

Yan-Fang Guan

List of Publications by Citations

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177
papers

25,129
citations

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158
g-index

186
ext. papers

30,711
ext. citations

13.6
avg, IF

7.92
L-index

#	Paper	IF	Citations
177	The future of seawater desalination: energy, technology, and the environment. <i>Science</i> , 2011 , 333, 712-733	33.3	3767
176	Materials for next-generation desalination and water purification membranes. <i>Nature Reviews Materials</i> , 2016 , 1,	73.3	1380
175	Maximizing the right stuff: The trade-off between membrane permeability and selectivity. <i>Science</i> , 2017 , 356,	33.3	1187
174	Antifouling membranes for sustainable water purification: strategies and mechanisms. <i>Chemical Society Reviews</i> , 2016 , 45, 5888-5924	58.5	676
173	Organic fouling of forward osmosis membranes: Fouling reversibility and cleaning without chemical reagents. <i>Journal of Membrane Science</i> , 2010 , 348, 337-345	9.6	661
172	Antimicrobial Properties of Graphene Oxide Nanosheets: Why Size Matters. <i>ACS Nano</i> , 2015 , 9, 7226-36	16.7	620
171	Organic fouling and chemical cleaning of nanofiltration membranes: measurements and mechanisms. <i>Environmental Science & Technology</i> , 2004 , 38, 4683-93	10.3	604
170	Chemical and physical aspects of organic fouling of forward osmosis membranes. <i>Journal of Membrane Science</i> , 2008 , 320, 292-302	9.6	507
169	Membrane distillation at the water-energy nexus: limits, opportunities, and challenges. <i>Energy and Environmental Science</i> , 2018 , 11, 1177-1196	35.4	458
168	The Global Rise of Zero Liquid Discharge for Wastewater Management: Drivers, Technologies, and Future Directions. <i>Environmental Science & Technology</i> , 2016 , 50, 6846-55	10.3	433
167	Thin-Film Composite Polyamide Membranes Functionalized with Biocidal Graphene Oxide Nanosheets. <i>Environmental Science and Technology Letters</i> , 2014 , 1, 71-76	11	396
166	The Critical Need for Increased Selectivity, Not Increased Water Permeability, for Desalination Membranes. <i>Environmental Science and Technology Letters</i> , 2016 , 3, 112-120	11	392
165	Emerging opportunities for nanotechnology to enhance water security. <i>Nature Nanotechnology</i> , 2018 , 13, 634-641	28.7	381
164	Relating organic fouling of reverse osmosis membranes to intermolecular adhesion forces. <i>Environmental Science & Technology</i> , 2006 , 40, 980-7	10.3	363
163	Anti-fouling ultrafiltration membranes containing polyacrylonitrile-graft-poly(ethylene oxide) comb copolymer additives. <i>Journal of Membrane Science</i> , 2007 , 298, 136-146	9.6	362
162	Effect of Membrane Surface Roughness on Colloid-Membrane DLVO Interactions. <i>Langmuir</i> , 2003 , 19, 4836-4847	4	354
161	Membrane-based processes for wastewater nutrient recovery: Technology, challenges, and future direction. <i>Water Research</i> , 2016 , 89, 210-21	12.5	294

