Fangang Meng

List of Publications by Year
in descending order

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133 papers	9,825 citations	44042 48 h-index	37183 96 g-index
134 all docs	134 docs citations	134 times ranked	6611 citing authors

#	Article	IF	Citations
1	Recent advances in membrane bioreactors (MBRs): Membrane fouling and membrane material. Water Research, 2009, 43, 1489-1512.	5.3	1,577
2	Fouling in membrane bioreactors: An updated review. Water Research, 2017, 114, 151-180.	5.3	773
3	A critical review of extracellular polymeric substances (EPSs) in membrane bioreactors: Characteristics, roles in membrane fouling and control strategies. Journal of Membrane Science, 2014, 460, 110-125.	4.1	583
4	Spectroscopic characterization of extracellular polymeric substances from a mixed culture dominated by ammonia-oxidizing bacteria. Water Research, 2015, 68, 740-749.	5.3	357
5	Roles of reactive chlorine species in trimethoprim degradation in the UV/chlorine process: Kinetics and transformation pathways. Water Research, 2016, 104, 272-282.	5.3	267
6	Factors affecting the roles of reactive species in the degradation of micropollutants by the UV/chlorine process. Water Research, 2017, 126, 351-360.	5.3	263
7	Membrane Bioreactors for Industrial Wastewater Treatment: A Critical Review. Critical Reviews in Environmental Science and Technology, 2012, 42, 677-740.	6.6	256
8	Characterization of Cake Layer in Submerged Membrane Bioreactor. Environmental Science & Technology, 2007, 41, 4065-4070.	4.6	230
9	Identification of activated sludge properties affecting membrane fouling in submerged membrane bioreactors. Separation and Purification Technology, 2006, 51, 95-103.	3.9	218
10	Effect of filamentous bacteria on membrane fouling in submerged membrane bioreactor. Journal of Membrane Science, 2006, 272, 161-168.	4.1	193
11	A comprehensive study on membrane fouling in submerged membrane bioreactors operated under different aeration intensities. Separation and Purification Technology, 2008, 59, 91-100.	3.9	191
12	Identifying the sources and fate of anthropogenically impacted dissolved organic matter (DOM) in urbanized rivers. Water Research, 2013, 47, 5027-5039.	5.3	165
13	Morphological visualization, componential characterization and microbiological identification of membrane fouling in membrane bioreactors (MBRs). Journal of Membrane Science, 2010, 361, 1-14.	4.1	149
14	Interactions between protein-like and humic-like components in dissolved organic matter revealed by fluorescence quenching. Water Research, 2015, 68, 404-413.	5.3	148
15	Effect of hydraulic retention time on membrane fouling and biomass characteristics in submerged membrane bioreactors. Bioprocess and Biosystems Engineering, 2007, 30, 359-367.	1.7	138
16	Removal of non-point source pollutants from domestic sewage and agricultural runoff by vegetated drainage ditches (VDDs): Design, mechanism, management strategies, and future directions. Science of the Total Environment, 2018, 639, 742-759.	3.9	128
17	Roles of quorum sensing in biological wastewater treatment: A critical review. Chemosphere, 2019, 221, 616-629.	4.2	128
18	Reactive Nitrogen Species Are Also Involved in the Transformation of Micropollutants by the UV/Monochloramine Process. Environmental Science & Technology, 2019, 53, 11142-11152.	4.6	127

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19	Enhanced anammox consortium activity for nitrogen removal: Impacts of static magnetic field. Journal of Biotechnology, 2008, 138, 96-102.	1.9	124
20	Application of anaerobic ammonium-oxidizing consortium to achieve completely autotrophic ammonium and sulfate removal. Bioresource Technology, 2008, 99, 6817-6825.	4.8	117
21	Fouling mechanisms of deflocculated sludge, normal sludge, and bulking sludge in membrane bioreactor. Journal of Membrane Science, 2007, 305, 48-56.	4.1	108
22	Characterization of the size-fractionated biomacromolecules: Tracking their role and fate in a membrane bioreactor. Water Research, 2011, 45, 4661-4671.	5.3	98
