Bin Cao

List of Publications by Year
in descending order

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107 papers	5,612 citations	76031 42 h-index	97045 71 g-index
110 all docs	110 docs citations	110 times ranked	8003 citing authors

#	Article	IF	Citations
1	An invisible workforce in soil: The neglected role of soil biofilms in conjugative transfer of antibiotic resistance genes. Critical Reviews in Environmental Science and Technology, 2022, 52, 2720-2748.	6.6	14
2	Extracellular DNA in Environmental Samples: Occurrence, Extraction, Quantification, and Impact on Microbial Biodiversity Assessment. Applied and Environmental Microbiology, 2022, 88, AEM0184521.	1.4	13
3	Biosynthesis of Tasikamides via Pathway Coupling and Diazonium-Mediated Hydrazone Formation. Journal of the American Chemical Society, 2022, 144, 1622-1633.	6.6	31
4	The Dark Side of Microbial Processes: Accumulation of Nitrate During Storage of Surface Water in the Dark and the Underlying Mechanism. Microbiology Spectrum, 2022, 10, e0223221.	1.2	0
5	Biofilm control by interfering with c-di-GMP metabolism and signaling. Biotechnology Advances, 2022, 56, 107915.	6.0	39
6	A quantitative, high-throughput urease activity assay for comparison and rapid screening of ureolytic bacteria. Environmental Research, 2022, 208, 112738.	3.7	12
7	Green Closed-Loop Cathode Regeneration from Spent NMC-Based Lithium-Ion Batteries through Bioleaching. ACS Sustainable Chemistry and Engineering, 2022, 10, 2634-2644.	3.2	32
8	Metal extraction from spent lithium-ion batteries (LIBs) at high pulp density by environmentally friendly bioleaching process. Journal of Cleaner Production, 2021, 280, 124242.	4.6	71
9	Engineering controllable biofilms for biotechnological applications. Microbial Biotechnology, 2021, 14, 74-78.	2.0	18
10	Editorial perspective: Viruses in wastewater: Wading into the knowns and unknowns. Environmental Research, 2021, 196, 110255.	3.7	7
11	Bioleaching as an Eco-Friendly Approach for Metal Recovery from Spent NMC-Based Lithium-Ion Batteries at a High Pulp Density. ACS Sustainable Chemistry and Engineering, 2021, 9, 3060-3069.	3.2	64
12	Biodiversity of magnetotactic bacteria in the tropical marine environment of Singapore revealed by metagenomic analysis. Environmental Research, 2021, 194, 110714.	3.7	6
13	Laboratory preparation of monochloramine for environmental research: A comparison of four commonly used protocols. Environmental Research, 2021, 197, 111009.	3.7	5
14	A review on the recycling of spent lithium-ion batteries (LIBs) by the bioleaching approach. Chemosphere, 2021, 282, 130944.	4.2	122
15	Elevated intracellular cyclicâ€diâ€GMP level in Shewanella oneidensis increases expression of câ€type cytochromes. Microbial Biotechnology, 2020, 13, 1904-1916.	2.0	23
16	Shewanella biofilm development and engineering for environmental and bioenergy applications. Current Opinion in Chemical Biology, 2020, 59, 84-92.	2.8	39
17	Responses of Exogenous Bacteria to Soluble Extracellular Polymeric Substances in Wastewater: A Mechanistic Study and Implications on Bioaugmentation. Environmental Science & Technology, 2020, 54, 6919-6928.	4.6	11
18	Biocementation of soil using non-sterile enriched urease-producing bacteria from activated sludge. Journal of Cleaner Production, 2020, 262, 121315.	4.6	54

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19	Microbial Community Composition and Putative Biogeochemical Functions in the Sediment and Water of Tropical Granite Quarry Lakes. Microbial Ecology, 2019, 77, 1-11.	1.4	51
20	Biofilm-Biology-Informed Biofilm Engineering for Environmental Biotechnology. ACS Symposium Series, 2019, , 59-82.	0.5	5
21	Optogenetic Modulation of a Catalytic Biofilm for the Biotransformation of Indole into Tryptophan. ChemSusChem, 2019, 12, 5142-5148.	3.6	19