160	Modeling water flux in forward osmosis: Implications for improved membrane design. <i>AIChE Journal</i> , 2007 , 53, 1736-1744	3.6	288
159	Gypsum scaling and cleaning in forward osmosis: measurements and mechanisms. <i>Environmental Science & Technology</i> , 2010 , 44, 2022-8	10.3	275
158	Layer-by-Layer Assembly of Cross-Functional Semi-transparent MXene-Carbon Nanotubes Composite Films for Next-Generation Electromagnetic Interference Shielding. <i>Advanced Functional Materials</i> , 2018 , 28, 1803360	15.6	270
157	The role of nanotechnology in tackling global water challenges. <i>Nature Sustainability</i> , 2018 , 1, 166-175	22.1	241
156	Pressure-retarded osmosis for power generation from salinity gradients: is it viable?. <i>Energy and Environmental Science</i> , 2016 , 9, 31-48	35.4	240
155	Omniphobic Polyvinylidene Fluoride (PVDF) Membrane for Desalination of Shale Gas Produced Water by Membrane Distillation. <i>Environmental Science & Technology</i> , 2016 , 50, 12275-12282	10.3	232
154	Omniphobic Membrane for Robust Membrane Distillation. <i>Environmental Science and Technology Letters</i> , 2014 , 1, 443-447	11	224
153	Relative Insignificance of Mineral Grain Zeta Potential to Colloid Transport in Geochemically Heterogeneous Porous Media. <i>Environmental Science & Technology</i> , 2000 , 34, 2143-2148	10.3	224
152	Superhydrophilic thin-film composite forward osmosis membranes for organic fouling control: fouling behavior and antifouling mechanisms. <i>Environmental Science & Technology</i> , 2012 , 46, 11135-11144	10.3	221
151	Enhanced antibacterial activity through the controlled alignment of graphene oxide nanosheets. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, E9793-E9801	11.5	215
150	Antimicrobial Electrospun Biopolymer Nanofiber Mats Functionalized with Graphene Oxide-Silver Nanocomposites. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 12751-9	9.5	213
149	Environmental performance of graphene-based 3D macrostructures. <i>Nature Nanotechnology</i> , 2019 , 14, 107-119	28.7	203
148	In situ formation of silver nanoparticles on thin-film composite reverse osmosis membranes for biofouling mitigation. <i>Water Research</i> , 2014 , 62, 260-70	12.5	199
147	Fouling of reverse osmosis membranes by hydrophilic organic matter: implications for water reuse. <i>Desalination</i> , 2006 , 187, 313-321	10.3	199
146	Environmental Applications of Interfacial Materials with Special Wettability. <i>Environmental Science & Technology</i> , 2016 , 50, 2132-50	10.3	197
145	Role of Charge (Donnan) Exclusion in Removal of Arsenic from Water by a Negatively Charged Porous Nanofiltration Membrane. <i>Environmental Engineering Science</i> , 2001 , 18, 105-113	2	195
144	Transport of in Situ Mobilized Colloidal Particles in Packed Soil Columns. <i>Environmental Science & Technology</i> , 1998 , 32, 3562-3569	10.3	191
143	Bacteriophage PRD1 and Silica Colloid Transport and Recovery in an Iron Oxide-Coated Sand Aquifer. <i>Environmental Science & Technology</i> , 1999 , 33, 63-73	10.3	184

142	Pathways and challenges for efficient solar-thermal desalination. <i>Science Advances</i> , 2019 , 5, eaax0763	14.3	172
141	Development of Omnipophobic Desalination Membranes Using a Charged Electrospun Nanofiber Scaffold. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 11154-61	9.5	169
140	Controlled Architecture of Dual-Functional Block Copolymer Brushes on Thin-Film Composite Membranes for Integrated "Defending" and "Attacking" Strategies against Biofouling. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 23069-79	9.5	168
139	Harvesting low-grade heat energy using thermo-osmotic vapour transport through nanoporous membranes. <i>Nature Energy</i> , 2016 , 1,	62.3	167
138	Highly efficient and sustainable non-precious-metal Fe ^{III} electrocatalysts for the oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 2527-2539	13	167
137	Antifouling Thin-Film Composite Membranes by Controlled Architecture of Zwitterionic Polymer Brush Layer. <i>Environmental Science & Technology</i> , 2017 , 51, 2161-2169	10.3	160
136	Polyamide nanofiltration membrane with highly uniform sub-nanometre pores for sub-1 μ m precision separation. <i>Nature Communications</i> , 2020 , 11, 2015	17.4	153
135	Engineering Surface Energy and Nanostructure of Microporous Films for Expanded Membrane Distillation Applications. <i>Environmental Science & Technology</i> , 2016 , 50, 8112-9	10.3	151
134	Improved antifouling properties of polyamide nanofiltration membranes by reducing the density of surface carboxyl groups. <i>Environmental Science & Technology</i> , 2012 , 46, 13253-61	10.3	150
133	Comparison of energy consumption in desalination by capacitive deionization and reverse osmosis. <i>Desalination</i> , 2019 , 455, 100-114	10.3	149
132	A Novel Asymmetric Clamping Cell for Measuring Streaming Potential of Flat Surfaces. <i>Langmuir</i> , 2002 , 18, 2193-2198	4	149
131	Nanofoaming of Polyamide Desalination Membranes To Tune Permeability and Selectivity. <i>Environmental Science and Technology Letters</i> , 2018 , 5, 123-130	11	148
130	Raising the Bar: Increased Hydraulic Pressure Allows Unprecedented High Power Densities in Pressure-Retarded Osmosis. <i>Environmental Science and Technology Letters</i> , 2014 , 1, 55-59	11	145
129	Biofouling Mitigation in Forward Osmosis Using Graphene Oxide Functionalized Thin-Film Composite Membranes. <i>Environmental Science & Technology</i> , 2016 , 50, 5840-8	10.3	141
128	The Shadow Effect in Colloid Transport and Deposition Dynamics in Granular Porous Media: Measurements and Mechanisms. <i>Environmental Science & Technology</i> , 2000 , 34, 3681-3689	10.3	140
127	Direct contact membrane distillation with heat recovery: Thermodynamic insights from module scale modeling. <i>Journal of Membrane Science</i> , 2014 , 453, 498-515	9.6	139
126	Towards single-species selectivity of membranes with subnanometre pores. <i>Nature Nanotechnology</i> , 2020 , 15, 426-436	28.7	138
125	In situ surface chemical modification of thin-film composite forward osmosis membranes for enhanced organic fouling resistance. <i>Environmental Science & Technology</i> , 2013 , 47, 12219-28	10.3	137