23	Roles of ammonia-oxidizing bacteria in improving metabolism and cometabolism of trace organic chemicals in biological wastewater treatment processes: A review. Science of the Total Environment, 2019, 659, 419-441.	3.9	93
24	Effects of fluoroquinolone antibiotics on reactor performance and microbial community structure of a membrane bioreactor. Chemical Engineering Journal, 2015, 280, 448-458.	6.6	88
25	Occurrence and fate of PPCPs and correlations with water quality parameters in urban riverine waters of the Pearl River Delta, South China. Environmental Science and Pollution Research, 2013, 20, 5864-5875.	2.7	87
26	Comparison of membrane fouling during short-term filtration of aerobic granular sludge and activated sludge. Journal of Environmental Sciences, 2007, 19, 1281-1286.	3.2	81
27	Recent Advances in Membrane Bioreactors: Configuration Development, Pollutant Elimination, and Sludge Reduction. Environmental Engineering Science, 2012, 29, 139-160.	0.8	77
28	Chemically induced alterations in the characteristics of fouling-causing bio-macromolecules â€“ Implications for the chemical cleaning of fouled membranes. Water Research, 2017, 108, 115-123.	5.3	77
29	Linking Exoproteome Function and Structure to Anammox Biofilm Development. Environmental Science & Technology, 2019, 53, 1490-1500.	4.6	77
30	Application of fractal permeation model to investigate membrane fouling in membrane bioreactor. Journal of Membrane Science, 2005, 262, 107-116.	4.1	76
31	Cake layer morphology in microfiltration of activated sludge wastewater based on fractal analysis. Separation and Purification Technology, 2005, 44, 250-257.	3.9	74
32	Bacterial assembly in the bio-cake of membrane bioreactors: Stochastic vs. deterministic processes. Water Research, 2019, 157, 535-545.	5.3	74
33	New insights into membrane fouling in submerged membrane bioreactor based on rheology and hydrodynamics concepts. Journal of Membrane Science, 2007, 302, 87-94.	4.1	73
34	A new insight into membrane fouling mechanism during membrane filtration of bulking and normal sludge suspension. Journal of Membrane Science, 2006, 285, 159-165.	4.1	72
35	Effects of COD/N ratio and DO concentration on simultaneous nitrifcation and denitrifcation in an airlift internal circulation membrane bioreactor. Journal of Environmental Sciences, 2008, 20, 933-939.	3.2	69
36	Occurrence, Source, and Fate of Dissolved Organic Matter (DOM) in a Pilot-Scale Membrane Bioreactor. Environmental Science & Technology, 2009, 43, 8821-8826.	4.6	66

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37	Optimisation and performance of NaClO-assisted maintenance cleaning for fouling control in membrane bioreactors. Water Research, 2014, 53, 1-11.	5.3	65
38	Biodegradation behavior of natural organic matter (NOM) in a biological aerated filter (BAF) as a pretreatment for ultrafiltration (UF) of river water. Applied Microbiology and Biotechnology, 2011, 90, 1795-1803.	1.7	64
39	Metagenomics reveals microbial community differences lead to differential nitrate production in anammox reactors with differing nitrogen loading rates. Water Research, 2020, 169, 115279.	5.3	62
40	Size-dependent microbial diversity of sub-visible particles in a submerged anaerobic membrane bioreactor (SAnMBR): Implications for membrane fouling. Water Research, 2019, 159, 20-29.	5.3	58
41	Fouling mitigation through flocculants and adsorbents addition in membrane bioreactors: Comparing lab and pilot studies. Journal of Membrane Science, 2009, 345, 21-30.	4.1	57
42	Metaproteomic Analysis of Biocake Proteins To Understand Membrane Fouling in a Submerged Membrane Bioreactor. Environmental Science & Technology, 2015, 49, 1068-1077.	4.6	57
43	Effect of sludge properties on the filtration characteristics of self-forming dynamic membranes (SFDMs) in aerobic bioreactors: Formation time, filtration resistance, and fouling propensity. Journal of Membrane Science, 2013, 436, 186-194.	4.1	54
44	Deciphering the core fouling-causing microbiota in a membrane bioreactor: Low abundance but important roles. Chemosphere, 2018, 195, 108-118.	4.2	54
