Yan-Fang Guan

List of Publications by Year
in descending order

182 papers	36,482 citations	91 h-index (3325)	181 g-index (3563)
186 all docs	186 docs citations	186 times ranked	24081 citing authors

#	Article	IF	Citations
1	The Future of Seawater Desalination: Energy, Technology, and the Environment. Science, 2011, 333, 712-717.	6.0	4,908
2	Materials for next-generation desalination and water purification membranes. Nature Reviews Materials, 2016, 1, .	23.3	1,977
3	Maximizing the right stuff: The trade-off between membrane permeability and selectivity. Science, 2017, 356, .	6.0	1,864
4	Antifouling membranes for sustainable water purification: strategies and mechanisms. Chemical Society Reviews, 2016, 45, 5888-5924.	18.7	977
5	Antimicrobial Properties of Graphene Oxide Nanosheets: Why Size Matters. ACS Nano, 2015, 9, 7226-7236.	7.3	806
6	Organic fouling of forward osmosis membranes: Fouling reversibility and cleaning without chemical reagents. Journal of Membrane Science, 2010, 348, 337-345.	4.1	744
7	Membrane distillation at the water-energy nexus: limits, opportunities, and challenges. Energy and Environmental Science, 2018, 11, 1177-1196.	15.6	740
8	Organic Fouling and Chemical Cleaning of Nanofiltration Membranes:Â Measurements and Mechanisms. Environmental Science & Technology, 2004, 38, 4683-4693.	4.6	700
9	The Global Rise of Zero Liquid Discharge for Wastewater Management: Drivers, Technologies, and Future Directions. Environmental Science & Technology, 2016, 50, 6846-6855.	4.6	682
10	Emerging opportunities for nanotechnology to enhance water security. Nature Nanotechnology, 2018, 13, 634-641.	15.6	627
11	Chemical and physical aspects of organic fouling of forward osmosis membranes. Journal of Membrane Science, 2008, 320, 292-302.	4.1	560
12	The Critical Need for Increased Selectivity, Not Increased Water Permeability, for Desalination Membranes. Environmental Science and Technology Letters, 2016, 3, 112-120.	3.9	527
13	Thin-Film Composite Polyamide Membranes Functionalized with Biocidal Graphene Oxide Nanosheets. Environmental Science and Technology Letters, 2014, 1, 71-76.	3.9	460
14	Effect of Membrane Surface Roughness on Colloidâˆ'Membrane DLVO Interactions. Langmuir, 2003, 19, 4836-4847.	1.6	419
15	Layerâ€byâ€Layer Assembly of Crossâ€Functional Semiâ€transparent MXeneâ€Carbon Nanotubes Composite Films for Nextâ€Generation Electromagnetic Interference Shielding. Advanced Functional Materials, 2018, 28, 1803360.	7.8	407
16	Relating Organic Fouling of Reverse Osmosis Membranes to Intermolecular Adhesion Forces. Environmental Science & Technology, 2006, 40, 980-987.	4.6	405
17	Membrane-based processes for wastewater nutrient recovery: Technology, challenges, and future direction. Water Research, 2016, 89, 210-221.	5.3	405
18	Anti-fouling ultrafiltration membranes containing polyacrylonitrile-graft-poly(ethylene oxide) comb copolymer additives. Journal of Membrane Science, 2007, 298, 136-146.	4.1	404

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19	Polyamide nanofiltration membrane with highly uniform sub-nanometre pores for sub-1â€‰Ã… precision separation. Nature Communications, 2020, 11, 2015.	5.8	398
20	Towards single-species selectivity of membranes with subnanometre pores. Nature Nanotechnology, 2020, 15, 426-436.	15.6	389
21	The role of nanotechnology in tackling global water challenges. Nature Sustainability, 2018, 1, 166-175.	11.5	377
22	Gypsum Scaling and Cleaning in Forward Osmosis: Measurements and Mechanisms. Environmental Science & Technology, 2010, 44, 2022-2028.	4.6	324