22	Biofilm-Templated Heteroatom-Doped Carbonâ€“Palladium Nanocomposite Catalyst for Hexavalent Chromium Reduction. ACS Applied Materials & Interfaces, 2019, 11, 24018-24026.	4.0	24
23	Extracellular DNA in Monochloraminated Drinking Water and Its Influence on DNA-Based Profiling of a Microbial Community. Environmental Science and Technology Letters, 2019, 6, 306-312.	3.9	28
24	A microfluidic gradient mixerâ€flow chamber as a new tool to study biofilm development under defined solute gradients. Biotechnology and Bioengineering, 2019, 116, 54-64.	1.7	17
25	Polydopamine enabled palladium loaded nanofibrous membrane and its catalytic performance for trichloroethene dechlorination. Applied Catalysis A: General, 2018, 559, 122-126.	2.2	23
26	Biowaste for energy recovery and environmental remediation. Chemical Engineering Research and Design, 2018, 115, 1.	2.7	3
27	Fate ofEnterococcus faecalisin stormwater matrices under ultraviolet-A (365 nm) irradiation. Environmental Science: Water Research and Technology, 2018, 4, 639-643.	1.2	1
28	Viability of bacterial spores and crack healing in bacteria-containing geopolymer. Construction and Building Materials, 2018, 169, 716-723.	3.2	62
29	Harnessing the Periplasm of Bacterial Cells To Develop Biocatalysts for the Biosynthesis of Highly Pure Chemicals. Applied and Environmental Microbiology, 2018, 84, .	1.4	7
30	The Core- and Pan-Genomic Analyses of the Genus Comamonas: From Environmental Adaptation to Potential Virulence. Frontiers in Microbiology, 2018, 9, 3096.	1.5	67
31	Bacterial Metabolism During Biofilm Growth Investigated by 13C Tracing. Frontiers in Microbiology, 2018, 9, 2657.	1.5	40
32	Engineering a light-responsive, quorum quenching biofilm to mitigate biofouling on water purification membranes. Science Advances, 2018, 4, eaau1459.	4.7	59
33	Biological Leaching and Chemical Precipitation Methods for Recovery of Co and Li from Spent Lithium-Ion Batteries. ACS Sustainable Chemistry and Engineering, 2018, 6, 12343-12352.	3.2	136
34	A near-infrared light responsive c-di-GMP module-based AND logic gate in Shewanella oneidensis. Chemical Communications, 2017, 53, 1646-1648.	2.2	22
35	Living and Conducting: Coating Individual Bacterial Cells with Inâ€…Situ Formed Polypyrrole. Angewandte Chemie, 2017, 129, 10652-10656.	1.6	38
36	Bacillus subtilis biofilm development in the presence of soil clay minerals and iron oxides. Npj Biofilms and Microbiomes, 2017, 3, 4.	2.9	83

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37	Living and Conducting: Coating Individual Bacterial Cells with Inâ€…Situ Formed Polypyrrole. Angewandte Chemie - International Edition, 2017, 56, 10516-10520.	7.2	206
38	Hydrothermally synthesized porous materials from municipal solid waste incineration bottom ash and their interfacial interactions with chloroaromatic compounds. Journal of Cleaner Production, 2017, 162, 411-419.	4.6	57
39	Concentrating synthetic estrogen 17Î±-ethinylestradiol using microporous polyethersulfone hollow fiber membranes: Experimental exploration and molecular simulation. Chemical Engineering Journal, 2017, 314, 80-87.	6.6	23
40	Recent advances in nanomaterials for water protection and monitoring. Chemical Society Reviews, 2017, 46, 6946-7020.	18.7	441
41	A novel thin-film nano-templated composite membrane with in situ silver nanoparticles loading: Separation performance enhancement and implications. Journal of Membrane Science, 2017, 544, 351-358.	4.1	86
42	RÃ¼cktitelbild: Living and Conducting: Coating Individual Bacterial Cells with Inâ€…Situ Formed Polypyrrole (Angew. Chem. 35/2017). Angewandte Chemie, 2017, 129, 10744-10744.	1.6	0
43	A novel gravity-driven nanofibrous membrane for point-of-use water disinfection: polydopamine-induced in situ silver incorporation. Scientific Reports, 2017, 7, 2334.	1.6	39