45	Changes in nitrogen removal and microbiota of anammox biofilm reactors under tetracycline stress at environmentally and industrially relevant concentrations. Science of the Total Environment, 2019, 668, 379-388.	3.9	54
46	Application of seawater to enhance SO2 removal from simulated flue gas through hollow fiber membrane contactor. Journal of Membrane Science, 2008, 312, 6-14.	4.1	51
47	Reactor performance and microbial ecology of a nitritation membrane bioreactor. Journal of Membrane Science, 2014, 462, 139-146.	4.1	51
48	Unveiling the Susceptibility of Functional Groups of Poly(ether sulfone)/Polyvinylpyrrolidone Membranes to NaOCl: A Two-Dimensional Correlation Spectroscopic Study. Environmental Science & Technology, 2017, 51, 14342-14351.	4.6	50
49	Application of activated sludge for odor control in wastewater treatment plants: Approaches, advances and outlooks. Water Research, 2020, 181, 115915.	5.3	50
50	Hierarchical Janus membrane with superior fouling and wetting resistance for efficient water recovery from challenging wastewater via membrane distillation. Journal of Membrane Science, 2021, 618, 118676.	4.1	50
51	An antifouling catechol/chitosan-modified polyvinylidene fluoride membrane for sustainable oil-in-water emulsions separation. Frontiers of Environmental Science and Engineering, 2021, 15, 1.	3.3	48
52	Improving nitrogen removal in an ANAMMOX reactor using a permeable reactive biobarrier. Water Research, 2014, 58, 82-91.	5.3	46
53	Functional Determinants of Extracellular Polymeric Substances in Membrane Biofouling: Experimental Evidence from Pure-Cultured Sludge Bacteria. Applied and Environmental Microbiology, 2018, 84, .	1.4	46
54	Sunlight-induced changes in chromophores and fluorophores of wastewater-derived organic matter in receiving waters â€“ The role of salinity. Water Research, 2014, 62, 281-292.	5.3	45

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55	High flux and antifouling filtration membrane based on non-woven fabric with chitosan coating for membrane bioreactors. Bioresource Technology, 2010, 101, 5469-5474.	4.8	42
56	Using UVâ€“vis absorbance spectral parameters to characterize the fouling propensity of humic substances during ultrafiltration. Water Research, 2015, 87, 311-319.	5.3	42
57	Impacts of diel temperature variations on nitrogen removal and metacommunity of anammox biofilm reactors. Water Research, 2019, 160, 1-9.	5.3	42
58	Interactions between algal (AOM) and natural organic matter (NOM): Impacts on their photodegradation in surface waters. Environmental Pollution, 2018, 242, 1185-1197.	3.7	41
59	Ecological Linkages between a Biofilm Ecosystem and Reactor Performance: The Specificity of Biofilm Development Phases. Environmental Science & Technology, 2021, 55, 11948-11960.	4.6	41
60	The short- and long-term effects of formic acid on rapid nitritation start-up. Environment International, 2020, 135, 105350.	4.8	39
61	Effect of support material pore size on the filtration behavior of dynamic membrane bioreactor. Bioresource Technology, 2018, 255, 359-363.	4.8	37
62	Combination of self-organizing map and parallel factor analysis to characterize the evolution of fluorescent dissolved organic matter in a full-scale landfill leachate treatment plant. Science of the Total Environment, 2019, 654, 1187-1195.	3.9	37
63	Micro-particlesâ€”A Neglected but Critical Cause of Different Membrane Fouling between Aerobic and Anaerobic Membrane Bioreactors. ACS Sustainable Chemistry and Engineering, 2020, 8, 16680-16690.	3.2	35
64	Simultaneous alkali supplementation and fouling mitigation in membrane bioreactors by on-line NaOH backwashing. Journal of Membrane Science, 2014, 457, 120-127.	4.1	34
65	Interactive effects between tetracycline and nitrosifying sludge microbiota in a nitritation membrane bioreactor. Chemical Engineering Journal, 2018, 341, 556-564.	6.6	34
66	New insights into the spatial variability of biofilm communities and potentially negative bacterial groups in hydraulic concrete structures. Water Research, 2017, 123, 495-504.	5.3	33