23	Modeling water flux in forward osmosis: Implications for improved membrane design. AICHE Journal, 2007, 53, 1736-1744.	1.8	323
24	Pathways and challenges for efficient solar-thermal desalination. Science Advances, 2019, 5, eaax0763.	4.7	311
25	Omniphobic Polyvinylidene Fluoride (PVDF) Membrane for Desalination of Shale Gas Produced Water by Membrane Distillation. Environmental Science & Technology, 2016, 50, 12275-12282.	4.6	307
26	Graphene oxide membranes with stable porous structure for ultrafast water transport. Nature Nanotechnology, 2021, 16, 337-343.	15.6	301
27	Pressure-retarded osmosis for power generation from salinity gradients: is it viable?. Energy and Environmental Science, 2016, 9, 31-48.	15.6	289
28	Omniphobic Membrane for Robust Membrane Distillation. Environmental Science and Technology Letters, 2014, 1, 443-447.	3.9	288
29	Environmental performance of graphene-based 3D macrostructures. Nature Nanotechnology, 2019, 14, 107-119.	15.6	286
30	Enhanced antibacterial activity through the controlled alignment of graphene oxide nanosheets. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E9793-E9801.	3.3	275
31	Environmental Applications of Interfacial Materials with Special Wettability. Environmental Science & Technology, 2016, 50, 2132-2150.	4.6	273
32	Nanofoaming of Polyamide Desalination Membranes To Tune Permeability and Selectivity. Environmental Science and Technology Letters, 2018, 5, 123-130.	3.9	260
33	Antimicrobial Electrospun Biopolymer Nanofiber Mats Functionalized with Graphene Oxideâ€"Silver Nanocomposites. ACS Applied Materials & Interfaces, 2015, 7, 12751-12759.	4.0	256
34	Superhydrophilic Thin-Film Composite Forward Osmosis Membranes for Organic Fouling Control: Fouling Behavior and Antifouling Mechanisms. Environmental Science & Technology, 2012, 46, 11135-11144.	4.6	255
35	Relative Insignificance of Mineral Grain Zeta Potential to Colloid Transport in Geochemically Heterogeneous Porous Media. Environmental Science & Technology, 2000, 34, 2143-2148.	4.6	245
36	In situ formation of silver nanoparticles on thin-film composite reverse osmosis membranes for biofouling mitigation. Water Research, 2014, 62, 260-270.	5.3	244

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37	Fouling of reverse osmosis membranes by hydrophilic organic matter: implications for water reuse. Desalination, 2006, 187, 313-321.	4.0	242
38	Critical Knowledge Gaps in Mass Transport through Single-Digit Nanopores: A Review and Perspective. Journal of Physical Chemistry C, 2019, 123, 21309-21326.	1.5	234
39	Role of Charge (Donnan) Exclusion in Removal of Arsenic from Water by a Negatively Charged Porous Nanofiltration Membrane. Environmental Engineering Science, 2001, 18, 105-113.	0.8	232
40	Antifouling Thin-Film Composite Membranes by Controlled Architecture of Zwitterionic Polymer Brush Layer. Environmental Science & Technology, 2017, 51, 2161-2169.	4.6	232
41	Harvesting low-grade heat energy using thermo-osmotic vapour transport through nanoporousÂmembranes. Nature Energy, 2016, 1, .	19.8	226
42	Transport of in Situ Mobilized Colloidal Particles in Packed Soil Columns. Environmental Science & Technology, 1998, 32, 3562-3569.	4.6	219
43	Development of Omniphobic Desalination Membranes Using a Charged Electrospun Nanofiber Scaffold. ACS Applied Materials & Interfaces, 2016, 8, 11154-11161.	4.0	218
44	High Performance Nanofiltration Membrane for Effective Removal of Perfluoroalkyl Substances at High Water Recovery. Environmental Science & Technology, 2018, 52, 7279-7288.	4.6	218
