Menachem Elimelech

List of Publications by Year
in descending order

523 papers	109,664 citations	100 170 h-index	233 314 g-index
535 all docs	535 docs citations	535 times ranked	54303 citing authors

#	Article	IF	Citations
1	Science and technology for water purification in the coming decades. Nature, 2008, 452, 301-310.	13.7	6,795
2	The Future of Seawater Desalination: Energy, Technology, and the Environment. Science, 2011, 333, 712-717.	6.0	4,908
3	Forward osmosis: Principles, applications, and recent developments. Journal of Membrane Science, 2006, 281, 70-87.	4.1	2,089
4	Materials for next-generation desalination and water purification membranes. Nature Reviews Materials, 2016, 1, .	23.3	1,977
5	Maximizing the right stuff: The trade-off between membrane permeability and selectivity. Science, 2017, 356, .	6.0	1,864
6	Environmental Applications of Carbon-Based Nanomaterials. Environmental Science & Technology, 2008, 42, 5843-5859.	4.6	1,337
7	Membrane-based processes for sustainable power generation using water. Nature, 2012, 488, 313-319.	13.7	1,242
8	Environmental applications of graphene-based nanomaterials. Chemical Society Reviews, 2015, 44, 5861-5896.	18.7	1,236
9	Single-Walled Carbon Nanotubes Exhibit Strong Antimicrobial Activity. Langmuir, 2007, 23, 8670-8673.	1.6	1,165
10	Chemical and physical aspects of natural organic matter (NOM) fouling of nanofiltration membranes. Journal of Membrane Science, 1997, 132, 159-181.	4.1	1,153
11	Influence of concentrative and dilutive internal concentration polarization on flux behavior in forward osmosis. Journal of Membrane Science, 2006, 284, 237-247.	4.1	1,121
12	Influence of membrane surface properties on initial rate of colloidal fouling of reverse osmosis and nanofiltration membranes. Journal of Membrane Science, 2001, 188, 115-128.	4.1	1,010
13	Antibacterial Effects of Carbon Nanotubes: Size Does Matter!. Langmuir, 2008, 24, 6409-6413.	1.6	1,003
14	Colloid mobilization and transport in groundwater. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1996, 107, 1-56.	2.3	990
15	Aggregation and Deposition of Engineered Nanomaterials in Aquatic Environments: Role of Physicochemical Interactions. Environmental Science & Technology, 2010, 44, 6532-6549.	4.6	986
16	Correlation Equation for Predicting Single-Collector Efficiency in Physicochemical Filtration in Saturated Porous Media. Environmental Science & Technology, 2004, 38, 529-536.	4.6	983
17	Antifouling membranes for sustainable water purification: strategies and mechanisms. Chemical Society Reviews, 2016, 45, 5888-5924.	18.7	977
18	A novel ammoniaâ€"carbon dioxide forward (direct) osmosis desalination process. Desalination, 2005, 174, 1-11.	4.0	850

#	Article	IF	Citations
19	Effect of solution chemistry on the surface charge of polymeric reverse osmosis and nanofiltration membranes. Journal of Membrane Science, 1996, 119, 253-268.	4.1	849
20	High Performance Thin-Film Composite Forward Osmosis Membrane. Environmental Science & Technology, 2010, 44, 3812-3818.	4.6	814
21	Antimicrobial Properties of Graphene Oxide Nanosheets: Why Size Matters. ACS Nano, 2015, 9, 7226-7236.	7.3	806
22	Organic fouling of forward osmosis membranes: Fouling reversibility and cleaning without chemical reagents. Journal of Membrane Science, 2010, 348, 337-345.	4.1	744
23	Membrane distillation at the water-energy nexus: limits, opportunities, and challenges. Energy and Environmental Science, 2018, 11, 1177-1196.	15.6	740
24	Desalination by ammoniaâ€“carbon dioxide forward osmosis: Influence of draw and feed solution concentrations on process performance. Journal of Membrane Science, 2006, 278, 114-123.	4.1	726
25	Organic Fouling and Chemical Cleaning of Nanofiltration Membranes:Â Measurements and Mechanisms. Environmental Science & Technology, 2004, 38, 4683-4693.	4.6	700
26	Water And Sanitation in Developing Countries: Including Health in the Equation. Environmental Science & Technology, 2007, 41, 17-24.	4.6	698
27	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
28	Forward osmosis: Where are we now?. Desalination, 2015, 356, 271-284.	4.0	681
29	Desalination and Reuse of High-Salinity Shale Gas Produced Water: Drivers, Technologies, and Future Directions. Environmental Science & Technology, 2013, 47, 9569-9583.	4.6	655
30	Comparison of fouling behavior in forward osmosis (FO) and reverse osmosis (RO). Journal of Membrane Science, 2010, 365, 34-39.	4.1	645
31	Aggregation and Deposition Kinetics of Fullerene (C60) Nanoparticles. Langmuir, 2006, 22, 10994-11001.	1.6	634
32	Emerging opportunities for nanotechnology to enhance water security. Nature Nanotechnology, 2018, 13, 634-641.	15.6	627
33	Relating Nanofiltration Membrane Performance to Membrane Charge (Electrokinetic) Characteristics. Environmental Science & Technology, 2000, 34, 3710-3716.	4.6	591
34	Influence of humic acid on the aggregation kinetics of fullerene (C60) nanoparticles in monovalent and divalent electrolyte solutions. Journal of Colloid and Interface Science, 2007, 309, 126-134.	5.0	583
35	Reverse Draw Solute Permeation in Forward Osmosis: Modeling and Experiments. Environmental Science & Technology, 2010, 44, 5170-5176.	4.6	576
36	Internal concentration polarization in forward osmosis: role of membrane orientation. Desalination, 2006, 197, 1-8.	4.0	564