124	Interaction of Graphene Oxide with Bacterial Cell Membranes: Insights from Force Spectroscopy. <i>Environmental Science and Technology Letters</i> , 2015 , 2, 112-117	11	135
123	Osmotic versus conventional membrane bioreactors integrated with reverse osmosis for water reuse: Biological stability, membrane fouling, and contaminant removal. <i>Water Research</i> , 2017 , 109, 122-134	12.5	128
122	Thermodynamic limits of extractable energy by pressure retarded osmosis. <i>Energy and Environmental Science</i> , 2014 , 7, 2706-2714	35.4	124
121	Silica scaling and scaling reversibility in forward osmosis. <i>Desalination</i> , 2013 , 312, 75-81	10.3	124
120	Critical Knowledge Gaps in Mass Transport through Single-Digit Nanopores: A Review and Perspective. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 21309-21326	3.8	121
119	Reinventing Fenton Chemistry: Iron Oxychloride Nanosheet for pH-Insensitive H ₂ O ₂ Activation. <i>Environmental Science and Technology Letters</i> , 2018 , 5, 186-191	11	120
118	Emerging electrochemical and membrane-based systems to convert low-grade heat to electricity. <i>Energy and Environmental Science</i> , 2018 , 11, 276-285	35.4	118
117	The road to nowhere: equilibrium partition coefficients for nanoparticles. <i>Environmental Science: Nano</i> , 2014 , 1, 317-323	7.1	116
116	High-Pressure Reverse Osmosis for Energy-Efficient Hypersaline Brine Desalination: Current Status, Design Considerations, and Research Needs. <i>Environmental Science and Technology Letters</i> , 2018 , 5, 467-475	11	114
115	Biofouling in forward osmosis and reverse osmosis: Measurements and mechanisms. <i>Journal of Membrane Science</i> , 2015 , 493, 703-708	9.6	113
114	Role of Ionic Charge Density in Donnan Exclusion of Monovalent Anions by Nanofiltration. <i>Environmental Science & Technology</i> , 2018 , 52, 4108-4116	10.3	113
113	High Performance Nanofiltration Membrane for Effective Removal of Perfluoroalkyl Substances at High Water Recovery. <i>Environmental Science & Technology</i> , 2018 , 52, 7279-7288	10.3	112
112	Rethinking wastewater risks and monitoring in light of the COVID-19 pandemic. <i>Nature Sustainability</i> , 2020 , 3, 981-990	22.1	111
111	The relative insignificance of advanced materials in enhancing the energy efficiency of desalination technologies. <i>Energy and Environmental Science</i> , 2020 , 13, 1694-1710	35.4	105
110	Heterogeneous WS _x /WO ₃ Thorn-Bush Nanofiber Electrodes for Sodium-Ion Batteries. <i>ACS Nano</i> , 2016 , 10, 3257-66	16.7	104
109	Relating rejection of trace organic contaminants to membrane properties in forward osmosis: measurements, modelling and implications. <i>Water Research</i> , 2014 , 49, 265-74	12.5	103
108	Photocatalytic Reactive Ultrafiltration Membrane for Removal of Antibiotic Resistant Bacteria and Antibiotic Resistance Genes from Wastewater Effluent. <i>Environmental Science & Technology</i> , 2018 , 52, 8666-8673	10.3	101
107	Engineering flat sheet microporous PVDF films for membrane distillation. <i>Journal of Membrane Science</i> , 2015 , 492, 355-363	9.6	98