67	Multi-objective optimization integrated with life cycle assessment for rainwater harvesting systems. Journal of Hydrology, 2018, 558, 659-666.	2.3	33
68	Increased salinity triggers significant changes in the functional proteins of ANAMMOX bacteria within a biofilm community. Chemosphere, 2018, 207, 655-664.	4.2	33
69	Response of Microbial Community Structures and Functions of Nitrosifying Consortia to Biorefractory Humic Substances. ACS Sustainable Chemistry and Engineering, 2019, 7, 4744-4754.	3.2	33
70	Linking dynamics in morphology, components, and microbial communities of biocakes to fouling evolution: A comparative study of anaerobic and aerobic membrane bioreactors. Chemical Engineering Journal, 2021, 413, 127483.	6.6	33
71	Effects of naturally occurring grit on the reactor performance and microbial community structure of membrane bioreactors. Journal of Membrane Science, 2015, 496, 284-292.	4.1	32
72	Effect of driving force on the performance of anaerobic osmotic membrane bioreactors: New insight into enhancing water flux of FO membrane via controlling driving force in a two-stage pattern. Journal of Membrane Science, 2019, 569, 41-47.	4.1	31

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73	Large-sized planktonic bioaggregates possess high biofilm formation potentials: Bacterial succession and assembly in the biofilm metacommunity. Water Research, 2020, 170, 115307.	5.3	31
74	Overlooked Ecological Roles of Influent Wastewater Microflora in Improving Biological Phosphorus Removal in an Anoxic/Aerobic MBR Process. Environmental Science & Technology, 2021, 55, 6270-6280.	4.6	30
75	Aluminum-induced changes in properties and fouling propensity of DOM solutions revealed by UVâ€“vis absorbance spectral parameters. Water Research, 2016, 93, 153-162.	5.3	29
76	Seeking urbanization security and sustainability: Multi-objective optimization of rainwater harvesting systems in China. Journal of Hydrology, 2017, 550, 42-53.	2.3	29
77	Selective elimination of chromophoric and fluorescent dissolved organic matter in a full-scale municipal wastewater treatment plant. Journal of Environmental Sciences, 2017, 57, 150-161.	3.2	27
78	Removal of sulfadiazine and tetracycline in membrane bioreactors: linking pathway to microbial community shift. Environmental Technology (United Kingdom), 2019, 40, 134-143.	1.2	23
79	A novel nonwoven hybrid bioreactor (NWHBR) for enhancing simultaneous nitrification and denitrification. Biotechnology and Bioengineering, 2013, 110, 1903-1912.	1.7	22
80	Greenhouse gases emissions from duckweed pond system treating polyester resin wastewater containing 1,4-dioxane and heavy metals. Ecotoxicology and Environmental Safety, 2021, 207, 111253.	2.9	22
81	Microbial Transformation of Biomacromolecules in a Membrane Bioreactor: Implications for Membrane Fouling Investigation. PLoS ONE, 2012, 7, e42270.	1.1	21
82	Searching for a universal fouling indicator for membrane bioreactors. Desalination and Water Treatment, 2010, 18, 264-269.	1.0	20
83	Differential ultravioletâ€“visible absorbance spectra for characterizing metal ions binding onto extracellular polymeric substances in different mixed microbial cultures. Chemosphere, 2016, 159, 267-274.	4.2	20
84	Metagenomics Response of Anaerobic Ammonium Oxidation (anammox) Bacteria to Bio-Refractory Humic Substances in Wastewater. Water (Switzerland), 2019, 11, 365.	1.2	18
85	Discrepant roles of a quorum quenching bacterium (Rhodococcus sp. BH4) in growing dual-species biofilms. Science of the Total Environment, 2020, 713, 136402.	3.9	18
86	Deciphering the genesis of anammox granular sludge floating from the perspective of microbial community. Journal of Water Process Engineering, 2020, 36, 101265.	2.6	18
87	Taxonomic and functional variations in the microbial community during the upgrade process of a full-scale landfill leachate treatment plant â€" from conventional to partial nitrification-denitrification. Frontiers of Environmental Science and Engineering, 2020, 14, 1.	3.3	18