44	Modeling Substrate Utilization, Metabolite Production, and Uranium Immobilization in Shewanella oneidensis Biofilms. Frontiers in Environmental Science, 2017, 5, .	1.5	9
45	Metagenomic insights into the influence of salinity and cytostatic drugs on the composition and functional genes of microbial community in forward osmosis anaerobic membrane bioreactors. Chemical Engineering Journal, 2017, 326, 462-469.	6.6	46
46	Impacts of nanomaterials on bacterial quorum sensing: differential effects on different signals. Environmental Science: Nano, 2016, 3, 351-356.	2.2	27
47	Influence of 3-Chloroaniline on the Biofilm Lifestyle of Comamonas testosteroni and Its Implications on Bioaugmentation. Applied and Environmental Microbiology, 2016, 82, 4401-4409.	1.4	19
48	Improving the Molecular Ion Signal Intensity for In Situ Liquid SIMS Analysis. Journal of the American Society for Mass Spectrometry, 2016, 27, 2006-2013.	1.2	46
49	In Situ Molecular Imaging of the Biofilm and Its Matrix. Analytical Chemistry, 2016, 88, 11244-11252.	3.2	76
50	In Situ Reduction of Silver by Polydopamine: A Novel Antimicrobial Modification of a Thin-Film Composite Polyamide Membrane. Environmental Science & Technology, 2016, 50, 9543-9550.	4.6	182
51	Confocal Laser Scanning Microscopy-Compatible Microfluidic Membrane Flow Cell as a Nondestructive Tool for Studying Biofouling Dynamics on Forward Osmosis Membranes. Environmental Science and Technology Letters, 2016, 3, 303-309.	3.9	28
52	A membrane-free micro-fluidic microbial fuel cell for rapid characterization of exoelectrogenic bacteria. Microfluidics and Nanofluidics, 2016, 20, 1.	1.0	5
53	Microorganisms meet solid minerals: interactions and biotechnological applications. Applied Microbiology and Biotechnology, 2016, 100, 6935-6946.	1.7	32
54	Hydrophobic-Sheath Segregated Macromolecular Fluorophores: Colloidal Nanoparticles of Polycaprolactone-Grafted Conjugated Polymers with Bright Far-Red/Near-Infrared Emission for Biological Imaging. Biomacromolecules, 2016, 17, 1673-1683.	2.6	46

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55	Fabrication and characterization of nanocomposite pressure retarded osmosis (PRO) membranes with excellent anti-biofouling property and enhanced water permeability. Desalination, 2016, 389, 137-148.	4.0	70
56	Engineering Rhodosporidium toruloides with a membrane transporter facilitates production and separation of carotenoids and lipids in a bi-phasic culture. Applied Microbiology and Biotechnology, 2016, 100, 869-877.	1.7	60
57	Hybrid Conducting Biofilm with Builtâ€in Bacteria for Highâ€Performance Microbial Fuel Cells. ChemElectroChem, 2015, 2, 619-619.	1.7	1
58	Protocol Improvements for Low Concentration DNA-Based Bioaerosol Sampling and Analysis. PLoS ONE, 2015, 10, e0141158.	1.1	56
59	Bioenergy and Its Environmental Impacts. Scientific World Journal, The, 2015, 2015, 1-1.	0.8	0
60	Metabolite-enabled mutualistic interaction between Shewanella oneidensis and Escherichia coli in a co-culture using an electrode as electron acceptor. Scientific Reports, 2015, 5, 11222.	1.6	35
61	C-di-GMP regulates Pseudomonas aeruginosa stress response to tellurite during both planktonic and biofilm modes of growth. Scientific Reports, 2015, 5, 10052.	1.6	72
62	Hybrid Conducting Biofilm with Builtâ€in Bacteria for Highâ€Performance Microbial Fuel Cells. ChemElectroChem, 2015, 2, 654-658.	1.7	77
63	Assessment of Bacterial Survival in the Presence of Nanomaterials: Is Colony Forming Unit Count Sufficient?. Environmental Engineering Science, 2015, 32, 977-977.	0.8	2
64	Extracellular biogenic nanomaterials inhibit pyoverdine production in Pseudomonas aeruginosa: a novel insight into impacts of metal(loid)s on environmental bacteria. Applied Microbiology and Biotechnology, 2015, 99, 1957-1966.	1.7	10