45	Controlled Architecture of Dual-Functional Block Copolymer Brushes on Thin-Film Composite Membranes for Integrated â€œDefendingâ€•and â€œAttackingâ€•Strategies against Biofouling. ACS Applied Materials & Interfaces, 2015, 7, 23069-23079.	4.0	216
46	Highly efficient and sustainable non-precious-metal Feâ€“Nâ€“C electrocatalysts for the oxygen reduction reaction. Journal of Materials Chemistry A, 2018, 6, 2527-2539.	5.2	214
47	High-Pressure Reverse Osmosis for Energy-Efficient Hypersaline Brine Desalination: Current Status, Design Considerations, and Research Needs. Environmental Science and Technology Letters, 2018, 5, 467-475.	3.9	213
48	Comparison of energy consumption in desalination by capacitive deionization and reverse osmosis. Desalination, 2019, 455, 100-114.	4.0	210
49	The relative insignificance of advanced materials in enhancing the energy efficiency of desalination technologies. Energy and Environmental Science, 2020, 13, 1694-1710.	15.6	206
50	Engineering Surface Energy and Nanostructure of Microporous Films for Expanded Membrane Distillation Applications. Environmental Science & Technology, 2016, 50, 8112-8119.	4.6	203
51	Reinventing Fenton Chemistry: Iron Oxychloride Nanosheet for pH-Insensitive H₂O₂ Activation. Environmental Science and Technology Letters, 2018, 5, 186-191.	3.9	202
52	Bacteriophage PRD1 and Silica Colloid Transport and Recovery in an Iron Oxide-Coated Sand Aquifer. Environmental Science & Technology, 1999, 33, 63-73.	4.6	199
53	Role of Ionic Charge Density in Donnan Exclusion of Monovalent Anions by Nanofiltration. Environmental Science & Technology, 2018, 52, 4108-4116.	4.6	196
54	Rethinking wastewater risks and monitoring in light of the COVID-19 pandemic. Nature Sustainability, 2020, 3, 981-990.	11.5	195

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55	Mechanism of Heterogeneous Fenton Reaction Kinetics Enhancement under Nanoscale Spatial Confinement. Environmental Science & Technology, 2020, 54, 10868-10875.	4.6	188
56	High performance polyester reverse osmosis desalination membrane with chlorine resistance. Nature Sustainability, 2021, 4, 138-146.	11.5	185
57	Cobalt Single Atoms on Tetrapyridomacrocyclic Support for Efficient Peroxymonosulfate Activation. Environmental Science & Technology, 2021, 55, 1242-1250.	4.6	185
58	Tailored design of nanofiltration membranes for water treatment based on synthesisâ€"propertyâ€"performance relationships. Chemical Society Reviews, 2022, 51, 672-719.	18.7	182
59	Improved Antifouling Properties of Polyamide Nanofiltration Membranes by Reducing the Density of Surface Carboxyl Groups. Environmental Science & Technology, 2012, 46, 13253-13261.	4.6	178
60	Emerging electrochemical and membrane-based systems to convert low-grade heat to electricity. Energy and Environmental Science, 2018, 11, 276-285.	15.6	172
61	Direct contact membrane distillation with heat recovery: Thermodynamic insights from module scale modeling. Journal of Membrane Science, 2014, 453, 498-515.	4.1	168
62	A Novel Asymmetric Clamping Cell for Measuring Streaming Potential of Flat Surfaces. Langmuir, 2002, 18, 2193-2198.	1.6	167
63	In Situ Surface Chemical Modification of Thin-Film Composite Forward Osmosis Membranes for Enhanced Organic Fouling Resistance. Environmental Science & Technology, 2013, 47, 12219-12228.	4.6	166
64	Interaction of Graphene Oxide with Bacterial Cell Membranes: Insights from Force Spectroscopy. Environmental Science and Technology Letters, 2015, 2, 112-117.	3.9	164