106	Coupled model of concentration polarization and pore transport in crossflow nanofiltration. <i>AICHE Journal</i> , 2001 , 47, 2733-2745	3.6	96
105	Graphene oxide membranes with stable porous structure for ultrafast water transport. <i>Nature Nanotechnology</i> , 2021 , 16, 337-343	28.7	95
104	Membrane scaling and flux decline during fertiliser-drawn forward osmosis desalination of brackish groundwater. <i>Water Research</i> , 2014 , 57, 172-82	12.5	91
103	Engineered Slippery Surface to Mitigate Gypsum Scaling in Membrane Distillation for Treatment of Hypersaline Industrial Wastewaters. <i>Environmental Science & Technology</i> , 2018 , 52, 14362-14370	10.3	86
102	Increasing Functional Sustainability of Water and Sanitation Supplies in Rural Sub-Saharan Africa. <i>Environmental Engineering Science</i> , 2009 , 26, 1017-1023	2	85
101	Relating Silica Scaling in Reverse Osmosis to Membrane Surface Properties. <i>Environmental Science & Technology</i> , 2017 , 51, 4396-4406	10.3	84
100	Science and technology for water purification in the coming decades 2009 , 337-346		78
99	Thin Polymer Films with Continuous Vertically Aligned 1 nm Pores Fabricated by Soft Confinement. <i>ACS Nano</i> , 2016 , 10, 150-8	16.7	77
98	Tuning Pb(II) Adsorption from Aqueous Solutions on Ultrathin Iron Oxide Nanosheets. <i>Environmental Science & Technology</i> , 2019 , 53, 2075-2085	10.3	71
97	Energy Efficiency of Electro-Driven Brackish Water Desalination: Electrodialysis Significantly Outperforms Membrane Capacitive Deionization. <i>Environmental Science & Technology</i> , 2020 , 54, 3663-3677	10.3	70
96	Reactive, Self-Cleaning Ultrafiltration Membrane Functionalized with Iron Oxide Nanocatalysts. <i>Environmental Science & Technology</i> , 2018 , 52, 8674-8683	10.3	70
95	Nanofiltration of Hormone Mimicking Trace Organic Contaminants. <i>Separation Science and Technology</i> , 2005 , 40, 2633-2649	2.5	69
94	Membrane-based osmotic heat engine with organic solvent for enhanced power generation from low-grade heat. <i>Environmental Science & Technology</i> , 2015 , 49, 5820-7	10.3	67
93	Aggregation rate and fractal dimension of fullerene nanoparticles via simultaneous multiangle static and dynamic light scattering measurement. <i>Journal of Colloid and Interface Science</i> , 2013 , 392, 27-33	9.3	65
92	Highly Selective Vertically Aligned Nanopores in Sustainably Derived Polymer Membranes by Molecular Templating. <i>ACS Nano</i> , 2017 , 11, 3911-3921	16.7	64
91	Impaired Performance of Pressure-Retarded Osmosis due to Irreversible Biofouling. <i>Environmental Science & Technology</i> , 2015 , 49, 13050-8	10.3	64
90	Energy Efficiency and Performance Limiting Effects in Thermo-Osmotic Energy Conversion from Low-Grade Heat. <i>Environmental Science & Technology</i> , 2017 , 51, 12925-12937	10.3	58
89	Intrapore energy barriers govern ion transport and selectivity of desalination membranes. <i>Science Advances</i> , 2020 , 6,	14.3	58