#	Article	IF	Citations
37	Chemical and physical aspects of organic fouling of forward osmosis membranes. Journal of Membrane Science, 2008, 320, 292-302.	4.1	560
38	Relating performance of thin-film composite forward osmosis membranes to support layer formation and structure. Journal of Membrane Science, 2011, 367, 340-352.	4.1	535
39	Mobile Subsurface Colloids and Their Role in Contaminant Transport. Advances in Agronomy, 1999, 66, 121-193.	2.4	531
40	Cake-Enhanced Concentration Polarization:Â A New Fouling Mechanism for Salt-Rejecting Membranes. Environmental Science & Technology, 2003, 37, 5581-5588.	4.6	531
41	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
42	Removal of Natural Hormones by Nanofiltration Membranes:Â Measurement, Modeling, and Mechanisms. Environmental Science & Technology, 2004, 38, 1888-1896.	4.6	521
43	Role of membrane surface morphology in colloidal fouling of cellulose acetate and composite aromatic polyamide reverse osmosis membranes. Journal of Membrane Science, 1997, 127, 101-109.	4.1	517
44	Biofouling of reverse osmosis membranes: Role of biofilm-enhanced osmotic pressure. Journal of Membrane Science, 2007, 295, 11-20.	4.1	517
45	Energy requirements of ammoniaâ€“carbon dioxide forward osmosis desalination. Desalination, 2007, 207, 370-382.	4.0	494
46	Thin-Film Composite Pressure Retarded Osmosis Membranes for Sustainable Power Generation from Salinity Gradients. Environmental Science & Technology, 2011, 45, 4360-4369.	4.6	479
47	Kinetics of deposition of colloidal particles in porous media. Environmental Science & Technology, 1990, 24, 1528-1536.	4.6	470
48	Thin-Film Composite Polyamide Membranes Functionalized with Biocidal Graphene Oxide Nanosheets. Environmental Science and Technology Letters, 2014, 1, 71-76.	3.9	460
49	Electronic-Structure-Dependent Bacterial Cytotoxicity of Single-Walled Carbon Nanotubes. ACS Nano, 2010, 4, 5471-5479.	7.3	456
50	Bacterial Adhesion and Transport in Porous Media:Â Role of the Secondary Energy Minimum. Environmental Science & Technology, 2004, 38, 1777-1785.	4.6	448
51	Evaluation of Removal of Noroviruses during Wastewater Treatment, Using Real-Time Reverse Transcription-PCR: Different Behaviors of Genogroups I and II. Applied and Environmental Microbiology, 2007, 73, 7891-7897.	1.4	435
52	Pharmaceutical Retention Mechanisms by Nanofiltration Membranes. Environmental Science & Technology, 2005, 39, 7698-7705.	4.6	434
53	A Singleâ€Walledâ€Carbonâ€Nanotube Filter for Removal of Viral and Bacterial Pathogens. Small, 2008, 4, 481-484.	5.2	431
54	Effect of Membrane Surface Roughness on Colloidâ˜Membrane DLVO Interactions. Langmuir, 2003, 19, 4836-4847.	1.6	419