65	Intrapore energy barriers govern ion transport and selectivity of desalination membranes. Science Advances, 2020, 6, .	4.7	161
66	Biofouling Mitigation in Forward Osmosis Using Graphene Oxide Functionalized Thin-Film Composite Membranes. Environmental Science & Technology, 2016, 50, 5840-5848.	4.6	160
67	Raising the Bar: Increased Hydraulic Pressure Allows Unprecedented High Power Densities in Pressure-Retarded Osmosis. Environmental Science and Technology Letters, 2014, 1, 55-59.	3.9	159
68	Photocatalytic Reactive Ultrafiltration Membrane for Removal of Antibiotic Resistant Bacteria and Antibiotic Resistance Genes from Wastewater Effluent. Environmental Science & Technology, 2018, 52, 8666-8673.	4.6	157
69	Silica scaling and scaling reversibility in forward osmosis. Desalination, 2013, 312, 75-81.	4.0	154
70	The â€œShadow Effectâ€•in Colloid Transport and Deposition Dynamics in Granular Porous Media:Â Measurements and Mechanisms. Environmental Science & Technology, 2000, 34, 3681-3689.	4.6	153
71	Osmotic versus conventional membrane bioreactors integrated with reverse osmosis for water reuse: Biological stability, membrane fouling, and contaminant removal. Water Research, 2017, 109, 122-134.	5.3	152
72	Thermodynamic limits of extractable energy by pressure retarded osmosis. Energy and Environmental Science, 2014, 7, 2706-2714.	15.6	149

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73	Engineered Slippery Surface to Mitigate Gypsum Scaling in Membrane Distillation for Treatment of Hypersaline Industrial Wastewaters. Environmental Science & Technology, 2018, 52, 14362-14370.	4.6	148
74	Janus electrocatalytic flow-through membrane enables highly selective singlet oxygen production. Nature Communications, 2020, 11, 6228.	5.8	142
75	Electrified Membranes for Water Treatment Applications. ACS ES&T Engineering, 2021, 1, 725-752.	3.7	139
76	Biofouling in forward osmosis and reverse osmosis: Measurements and mechanisms. Journal of Membrane Science, 2015, 493, 703-708.	4.1	137
77	Relating Silica Scaling in Reverse Osmosis to Membrane Surface Properties. Environmental Science & Technology, 2017, 51, 4396-4406.	4.6	136
78	Membrane-Confined Iron Oxychloride Nanocatalysts for Highly Efficient Heterogeneous Fenton Water Treatment. Environmental Science & Technology, 2021, 55, 9266-9275.	4.6	135
79	Energy Efficiency of Electro-Driven Brackish Water Desalination: Electrodialysis Significantly Outperforms Membrane Capacitive Deionization. Environmental Science & Technology, 2020, 54, 3663-3677.	4.6	133
80	The road to nowhere: equilibrium partition coefficients for nanoparticles. Environmental Science: Nano, 2014, 1, 317-323.	2.2	129
81	Relating rejection of trace organic contaminants to membrane properties in forward osmosis: Measurements, modelling and implications. Water Research, 2014, 49, 265-274.	5.3	124
82	Reactive, Self-Cleaning Ultrafiltration Membrane Functionalized with Iron Oxychloride Nanocatalysts. Environmental Science & Technology, 2018, 52, 8674-8683.	4.6	124
83	Heterogeneous WS_{<i>x</i>}/WO₃ Thorn-Bush Nanofiber Electrodes for Sodium-Ion Batteries. ACS Nano, 2016, 10, 3257-3266.	7.3	121
84	Tuning Pb(II) Adsorption from Aqueous Solutions on Ultrathin Iron Oxychloride (FeOCl) Nanosheets. Environmental Science & Technology, 2019, 53, 2075-2085.	4.6	121
85	Engineering flat sheet microporous PVDF films for membrane distillation. Journal of Membrane Science, 2015, 492, 355-363.	4.1	118
86	Simultaneous nanocatalytic surface activation of pollutants and oxidants for highly efficient water decontamination. Nature Communications, 2022, 13, .	5.8	117