88	A novel pilot-scale IFAS-MBR system with low aeration for municipal wastewater treatment: Linkages between nutrient removal and core functional microbiota. Science of the Total Environment, 2021, 776, 145858.	3.9	18
89	Cure of Filament-Caused MBR Fouling in the Presence of Antibiotics: Taking Ciprofloxacin Exposure As an Example. Industrial & Engineering Chemistry Research, 2012, 51, 13784-13791.	1.8	17
90	Roles of Organic Matter-Induced Heterotrophic Bacteria in Nitritation Reactors: Ammonium Removal and Bacterial Interactions. ACS Sustainable Chemistry and Engineering, 2020, 8, 3976-3985.	3.2	17

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91	Microbial Transformation of Structural and Functional Makeup of Human-Impacted Riverine Dissolved Organic Matter. Industrial & Engineering Chemistry Research, 2012, 51, 6212-6218.	1.8	16
92	A novel nearly plugâ€flow membrane bioreactor for enhanced biological nutrient removal. AICHE Journal, 2013, 59, 46-54.	1.8	16
93	Biochemical characteristics and membrane fouling behaviors of soluble microbial products during the lifecycle of Escherichia coli. Water Research, 2021, 192, 116835.	5.3	16
94	Liquid-like surface modification for effective anti-scaling membrane distillation with uncompromised flux. Journal of Membrane Science, 2021, 637, 119673.	4.1	16
95	Role of microorganism growth phase in the accumulation and characteristics of biomacromolecules (BMM) in a membrane bioreactor. RSC Advances, 2012, 2, 453-460.	1.7	14
96	Effects of carbon-to-sulfur (C/S) ratio and nitrate (N) dosage on Denitrifying Sulfur cycle-associated Enhanced Biological Phosphorus Removal (DS-EBPR). Scientific Reports, 2016, 6, 23221.	1.6	14
97	Using UVâ€“vis spectral parameters to characterize the cleaning efficacy and mechanism of sodium hypochlorite (NaOCl) on fouled membranes. Journal of Membrane Science, 2017, 527, 18-25.	4.1	14
98	Molecular traits of phenolic moieties in dissolved organic matter: Linkages with membrane fouling development. Environment International, 2019, 133, 105202.	4.8	14
99	Core activated sludge communities are influenced little by immigration: Case study of a membrane bioreactor plant. Journal of Environmental Sciences, 2021, 102, 244-255.	3.2	14
100	The mechanical scouring of bio-carriers improves phosphorus removal and mediates functional microbiomes in membrane bioreactors. Environmental Science: Water Research and Technology, 2018, 4, 241-252.	1.2	12
101	Roles of nitrite in mediating the composition and metacommunity of multispecies biofilms. Journal of Water Process Engineering, 2021, 40, 101764.	2.6	12
102	Monovalent ion-mediated fouling propensity of model proteins during low-pressure membrane filtration. Separation and Purification Technology, 2015, 152, 200-206.	3.9	11
103	Two-Dimensional FTIR Spectroscopic Characterization of Functional Groups of NaOCl-Exposed Alginate: Insights into Membrane Refouling after Online Chemical Cleaning. ACS Applied Bio Materials, 2018, 1, 593-603.	2.3	11
104	Day/night temperature differences (DNTD) trigger changes in nutrient removal and functional bacteria in membrane bioreactors. Science of the Total Environment, 2018, 636, 1202-1210.	3.9	11
105	Response of anammox metacommunity to varying hydrodynamic wash. Journal of Water Process Engineering, 2020, 33, 101096.	2.6	11
106	Seasonality and Community Separation of Fungi in a Municipal Wastewater Treatment Plant. Applied and Environmental Microbiology, 2020, 86, .	1.4	11
107	Deciphering the succession dynamics of dominant and rare genera in biofilm development process. Science of the Total Environment, 2020, 739, 139961.	3.9	11
108	Floc-size effects of the pathogenic bacteria in a membrane bioreactor plant. Environment International, 2019, 127, 645-652.	4.8	10

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109	Carbon sources driven supernatant micro-particles differentiate in submerged anaerobic membrane bioreactors (AnMBRs). Chemical Engineering Journal, 2022, 430, 133020.	6.6	10
110	Comparing biotransformation of extracellular polymeric substances (EPS) under aerobic and anoxic conditions: Reactivities, components, and bacterial responses. Chemosphere, 2022, 296, 133996.	4.2	10
