of interfacial electron uptake by the sulfur oxidizing bacterium Thioclava electrotropha ElOx9. Electrochimica Acta, 2019, 324, 134838.	5.2	24
18	<i>In situ</i> imaging of the bacterial flagellar motor disassembly and assembly processes. EMBO Journal, 2019, 38, e100957.	7.8	43

#	ARTICLE	IF	CITATIONS
19	Methane-Linked Mechanisms of Electron Uptake from Cathodes by Methanosarcina barkeri. MBio, 2019, 10, .	4.1	52
20	Biogenic Control of Manganese Doping in Zinc Sulfide Nanomaterial Using Shewanella oneidensis MR-1. Frontiers in Microbiology, 2019, 10, 938.	3.5	15
21	Engineering bacteria for biogenic synthesis of chalcogenide nanomaterials. Microbial Biotechnology, 2019, 12, 161-172.	4.2	28
22	The presence and absence of periplasmic rings in bacterial flagellar motors correlates with stator type. ELife, 2019, 8, .	6.0	36
23	Tracking Electron Uptake from a Cathode into <i>Shewanella</i> Cells: Implications for Energy Acquisition from Solid-Substrate Electron Donors. MBio, 2018, 9, .	4.1	115
24	Distinct Electron Conductance Regimes in Bacterial Decaheme Cytochromes. Angewandte Chemie - International Edition, 2018, 57, 6805-6809.	13.8	27
25	Ultrastructure of <i>Shewanella oneidensis</i> MR-1 nanowires revealed by electron cryotomography. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E3246-E3255.	7.1	151
26	Going the Distance: Long-Range Conductivity in Protein and Peptide Bioelectronic Materials. Journal of Physical Chemistry B, 2018, 122, 10403-10423.	2.6	116
27	Characterizing Electron Transport through Living Biofilms. Journal of Visualized Experiments, 2018, , .	0.3	8
28	Distinct Electron Conductance Regimes in Bacterial Decaheme Cytochromes. Angewandte Chemie, 2018, 130, 6921-6925.	2.0	3
29	Multiheme Cytochrome Mediated Redox Conduction through <i>Shewanella oneidensis</i> MR-1 Cells. Journal of the American Chemical Society, 2018, 140, 10085-10089.	13.7	89
30	Natureâ€™s conductors: what can microbial multi-heme cytochromes teach us about electron transport and biological energy conversion?. Current Opinion in Chemical Biology, 2018, 47, 7-17.	6.1	63
31	A Microenvironment for<i>Shewanella oneidensis</i>MR-1 Exists within Graphite Felt Electrodes. Journal of the Electrochemical Society, 2017, 164, H3103-H3108.	2.9	4
32	Redox conduction in biofilms: From respiration to living electronics. Current Opinion in Electrochemistry, 2017, 4, 182-189.	4.8	34
33	A derivation and scalable implementation of the synchronous parallel kinetic Monte Carlo method for simulating long-time dynamics. Computer Physics Communications, 2017, 219, 246-254.	7.5	4
34	Redox Sensing within the Genus Shewanella. Frontiers in Microbiology, 2017, 8, 2568.	3.5	32
35	Dissociation and Re-Aggregation of Multicell-Ensheathed Fragments Responsible for Rapid Production of Massive Clumps of Leptothrix Sheaths. Biology, 2016, 5, 32.	2.8	8
36	Isolation and Characterization of Electrochemically Active Subsurface Delftia and Azonexus Species. Frontiers in Microbiology, 2016, 7, 756.	3.5	65