87	Science and technology for water purification in the coming decades. , 2009, , 337-346.		110
88	Increasing Functional Sustainability of Water and Sanitation Supplies in Rural Sub-Saharan Africa. Environmental Engineering Science, 2009, 26, 1017-1023.	0.8	109
89	Coupled model of concentration polarization and pore transport in crossflow nanofiltration. AIChE Journal, 2001, 47, 2733-2745.	1.8	108
90	Minimal and zero liquid discharge with reverse osmosis using low-salt-rejection membranes. Water Research, 2020, 170, 115317.	5.3	102

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91	Membrane scaling and flux decline during fertiliser-drawn forward osmosis desalination of brackish groundwater. Water Research, 2014, 57, 172-182.	5.3	101
92	Nanopore-Based Power Generation from Salinity Gradient: Why It Is Not Viable. ACS Nano, 2021, 15, 4093-4107.	7.3	101
93	Membrane Materials for Selective Ion Separations at the Waterâ€“Energy Nexus. Advanced Materials, 2021, 33, e2101312.	11.1	100
94	Thin Polymer Films with Continuous Vertically Aligned 1 nm Pores Fabricated by Soft Confinement. ACS Nano, 2016, 10, 150-158.	7.3	92
95	Actinia-like multifunctional nanocoagulant for single-step removal of water contaminants. Nature Nanotechnology, 2019, 14, 64-71.	15.6	89
96	<i>In Situ</i> Characterization of Dehydration during Ion Transport in Polymeric Nanochannels. Journal of the American Chemical Society, 2021, 143, 14242-14252.	6.6	89
97	Relating Organic Fouling in Membrane Distillation to Intermolecular Adhesion Forces and Interfacial Surface Energies. Environmental Science & Technology, 2018, 52, 14198-14207.	4.6	87
98	1,4-Dioxane as an emerging water contaminant: State of the science and evaluation of research needs. Science of the Total Environment, 2019, 690, 853-866.	3.9	85
99	Performance and Mechanisms of Ultrafiltration Membrane Fouling Mitigation by Coupling Coagulation and Applied Electric Field in a Novel Electrocoagulation Membrane Reactor. Environmental Science & Technology, 2017, 51, 8544-8551.	4.6	84
100	In Situ Electrochemical Generation of Reactive Chlorine Species for Efficient Ultrafiltration Membrane Self-Cleaning. Environmental Science & Technology, 2020, 54, 6997-7007.	4.6	84
101	Highly Selective Vertically Aligned Nanopores in Sustainably Derived Polymer Membranes by Molecular Templating. ACS Nano, 2017, 11, 3911-3921.	7.3	83
102	Energy Efficiency and Performance Limiting Effects in Thermo-Osmotic Energy Conversion from Low-Grade Heat. Environmental Science & Technology, 2017, 51, 12925-12937.	4.6	82
103	Ionization behavior of nanoporous polyamide membranes. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 30191-30200.	3.3	82
104	Relating Selectivity and Separation Performance of Lamellar Two-Dimensional Molybdenum Disulfide (MoS₂) Membranes to Nanosheet Stacking Behavior. Environmental Science & Technology, 2020, 54, 9640-9651.	4.6	82
105	Salt and Water Transport in Reverse Osmosis Membranes: Beyond the Solution-Diffusion Model. Environmental Science & Technology, 2021, 55, 16665-16675.	4.6	82
106	Monte Carlo Simulations of Framework Defects in Layered Two-Dimensional Nanomaterial Desalination Membranes: Implications for Permeability and Selectivity. Environmental Science & Technology, 2019, 53, 6214-6224.	4.6	80
107	Environmental Applications of Engineered Materials with Nanoconfinement. ACS ES&T Engineering, 2021, 1, 706-724.	3.7	80
108	Nanofiltration of Hormone Mimicking Trace Organic Contaminants. Separation Science and Technology, 2005, 40, 2633-2649.	1.3	79