88	Mechanism of Heterogeneous Fenton Reaction Kinetics Enhancement under Nanoscale Spatial Confinement. <i>Environmental Science & Technology</i> , 2020 , 54, 10868-10875	10.3	56
87	Relating Organic Fouling in Membrane Distillation to Intermolecular Adhesion Forces and Interfacial Surface Energies. <i>Environmental Science & Technology</i> , 2018 , 52, 14198-14207	10.3	56
86	Actinia-like multifunctional nano-coagulant for single-step removal of water contaminants. <i>Nature Nanotechnology</i> , 2019 , 14, 64-71	28.7	55
85	High performance polyester reverse osmosis desalination membrane with chlorine resistance. <i>Nature Sustainability</i> , 2021 , 4, 138-146	22.1	55
84	The role of forward osmosis and microfiltration in an integrated osmotic-microfiltration membrane bioreactor system. <i>Chemosphere</i> , 2015 , 136, 125-32	8.4	54
83	Permselectivity limits of biomimetic desalination membranes. <i>Science Advances</i> , 2018 , 4, eaar8266	14.3	53
82	Particle Deposition onto Solid Surfaces with Micropatterned Charge Heterogeneity: The Hydrodynamic Bump Effect. <i>Langmuir</i> , 2003 , 19, 6594-6597	4	52
81	High-Performance Capacitive Deionization via Manganese Oxide-Coated, Vertically Aligned Carbon Nanotubes. <i>Environmental Science and Technology Letters</i> , 2018 , 5, 692-700	11	52
80	Performance and Mechanisms of Ultrafiltration Membrane Fouling Mitigation by Coupling Coagulation and Applied Electric Field in a Novel Electrocoagulation Membrane Reactor. <i>Environmental Science & Technology</i> , 2017 , 51, 8544-8551	10.3	51
79	Molecular Design of Liquid Crystalline Brush-Like Block Copolymers for Magnetic Field Directed Self-Assembly: A Platform for Functional Materials.. <i>ACS Macro Letters</i> , 2014 , 3, 462-466	6.6	49
78	Thermal desalination membranes: Carbon nanotubes keep up the heat. <i>Nature Nanotechnology</i> , 2017 , 12, 501-503	28.7	48
77	Monte Carlo Simulations of Framework Defects in Layered Two-Dimensional Nanomaterial Desalination Membranes: Implications for Permeability and Selectivity. <i>Environmental Science & Technology</i> , 2019 , 53, 6214-6224	10.3	48
76	An Osmotic Membrane Bioreactor-Membrane Distillation System for Simultaneous Wastewater Reuse and Seawater Desalination: Performance and Implications. <i>Environmental Science & Technology</i> , 2017 , 51, 14311-14320	10.3	47
75	Cobalt Single Atoms on Tetrapyrrolic Support for Efficient Peroxymonosulfate Activation. <i>Environmental Science & Technology</i> , 2021 , 55, 1242-1250	10.3	47
74	Concentration and Recovery of Dyes from Textile Wastewater Using a Self-Standing, Support-Free Forward Osmosis Membrane. <i>Environmental Science & Technology</i> , 2019 , 53, 3078-3086	10.3	45
73	Minimal and zero liquid discharge with reverse osmosis using low-salt-rejection membranes. <i>Water Research</i> , 2020 , 170, 115317	12.5	45
72	Precise nanofiltration in a fouling-resistant self-assembled membrane with water-continuous transport pathways. <i>Science Advances</i> , 2019 , 5, eaav9308	14.3	44
71	1,4-Dioxane as an emerging water contaminant: State of the science and evaluation of research needs. <i>Science of the Total Environment</i> , 2019 , 690, 853-866	10.2	43