111	Cellulose-induced shifts in microbial communities and microbial interactions in an anoxic/aerobic membrane bioreactor. Journal of Water Process Engineering, 2021, 42, 102106.	2.6	9
112	Synergistic fouling behaviors and thermodynamic mechanisms of proteins and polysaccharides in forward osmosis: The unique role of reverse solute diffusion. Desalination, 2022, 536, 115850.	4.0	9
113	Achieving simultaneous nitrification, denitrification, and phosphorus removal in pilot-scale flow-through biofilm reactor with low dissolved oxygen concentrations: Performance and mechanisms. Bioresource Technology, 2022, 358, 127373.	4.8	9
114	Photochemical alteration of biogenic particles in wastewater effluents. Science Bulletin, 2014, 59, 3659-3668.	1.7	8
115	Regularized S-Map Reveals Varying Bacterial Interactions. Applied and Environmental Microbiology, 2020, 86, .	1.4	8
116	A unified thermodynamic fouling mechanism based on forward osmosis membrane unique properties: An asymmetric structure and reverse solute diffusion. Science of the Total Environment, 2022, 808, 152219.	3.9	8
117	The counteraction of anammox community to long-term nitrite stress: Crucial roles of rare subcommunity. Science of the Total Environment, 2022, 822, 153062.	3.9	8
118	Characteristics and fouling propensity of polysaccharides in the presence of different monovalent ions. AICHE Journal, 2016, 62, 2501-2507.	1.8	7
119	Sunlight irradiation triggers changes in the fouling potentials of natural dissolved organic matter. Science of the Total Environment, 2018, 627, 227-234.	3.9	7
120	Metabolome responses of Enterococcus faecium to acid shock and nitrite stress. Biotechnology and Bioengineering, 2020, 117, 3559-3571.	1.7	7
121	Activated sludge diffusion for efficient simultaneous treatment of municipal wastewater and odor in a membrane bioreactor. Chemical Engineering Journal, 2021, 415, 128765.	6.6	7
122	Ultrastable Nanofiltration Membranes Engineered by Polydopamine-Assisted Polyelectrolyte Layer-by-Layer Assembly for Water Reclamation. ACS Sustainable Chemistry and Engineering, 0, , .	3.2	6
123	Development of a Flow-through Biofilm Reactor for Anammox Startup and Operation: Nitrogen Removal and Metacommunity. ACS ES&T Water, 2021, 1, 573-583.	2.3	6
124	Membrane fouling behavior during filtration of sludge supernatant. Environmental Progress, 2007, 26, 86-93.	0.8	5
125	Denitrificationâ€caused suppression of soluble microbial products (SMP) in MBRs used for biological nitrogen removal. AICHE Journal, 2013, 59, 3569-3573.	1.8	5
126	DOM-mediated membrane retention of fluoroquinolone as revealed by fluorescence quenching properties. Scientific Reports, 2017, 7, 5372.	1.6	5

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127	Development of a Quartz Sand Protocol for Exoproteome Exploration from Anammox Consortia. ACS Sustainable Chemistry and Engineering, 2020, 8, 14330-14339.	3.2	5
128	Interactive Effects between the Bio-Reactivity Continuum and the Ecological Role of Soluble Microbial Products during Biotransformation. ACS ES&T Water, 2022, 2, 883-894.	2.3	5
129	Ecological insights into the underlying evolutionary patterns of biofilm formation from biological wastewater treatment systems: Red or Black Queen Hypothesis?. Biotechnology and Bioengineering, 2020, 117, 1270-1280.	1.7	4
130	Efficient treatment of digested piggery wastewater via an improved anoxic/aerobic process with Myriophyllum spicatum and bionic aquatic weed. Bioresource Technology, 2021, 341, 125825.	4.8	4
131	Aggregate size-dependence of bacterial community separation in a full-scale membrane bioreactor plant. FEMS Microbiology Ecology, 2020, 96, .	1.3	2
132	Effect of sodium and potassium on polysaccharide fouling on PVDF and graphene oxide modified PVDF membrane surfaces. Chemical Engineering Research and Design, 2022, 165, 387-395.	2.7	1
133	Timeâ€lagged interspecies interactions prevail during biofilm development in moving bed biofilm reactor. Biotechnology and Bioengineering, 0, , .	1.7	0