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109	Precise nanofiltration in a fouling-resistant self-assembled membrane with water-continuous transport pathways. Science Advances, 2019, 5, eaav9308.	4.7	79
110	Membrane-Based Osmotic Heat Engine with Organic Solvent for Enhanced Power Generation from Low-Grade Heat. Environmental Science & Technology, 2015, 49, 5820-5827.	4.6	76
111	Concentration and Recovery of Dyes from Textile Wastewater Using a Self-Standing, Support-Free Forward Osmosis Membrane. Environmental Science & Technology, 2019, 53, 3078-3086.	4.6	76
112	Aggregation rate and fractal dimension of fullerene nanoparticles via simultaneous multiangle static and dynamic light scattering measurement. Journal of Colloid and Interface Science, 2013, 392, 27-33.	5.0	75
113	Impaired Performance of Pressure-Retarded Osmosis due to Irreversible Biofouling. Environmental Science & Technology, 2015, 49, 13050-13058.	4.6	75
114	Permselectivity limits of biomimetic desalination membranes. Science Advances, 2018, 4, eaar8266.	4.7	72
115	Pathways and Challenges for Biomimetic Desalination Membranes with Sub-Nanometer Channels. ACS Nano, 2020, 14, 10894-10916.	7.3	72
116	High-Performance Capacitive Deionization via Manganese Oxide-Coated, Vertically Aligned Carbon Nanotubes. Environmental Science and Technology Letters, 2018, 5, 692-700.	3.9	69
117	Combined Organic Fouling and Inorganic Scaling in Reverse Osmosis: Role of Proteinâ€"Silica Interactions. Environmental Science & Technology, 2018, 52, 9145-9153.	4.6	66
118	Carbon nanotubes keep up the heat. Nature Nanotechnology, 2017, 12, 501-503.	15.6	62
119	Inorganic Scaling in Membrane Desalination: Models, Mechanisms, and Characterization Methods. Environmental Science & Technology, 2022, 56, 7484-7511.	4.6	60
120	Molecular Design of Liquid Crystalline Brush-Like Block Copolymers for Magnetic Field Directed Self-Assembly: A Platform for Functional Materials. ACS Macro Letters, 2014, 3, 462-466.	2.3	59
121	Removal of calcium ions from water by selective electrosorption using target-ion specific nanocomposite electrode. Water Research, 2019, 160, 445-453.	5.3	57
122	The role of forward osmosis and microfiltration in an integrated osmotic-microfiltration membrane bioreactor system. Chemosphere, 2015, 136, 125-132.	4.2	56
123	An Osmotic Membrane Bioreactorâ€"Membrane Distillation System for Simultaneous Wastewater Reuse and Seawater Desalination: Performance and Implications. Environmental Science & Technology, 2017, 51, 14311-14320.	4.6	56
124	Particle Deposition onto Solid Surfaces with Micropatterned Charge Heterogeneity:Â The â€œHydrodynamic Bumpâ€• Effect. Langmuir, 2003, 19, 6594-6597.	1.6	55
125	Tunable Molybdenum Disulfide-Enabled Fiber Mats for High-Efficiency Removal of Mercury from Water. ACS Applied Materials & Interfaces, 2020, 12, 18446-18456.	4.0	55
126	Elements Provide a Clue: Nanoscale Characterization of Thin-Film Composite Polyamide Membranes. ACS Applied Materials & Interfaces, 2015, 7, 16917-16922.	4.0	50

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127	A Self-Standing, Support-Free Membrane for Forward Osmosis with No Internal Concentration Polarization. Environmental Science and Technology Letters, 2018, 5, 266-271.	3.9	50
128	Surface functionalization of reverse osmosis membranes with sulfonic groups for simultaneous mitigation of silica scaling and organic fouling. Water Research, 2020, 185, 116203.	5.3	50