70	Probing the Viability of Oxo-Coupling Pathways in Iridium-Catalyzed Oxygen Evolution. <i>Organometallics</i> , 2013 , 32, 5384-5390	3.8	40
69	Removal of calcium ions from water by selective electrosorption using target-ion specific nanocomposite electrode. <i>Water Research</i> , 2019 , 160, 445-453	12.5	39
68	Combined Organic Fouling and Inorganic Scaling in Reverse Osmosis: Role of Protein-Silica Interactions. <i>Environmental Science & Technology</i> , 2018 , 52, 9145-9153	10.3	39
67	In Situ Electrochemical Generation of Reactive Chlorine Species for Efficient Ultrafiltration Membrane Self-Cleaning. <i>Environmental Science & Technology</i> , 2020 , 54, 6997-7007	10.3	38
66	Janus electrocatalytic flow-through membrane enables highly selective singlet oxygen production. <i>Nature Communications</i> , 2020 , 11, 6228	17.4	38
65	Elements Provide a Clue: Nanoscale Characterization of Thin-Film Composite Polyamide Membranes. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 16917-22	9.5	37
64	Selectivity and Mass Transfer Limitations in Pressure-Retarded Osmosis at High Concentrations and Increased Operating Pressures. <i>Environmental Science & Technology</i> , 2015 , 49, 12551-9	10.3	37
63	A Self-Standing, Support-Free Membrane for Forward Osmosis with No Internal Concentration Polarization. <i>Environmental Science and Technology Letters</i> , 2018 , 5, 266-271	11	36
62	Reverse Osmosis Biofilm Dispersal by Osmotic Back-Flushing: Cleaning via Substratum Perforation. <i>Environmental Science and Technology Letters</i> , 2014 , 1, 162-166	11	33
61	Electrified Membranes for Water Treatment Applications. <i>ACS ES&T Engineering</i> , 2021 , 1, 725-752		33
60	Engineering Carbon Nanotube Forest Superstructure for Robust Thermal Desalination Membranes. <i>Advanced Functional Materials</i> , 2019 , 29, 1903125	15.6	31
59	Relating Selectivity and Separation Performance of Lamellar Two-Dimensional Molybdenum Disulfide (MoS) Membranes to Nanosheet Stacking Behavior. <i>Environmental Science & Technology</i> , 2020 , 54, 9640-9651	10.3	31
58	Pathways and Challenges for Biomimetic Desalination Membranes with Sub-Nanometer Channels. <i>ACS Nano</i> , 2020 , 14, 10894-10916	16.7	30
57	Tuning the permselectivity of polymeric desalination membranes via control of polymer crystallite size. <i>Nature Communications</i> , 2019 , 10, 2347	17.4	29
56	Loss of Phospholipid Membrane Integrity Induced by Two-Dimensional Nanomaterials. <i>Environmental Science and Technology Letters</i> , 2017 , 4, 404-409	11	29
55	Mitigating biofouling on thin-film composite polyamide membranes using a controlled-release platform. <i>Journal of Membrane Science</i> , 2014 , 453, 84-91	9.6	28
54	Tunable Molybdenum Disulfide-Enabled Fiber Mats for High-Efficiency Removal of Mercury from Water. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 18446-18456	9.5	27
53	Carbon nanotube bundling: influence on layer-by-layer assembly and antimicrobial activity. <i>Soft Matter</i> , 2013 , 9, 2136	3.6	26