65	Enhancing Bidirectional Electron Transfer of Shewanella oneidensis by a Synthetic Flavin Pathway. ACS Synthetic Biology, 2015, 4, 815-823.	1.9	219
66	What Exactly Are You Filtering Out?. Environmental Science & Technology, 2015, 49, 5259-5260.	4.6	7
67	Chemically Functionalized Conjugated Oligoelectrolyte Nanoparticles for Enhancement of Current Generation in Microbial Fuel Cells. ACS Applied Materials & Interfaces, 2015, 7, 14501-14505.	4.0	30
68	Adjustable bidirectional extracellular electron transfer between Comamonas testosteroni biofilms and electrode via distinct electron mediators. Electrochemistry Communications, 2015, 59, 43-47.	2.3	46
69	Elevated level of the second messenger c-di-GMP in Comamonas testosteroni enhances biofilm formation and biofilm-based biodegradation of 3-chloroaniline. Applied Microbiology and Biotechnology, 2015, 99, 1967-1976.	1.7	38
70	Enhanced Shewanella biofilm promotes bioelectricity generation. Biotechnology and Bioengineering, 2015, 112, 2051-2059.	1.7	129
71	Multiple diguanylate cyclaseâ€coordinated regulation of pyoverdine synthesis in <scp>P</scp>seudomonas aeruginosa. Environmental Microbiology Reports, 2015, 7, 498-507.	1.0	47
72	Impact of Sublethal Levels of Single-Wall Carbon Nanotubes on Pyoverdine Production in Pseudomonas aeruginosa and Its Environmental Implications. Environmental Science and Technology Letters, 2015, 2, 105-111.	3.9	19

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73	Comparative genome analysis reveals genetic adaptation to versatile environmental conditions and importance of biofilm lifestyle in Comamonas testosteroni. Applied Microbiology and Biotechnology, 2015, 99, 3519-3532.	1.7	33
74	Engineering Electrode-Attached Microbial Consortia for High-Performance Xylose-Fed Microbial Fuel Cell. ACS Catalysis, 2015, 5, 6937-6945.	5.5	61
75	Involvement in Denitrification is Beneficial to the Biofilm Lifestyle of Comamonas testosteroni: A Mechanistic Study and Its Environmental Implications. Environmental Science & Technology, 2015, 49, 11551-11559.	4.6	63
76	Highly fluorescent and bioresorbable polymeric nanoparticles with enhanced photostability for cell imaging. Nanoscale, 2015, 7, 889-895.	2.8	46
77	Surface display of roGFP for monitoring redox status of extracellular microenvironments in Shewanella oneidensis biofilms. Biotechnology and Bioengineering, 2015, 112, 512-520.	1.7	9
78	Synergistic Microbial Consortium for Bioenergy Generation from Complex Natural Energy Sources. Scientific World Journal, The, 2014, 2014, 1-5.	0.8	1
79	Biogenic tellurium nanorods as a novel antivirulence agent inhibiting pyoverdine production in Pseudomonas aeruginosa. Biotechnology and Bioengineering, 2014, 111, 858-865.	1.7	34
80	Membrane permeabilization underlies the enhancement of extracellular bioactivity in Shewanella oneidensis by a membrane-spanning conjugated oligoelectrolyte. Applied Microbiology and Biotechnology, 2014, 98, 9021-9031.	1.7	34
81	A microfluidic co-culture system to monitor tumor-stromal interactions on a chip. Biomicrofluidics, 2014, 8, 064118.	1.2	46
82	Disruption of Putrescine Biosynthesis in Shewanella oneidensis Enhances Biofilm Cohesiveness and Performance in Cr(VI) Immobilization. Applied and Environmental Microbiology, 2014, 80, 1498-1506.	1.4	101
83	Cell growth and protein expression of Shewanella oneidensis in biofilms and hydrogel-entrapped cultures. Molecular BioSystems, 2014, 10, 1035.	2.9	40
84	Impacts of engineered nanomaterials on microbial community structure and function in natural and engineered ecosystems. Applied Microbiology and Biotechnology, 2014, 98, 8457-8468.	1.7	33
85	Comparison of flavins and a conjugated oligoelectrolyte in stimulating extracellular electron transport from Shewanella oneidensis MR-1. Electrochemistry Communications, 2014, 41, 55-58.	2.3	50