129	Derivation of the Theoretical Minimum Energy of Separation of Desalination Processes. Journal of Chemical Education, 2020, 97, 4361-4369.	1.1	50
130	Engineered Nanoconfinement Accelerating Spontaneous Manganese-Catalyzed Degradation of Organic Contaminants. Environmental Science & Technology, 2021, 55, 16708-16715.	4.6	50
131	Designing polymeric membranes with coordination chemistry for high-precision ion separations. Science Advances, 2022, 8, eabm9436.	4.7	50
132	Engineering Carbon Nanotube Forest Superstructure for Robust Thermal Desalination Membranes. Advanced Functional Materials, 2019, 29, 1903125.	7.8	48
133	Graphene Oxide-Functionalized Membranes: The Importance of Nanosheet Surface Exposure for Biofouling Resistance. Environmental Science & Technology, 2020, 54, 517-526.	4.6	47
134	Capillary-driven desalination in a synthetic mangrove. Science Advances, 2020, 6, eaax5253.	4.7	47
135	Selectivity and Mass Transfer Limitations in Pressure-Retarded Osmosis at High Concentrations and Increased Operating Pressures. Environmental Science & Technology, 2015, 49, 12551-12559.	4.6	46
136	Perfect divalent cation selectivity with capacitive deionization. Water Research, 2022, 210, 117959.	5.3	46
137	Machine learning reveals key ion selectivity mechanisms in polymeric membranes with subnanometer pores. Science Advances, 2022, 8, eabl5771.	4.7	45
138	Tuning the permselectivity of polymeric desalination membranes via control of polymer crystallite size. Nature Communications, 2019, 10, 2347.	5.8	43
139	Probing the Viability of Oxo-Coupling Pathways in Iridium-Catalyzed Oxygen Evolution. Organometallics, 2013, 32, 5384-5390.	1.1	42
140	Elucidating the Role of Oxidative Debris in the Antimicrobial Properties of Graphene Oxide. ACS Applied Nano Materials, 2018, 1, 1164-1174.	2.4	42
141	Removal of Emerging Wastewater Organic Contaminants by Polyelectrolyte Multilayer Nanofiltration Membranes with Tailored Selectivity. ACS ES&T Engineering, 2021, 1, 404-414.	3.7	41
142	Controlled TiO₂ Growth on Reverse Osmosis and Nanofiltration Membranes by Atomic Layer Deposition: Mechanisms and Potential Applications. Environmental Science & Technology, 2018, 52, 14311-14320.	4.6	40
143	Reverse Osmosis Biofilm Dispersal by Osmotic Back-Flushing: Cleaning via Substratum Perforation. Environmental Science and Technology Letters, 2014, 1, 162-166.	3.9	39
144	Loss of Phospholipid Membrane Integrity Induced by Two-Dimensional Nanomaterials. Environmental Science and Technology Letters, 2017, 4, 404-409.	3.9	39

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145	Fabrication of a Desalination Membrane with Enhanced Microbial Resistance through Vertical Alignment of Graphene Oxide. Environmental Science and Technology Letters, 2018, 5, 614-620.	3.9	37
146	A Path to Ultraselectivity: Support Layer Properties To Maximize Performance of Biomimetic Desalination Membranes. Environmental Science & Technology, 2018, 52, 10737-10747.	4.6	36
147	One-step sonochemical synthesis of a reduced graphene oxide â€“ ZnO nanocomposite with antibacterial and antibiofouling properties. Environmental Science: Nano, 2019, 6, 3080-3090.	2.2	36
148	Strong Differential Monovalent Anion Selectivity in Narrow Diameter Carbon Nanotube Porins. ACS Nano, 2020, 14, 6269-6275.	7.3	35
149	Mitigating biofouling on thin-film composite polyamide membranes using a controlled-release platform. Journal of Membrane Science, 2014, 453, 84-91.	4.1	34
150	Single crystal texture by directed molecular self-assembly along dual axes. Nature Materials, 2019, 18, 1235-1243.	13.3	34