52	Controlled TiO Growth on Reverse Osmosis and Nanofiltration Membranes by Atomic Layer Deposition: Mechanisms and Potential Applications. <i>Environmental Science & Technology</i> , 2018 , 52, 14311-14320	10.3	26
51	Elucidating the Role of Oxidative Debris in the Antimicrobial Properties of Graphene Oxide. <i>ACS Applied Nano Materials</i> , 2018 , 1, 1164-1174	5.6	25
50	Fabrication of a Desalination Membrane with Enhanced Microbial Resistance through Vertical Alignment of Graphene Oxide. <i>Environmental Science and Technology Letters</i> , 2018 , 5, 614-620	11	24
49	Graphene Oxide-Functionalized Membranes: The Importance of Nanosheet Surface Exposure for Biofouling Resistance. <i>Environmental Science & Technology</i> , 2020 , 54, 517-526	10.3	24
48	Membrane Materials for Selective Ion Separations at the Water-Energy Nexus. <i>Advanced Materials</i> , 2021 , 33, e2101312	24	24
47	Nanopore-Based Power Generation from Salinity Gradient: Why It Is Not Viable. <i>ACS Nano</i> , 2021 , 15, 4093-4107	16.7	24
46	One-step sonochemical synthesis of a reduced graphene oxide /ZnO nanocomposite with antibacterial and antibiofouling properties. <i>Environmental Science: Nano</i> , 2019 , 6, 3080-3090	7.1	23
45	Membrane-Confined Iron Oxochloride Nanocatalysts for Highly Efficient Heterogeneous Fenton Water Treatment. <i>Environmental Science & Technology</i> , 2021 , 55, 9266-9275	10.3	23
44	A Path to Ultraspecificity: Support Layer Properties To Maximize Performance of Biomimetic Desalination Membranes. <i>Environmental Science & Technology</i> , 2018 , 52, 10737-10747	10.3	22
43	Surface functionalization of reverse osmosis membranes with sulfonic groups for simultaneous mitigation of silica scaling and organic fouling. <i>Water Research</i> , 2020 , 185, 116203	12.5	22
42	Photografting Graphene Oxide to Inert Membrane Materials to Impart Antibacterial Activity. <i>Environmental Science and Technology Letters</i> , 2019 , 6, 141-147	11	21
41	Single crystal texture by directed molecular self-assembly along dual axes. <i>Nature Materials</i> , 2019 , 18, 1235-1243	27	21
40	Ionization behavior of nanoporous polyamide membranes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 30191-30200	11.5	21
39	Strong Differential Monovalent Anion Selectivity in Narrow Diameter Carbon Nanotube Porins. <i>ACS Nano</i> , 2020 , 14, 6269-6275	16.7	20
38	A Novel Method for Investigating the Influence of Feed Water Recovery on Colloidal and NOM Fouling of RO and NF Membranes. <i>Environmental Engineering Science</i> , 2005 , 22, 496-509	2	20
37	Capillary-driven desalination in a synthetic mangrove. <i>Science Advances</i> , 2020 , 6, eaax5253	14.3	19
36	Tailored design of nanofiltration membranes for water treatment based on synthesis-property-performance relationships.. <i>Chemical Society Reviews</i> , 2021 ,	58.5	19
35	Bacterial inactivation by a carbon nanotube/iron oxide nanocomposite: a mechanistic study using E. coli mutants. <i>Environmental Science: Nano</i> , 2018 , 5, 372-380	7.1	19

34	Characterization of Dehydration during Ion Transport in Polymeric Nanochannels. <i>Journal of the American Chemical Society</i> , 2021 , 143, 14242-14252	16.4	18
33	Similarities and differences between potassium and ammonium ions in liquid water: a first-principles study. <i>Physical Chemistry Chemical Physics</i> , 2020 , 22, 2540-2548	3.6	16
32	Environmental Applications of Engineered Materials with Nanoconfinement. <i>ACS ES&T Engineering</i> , 2021 , 1, 706-724		14
31	Removal of Emerging Wastewater Organic Contaminants by Polyelectrolyte Multilayer Nanofiltration Membranes with Tailored Selectivity. <i>ACS ES&T Engineering</i> , 2021 , 1, 404-414		13
30	Electrochemical-Osmotic Process for Simultaneous Recovery of Electric Energy, Water, and Metals from Wastewater. <i>Environmental Science & Technology</i> , 2020 , 54, 8430-8442	10.3	12
29	Sub-1 μ m Free-Standing Symmetric Membrane for Osmotic Separations. <i>Environmental Science and Technology Letters</i> , 2019 , 6, 492-498	11	12
28	Derivation of the Theoretical Minimum Energy of Separation of Desalination Processes. <i>Journal of Chemical Education</i> , 2020 , 97, 4361-4369	2.4	12
27	Effect of Final Monomer Deposition Steps on Molecular Layer-by-Layer Polyamide Surface Properties. <i>Langmuir</i> , 2016 , 32, 10815-10823	4	12
26	Silica Removal Using Magnetic Iron-Aluminum Hybrid Nanomaterials: Measurements, Adsorption Mechanisms, and Implications for Silica Scaling in Reverse Osmosis. <i>Environmental Science & Technology</i> , 2019 , 53, 13302-13311	10.3	11
25	Colloidal stability of cellulose nanocrystals in aqueous solutions containing monovalent, divalent, and trivalent inorganic salts. <i>Journal of Colloid and Interface Science</i> , 2021 , 584, 456-463	9.3	11
24	Photo-electrochemical Osmotic System Enables Simultaneous Metal Recovery and Electricity Generation from Wastewater. <i>Environmental Science & Technology</i> , 2021 , 55, 604-613	10.3	11
23	Salt and Water Transport in Reverse Osmosis Membranes: Beyond the Solution-Diffusion Model. <i>Environmental Science & Technology</i> , 2021 ,	10.3	10
22	Enhanced Photocatalytic Water Decontamination by Micro-Nano Bubbles: Measurements and Mechanisms. <i>Environmental Science & Technology</i> , 2021 , 55, 7025-7033	10.3	7
21	Modification of forward osmosis membrane with naturally-available humic acid: Towards simultaneously improved filtration performance and antifouling properties. <i>Environment International</i> , 2019 , 131, 105045	12.9	6
20	Machine learning reveals key ion selectivity mechanisms in polymeric membranes with subnanometer pores. <i>Science Advances</i> , 2022 , 8, eabl5771	14.3	6
19	Perfect divalent cation selectivity with capacitive deionization. <i>Water Research</i> , 2021 , 210, 117959	12.5	5
18	Comparison of Energy Consumption of Osmotically Assisted Reverse Osmosis and Low-Salt-Rejection Reverse Osmosis for Brine Management. <i>Environmental Science & Technology</i> , 2021 , 55, 10714-10723	10.3	5
17	Engineered Nanoconfinement Accelerating Spontaneous Manganese-Catalyzed Degradation of Organic Contaminants. <i>Environmental Science & Technology</i> , 2021 ,	10.3	4