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37	Abiotic Deposition of Fe Complexes onto Leptothrix Sheaths. Biology, 2016, 5, 26.	2.8	13
38	iBET: Immersive visualization of biological electron-transfer dynamics. Journal of Molecular Graphics and Modelling, 2016, 65, 94-99.	2.4	9
39	Measuring conductivity of living Geobacter sulfurreducens biofilms. Nature Nanotechnology, 2016, 11, 910-913.	31.5	99
40	Divide-Conquer-Recombine Kinetic Monte Carlo Simulations of Electron Transfer in the Extracellular Redox Network of Shewanella oneidensis MR-1. Biophysical Journal, 2016, 110, 314a.	0.5	1
41	Regulation of Gene Expression in Shewanella oneidensis MR-1 during Electron Acceptor Limitation and Bacterial Nanowire Formation. Applied and Environmental Microbiology, 2016, 82, 5428-5443.	3.1	59
42	Disentangling the roles of free and cytochrome-bound flavins in extracellular electron transport from Shewanella oneidensis MR-1. Electrochimica Acta, 2016, 198, 49-55.	5.2	153
43	Queuing Models for Abstracting Interactions in Bacterial Communities. IEEE Journal on Selected Areas in Communications, 2016, 34, 584-599.	14.0	19
44	Cellular Semiconductor Factories: Controlled Bacterial Synthesis of Chalcogenide Nanomaterials. Biophysical Journal, 2016, 110, 340a.	0.5	0
45	A stochastic queuing model of quorum sensing in microbial communities. , 2015, , .		4
46	A framework for stochastic simulations and visualization of biological electron-transfer dynamics. Computer Physics Communications, 2015, 193, 1-9.	7.5	14
47	Thermally activated long range electron transport in living biofilms. Physical Chemistry Chemical Physics, 2015, 17, 32564-32570.	2.8	108
48	Field effect transistors based on semiconductive microbially synthesized chalcogenide nanofibers. Acta Biomaterialia, 2015, 13, 364-373.	8.3	22
49	A combined electrochemical and optical trapping platform for measuring single cell respiration rates at electrode interfaces. Review of Scientific Instruments, 2015, 86, 064301.	1.3	46
50	Bacterial Nanowires of Shewanella Oneidensis MR-1 are Outer Membrane and Periplasmic Extensions of the Extracellular Electron Transport Components. Biophysical Journal, 2015, 108, 368a.	0.5	8
51	Kinetic Monte Carlo Simulations and Molecular Conductance Measurements of the Bacterial Decaheme Cytochrome MtrF. ChemElectroChem, 2014, 1, 1932-1939.	3.4	34
52	A Stochastic Model for Electron Transfer in Bacterial Cables. IEEE Journal on Selected Areas in Communications, 2014, 32, 2402-2416.	14.0	25
53	Biological Fuel Cells: Cardinal Advances and Critical Challenges. ChemElectroChem, 2014, 1, 1702-1704.	3.4	8
54	<i>Shewanella oneidensis</i> MR-1 nanowires are outer membrane and periplasmic extensions of the extracellular electron transport components. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 12883-12888.	7.1	531

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55	<i>Shewanella oneidensis</i> MR-1 Bacterial Nanowires Exhibit p-Type, Tunable Electronic Behavior. Nano Letters, 2013, 13, 2407-2411.	9.1	103
56	Electrically conductive bacterial nanowires in bisphosphonate-related osteonecrosis of the jaw biofilms. Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology, 2013, 115, 71-78.	0.4	35
57	Filamentous bacteria transport electrons over centimetre distances. Nature, 2012, 491, 218-221.	27.8	475
58	Multistep hopping and extracellular charge transfer in microbial redox chains. Physical Chemistry Chemical Physics, 2012, 14, 13802.	2.8	130
59	<i>Shewanella oneidensis</i> MR-1 chemotaxis proteins and electron-transport chain components essential for congregation near insoluble electron acceptors. Biochemical Society Transactions, 2012, 40, 1167-1177.	3.4	45
60	Aggrandizing power output from Shewanella oneidensis MR-1 microbial fuel cells using calcium chloride. Biosensors and Bioelectronics, 2012, 31, 492-498.	10.1	32
61	Electrical transport along bacterial nanowires from <i>Shewanella oneidensis</i> MR-1. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 18127-18131.	7.1	566
62	The Molecular Density of States in Bacterial Nanowires. Biophysical Journal, 2008, 95, L10-L12.	0.5	106
63	Plasmon-Assisted Chemical Vapor Deposition. Nano Letters, 2006, 6, 2592-2597.	9.1	153
64	Graded ferroelectric capacitors with robust temperature characteristics. Journal of Applied Physics, 2006, 100, 114115.	2.5	35
65	Characterization of Highly-Oriented Ferroelectric PbxBa1âˆ’x TiO3 Thin Films Grown by Metalorganic Chemical Vapor Deposition. Journal of Materials Research, 2005, 20, 2969-2976.	2.6	8