151	Photografting Graphene Oxide to Inert Membrane Materials to Impart Antibacterial Activity. Environmental Science and Technology Letters, 2019, 6, 141-147.	3.9	33
152	Similarities and differences between potassium and ammonium ions in liquid water: a first-principles study. Physical Chemistry Chemical Physics, 2020, 22, 2540-2548.	1.3	33
153	Carbon nanotube bundling: influence on layer-by-layer assembly and antimicrobial activity. Soft Matter, 2013, 9, 2136.	1.2	32
154	Colloidal stability of cellulose nanocrystals in aqueous solutions containing monovalent, divalent, and trivalent inorganic salts. Journal of Colloid and Interface Science, 2021, 584, 456-463.	5.0	32
155	Electrochemical-Osmotic Process for Simultaneous Recovery of Electric Energy, Water, and Metals from Wastewater. Environmental Science & Technology, 2020, 54, 8430-8442.	4.6	31
156	Catalytic Membrane with Copper Single-Atom Catalysts for Effective Hydrogen Peroxide Activation and Pollutant Destruction. Environmental Science & Technology, 2022, 56, 8733-8745.	4.6	31
157	Enhanced Photocatalytic Water Decontamination by Microâ€“Nano Bubbles: Measurements and Mechanisms. Environmental Science & Technology, 2021, 55, 7025-7033.	4.6	29
158	Photo-electrochemical Osmotic System Enables Simultaneous Metal Recovery and Electricity Generation from Wastewater. Environmental Science & Technology, 2021, 55, 604-613.	4.6	26
159	Synergistic Nanowire-Enhanced Electroporation and Electrochlorination for Highly Efficient Water Disinfection. Environmental Science & Technology, 2022, 56, 10925-10934.	4.6	26
160	Comparison of Energy Consumption of Osmotically Assisted Reverse Osmosis and Low-Salt-Rejection Reverse Osmosis for Brine Management. Environmental Science & Technology, 2021, 55, 10714-10723.	4.6	25
161	Molecular Simulations to Elucidate Transport Phenomena in Polymeric Membranes. Environmental Science & Technology, 2022, 56, 3313-3323.	4.6	25
162	Bacterial inactivation by a carbon nanotubeâ€“iron oxide nanocomposite: a mechanistic study usingE. colimutants. Environmental Science: Nano, 2018, 5, 372-380.	2.2	22

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163	Silica Removal Using Magnetic Ironâ€“Aluminum Hybrid Nanomaterials: Measurements, Adsorption Mechanisms, and Implications for Silica Scaling in Reverse Osmosis. Environmental Science & Technology, 2019, 53, 13302-13311.	4.6	22
164	Distinct impacts of natural organic matter and colloidal particles on gypsum crystallization. Water Research, 2022, 218, 118500.	5.3	22
165	A Novel Method for Investigating the Influence of Feed Water Recovery on Colloidal and NOM Fouling of RO and NF Membranes. Environmental Engineering Science, 2005, 22, 496-509.	0.8	20
166	Sub-1 Î¼m Free-Standing Symmetric Membrane for Osmotic Separations. Environmental Science and Technology Letters, 2019, 6, 492-498.	3.9	20
167	Selective Fluoride Transport in Subnanometer TiO₂ Pores. ACS Nano, 2021, 15, 16828-16838.	7.3	16
168	Effect of Final Monomer Deposition Steps on Molecular Layer-by-Layer Polyamide Surface Properties. Langmuir, 2016, 32, 10815-10823.	1.6	15
169	Precisely Engineered Photoreactive Titanium Nanoarray Coating to Mitigate Biofouling in Ultrafiltration. ACS Applied Materials & Interfaces, 2021, 13, 9975-9984.	4.0	14
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171	Chlorine-Resistant Epoxide-Based Membranes for Sustainable Water Desalination. Environmental Science and Technology Letters, 2021, 8, 818-824.	3.9	12
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