16	Nanoscale Thickness Control of Nanoporous Films Derived from Directionally Photopolymerized Mesophases. <i>Advanced Materials Interfaces</i> , 2021 , 8, 2001977	4.6	4
15	Precisely Engineered Photoreactive Titanium Nanoarray Coating to Mitigate Biofouling in Ultrafiltration. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 9975-9984	9.5	3
14	Informal Small-Scale Water Services in Developing Countries: The Business of Water for Those without Formal Municipal Connections231-240		3
13	Shape-Dependent Interactions of Manganese Oxide Nanomaterials with Lipid Bilayer Vesicles. <i>Langmuir</i> , 2019 , 35, 13958-13966	4	2
12	Low flow data logger in membrane distillation: An interdisciplinary laboratory in process control 2014 ,		2
11	Selective Fluoride Transport in Subnanometer TiO Pores. <i>ACS Nano</i> , 2021 , 15, 16828-16838	16.7	2
10	Designing polymeric membranes with coordination chemistry for high-precision ion separations.. <i>Science Advances</i> , 2022 , 8, eabm9436	14.3	2
9	Distinct impacts of natural organic matter and colloidal particles on gypsum crystallization.. <i>Water Research</i> , 2022 , 218, 118500	12.5	2
8	Joule-Heated Layered Double Hydroxide Sponge for Rapid Removal of Silica from Water. <i>Environmental Science & Technology</i> , 2021 , 55, 16130-16142	10.3	1
7	Module-scale analysis of low-salt-rejection reverse osmosis: Design guidelines and system performance.. <i>Water Research</i> , 2021 , 209, 117936	12.5	1
6	Comment on "Techno-economic analysis of capacitive and intercalative water deionization" by M. Metzger, M. Besli, S. Kuppan, S. Hellstrom, S. Kim, E. Sebti, C. Subban and J. Christensen, <i>Energy Environ. Sci.</i> , 2020, 13, 1544. <i>Energy and Environmental Science</i> , 2021 , 14, 2494-2498	35.4	1
5	Chlorine-Resistant Epoxide-Based Membranes for Sustainable Water Desalination. <i>Environmental Science and Technology Letters</i> , 2021 , 8, 818-824	11	1
4	Contrasting behaviors of pre-ozonation on ceramic membrane biofouling: Early stage vs late stage. <i>Water Research</i> , 2022 , 220, 118702	12.5	1
3	Reply to "A resurrection of the Haber-Weiss reaction".. <i>Nature Communications</i> , 2022 , 13, 395	17.4	0
2	Plate-Based Kinetic Fluorescence Tests for High-Throughput Screening of Electrochemically Active Bacteria. <i>ACS ES&T Water</i> , 2021 , 1, 2139-2145		0
1	Laser Interferometry for Precise Measurement of Ultralow Flow Rates from Permeable Materials. <i>Environmental Science and Technology Letters</i> , 2022 , 9, 233-238	11	