86	A stable synergistic microbial consortium for simultaneous azo dye removal and bioelectricity generation. Bioresource Technology, 2014, 155, 71-76.	4.8	27
87	Bactericidal activity of silver nanoparticles in environmentally relevant freshwater matrices: Influences of organic matter and chelating agent. Journal of Environmental Chemical Engineering, 2014, 2, 525-531.	3.3	30
88	Increase of riboflavin biosynthesis underlies enhancement of extracellular electron transfer of Shewanella in alkaline microbial fuel cells. Bioresource Technology, 2013, 130, 763-768.	4.8	86
89	Influence of outer membrane câ€type cytochromes on particle size and activity of extracellular nanoparticles produced by Shewanella oneidensis. Biotechnology and Bioengineering, 2013, 110, 1831-1837.	1.7	72
90	Synthesis and characterization of novel antibacterial silver nanocomposite nanofiltration and forward osmosis membranes based on layer-by-layer assembly. Water Research, 2013, 47, 3081-3092.	5.3	161

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91	Reductive formation of palladium nanoparticles by Shewanella oneidensis: role of outer membrane cytochromes and hydrogenases. RSC Advances, 2013, 3, 22498.	1.7	43
92	Engineering PQS Biosynthesis Pathway for Enhancement of Bioelectricity Production in Pseudomonas aeruginosa Microbial Fuel Cells. PLoS ONE, 2013, 8, e63129.	1.1	65
93	Correlative Microscopy and Chemical Imaging to Characterize the Structure and Biogeochemical Function of Biofilms. Microscopy and Microanalysis, 2012, 18, 844-845.	0.2	2
94	Biofilm shows spatially stratified metabolic responses to contaminant exposure. Environmental Microbiology, 2012, 14, 2901-2910.	1.8	44
95	Microscale geochemical gradients in Hanford 300 Area sediment biofilms and influence of uranium. Water Research, 2012, 46, 227-234.	5.3	28
96	Immobilization of U(VI) from oxic groundwater by Hanford 300 Area sediments and effects of Columbia River water. Water Research, 2012, 46, 3989-3998.	5.3	23
97	Fe(III) Reduction and U(VI) Immobilization by Paenibacillus sp. Strain 300A, Isolated from Hanford 300A Subsurface Sediments. Applied and Environmental Microbiology, 2012, 78, 8001-8009.	1.4	26
98	State of the art of osmotic membrane bioreactors for water reclamation. Bioresource Technology, 2012, 122, 217-222.	4.8	88
99	Contribution of Extracellular Polymeric Substances from Shewanella sp. HRCR-1 Biofilms to U(VI) Immobilization. Environmental Science & Technology, 2011, 45, 5483-5490.	4.6	149
100	Extracellular polymeric substances from Shewanella sp. HRCRâ€1 biofilms: characterization by infrared spectroscopy and proteomics. Environmental Microbiology, 2011, 13, 1018-1031.	1.8	247
101	Immobilization of Uranium in Groundwater Using Biofilms. , 2010, , 1-37.		5
102	Physiological comparison of Pseudomonas putida between two growth phases during cometabolism of 4â€chlorophenol in presence of phenol and glutamate: a proteomics approach. Journal of Chemical Technology and Biotechnology, 2009, 84, 1178-1185.	1.6	7
103	Biodegradation of aromatic compounds: current status and opportunities for biomolecular approaches. Applied Microbiology and Biotechnology, 2009, 85, 207-228.	1.7	256
104	Induction of ortho- and meta-cleavage pathways in Pseudomonas in biodegradation of high benzoate concentration: MS identification of catabolic enzymes. Applied Microbiology and Biotechnology, 2008, 81, 99-107.	1.7	68
105	Catabolic pathways and cellular responses of Pseudomonas putida P8 during growth on benzoate with a proteomics approach. Biotechnology and Bioengineering, 2008, 101, 1297-1312.	1.7	48
106	Paradigm in biodegradation using Pseudomonas putidaâ€"A review of proteomics studies. Enzyme and Microbial Technology, 2008, 43, 1-12.	1.6	50
107	Monitoring Biofouling Dynamics on Forward Osmosis (FO) Membranes Using a CLSM-Compatible Microfluidic Biofilm Flow Cell. , 0, , .		0