#	Article	IF	Citations
55	Influence of membrane support layer hydrophobicity on water flux in osmotically driven membrane processes. Journal of Membrane Science, 2008, 318, 458-466.	4.1	417
56	Measuring the zeta (electrokinetic) potential of reverse osmosis membranes by a streaming potential analyzer. Desalination, 1994, 95, 269-286.	4.0	413
57	Aggregation Kinetics of Alginate-Coated Hematite Nanoparticles in Monovalent and Divalent Electrolytes. Environmental Science & Technology, 2006, 40, 1516-1523.	4.6	413
58	Relating Organic Fouling of Reverse Osmosis Membranes to Intermolecular Adhesion Forces. Environmental Science & Technology, 2006, 40, 980-987.	4.6	405
59	Membrane-based processes for wastewater nutrient recovery: Technology, challenges, and future direction. Water Research, 2016, 89, 210-221.	5.3	405
60	Anti-fouling ultrafiltration membranes containing polyacrylonitrile-graft-poly(ethylene oxide) comb copolymer additives. Journal of Membrane Science, 2007, 298, 136-146.	4.1	404
61	Breakdown of Colloid Filtration Theory:Â Role of the Secondary Energy Minimum and Surface Charge Heterogeneities. Langmuir, 2005, 21, 841-852.	1.6	401
62	Aggregation Kinetics of Multiwalled Carbon Nanotubes in Aquatic Systems: Measurements and Environmental Implications. Environmental Science & Technology, 2008, 42, 7963-7969.	4.6	401
63	Polyamide nanofiltration membrane with highly uniform sub-nanometre pores for sub-1â€‰Ã… precision separation. Nature Communications, 2020, 11, 2015.	5.8	398
64	A method for the simultaneous determination of transport and structural parameters of forward osmosis membranes. Journal of Membrane Science, 2013, 444, 523-538.	4.1	397
65	Towards single-species selectivity of membranes with subnanometre pores. Nature Nanotechnology, 2020, 15, 426-436.	15.6	389
66	The role of nanotechnology in tackling global water challenges. Nature Sustainability, 2018, 1, 166-175.	11.5	377
67	Deviation from the Classical Colloid Filtration Theory in the Presence of Repulsive DLVO Interactions. Langmuir, 2004, 20, 10818-10828.	1.6	372
68	Coupling between chemical and physical interactions in natural organic matter (NOM) fouling of nanofiltration membranes: implications for fouling control. Journal of Membrane Science, 2002, 203, 245-255.	4.1	360
69	Effect of particle size on collision efficiency in the deposition of Brownian particles with electrostatic energy barriers. Langmuir, 1990, 6, 1153-1163.	1.6	356
70	Microbial Cytotoxicity of Carbon-Based Nanomaterials: Implications for River Water and Wastewater Effluent. Environmental Science & Technology, 2009, 43, 2648-2653.	4.6	354
71	Colloid Transport in Geochemically Heterogeneous Porous Media:Â Modeling and Measurements. Environmental Science & Technology, 1996, 30, 3284-3293.	4.6	349
72	Standard Methodology for Evaluating Membrane Performance in Osmotically Driven Membrane Processes. Desalination, 2013, 312, 31-38.	4.0	349

#	Article	IF	Citations
73	Nanophotonics-enabled solar membrane distillation for off-grid water purification. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 6936-6941.	3.3	348
74	Electrochemical Multiwalled Carbon Nanotube Filter for Viral and Bacterial Removal and Inactivation. Environmental Science & Technology, 2011, 45, 3672-3679.	4.6	345
75	Role of Extracellular Polymeric Substances (EPS) in Biofouling of Reverse Osmosis Membranes. Environmental Science & Technology, 2009, 43, 4393-4398.	4.6	338
76	Physicochemical Determinants of Multiwalled Carbon Nanotube Bacterial Cytotoxicity. Environmental Science & Technology, 2008, 42, 7528-7534.	4.6	335
77	DLVO Interaction between Rough Surfaces. Langmuir, 1998, 14, 3365-3375.	1.6	331
78	Reduced aggregation and sedimentation of zero-valent iron nanoparticles in the presence of guar gum. Journal of Colloid and Interface Science, 2008, 324, 71-79.	5.0	331
79	Dynamics of Colloid Deposition in Porous Media: Blocking Based on Random Sequential Adsorption. Langmuir, 1995, 11, 801-812.	1.6	329
80	Gypsum Scaling and Cleaning in Forward Osmosis: Measurements and Mechanisms. Environmental Science & Technology, 2010, 44, 2022-2028.	4.6	324
81	Modeling water flux in forward osmosis: Implications for improved membrane design. AIChE Journal, 2007, 53, 1736-1744.	1.8	323
82	Surface Element Integration: A Novel Technique for Evaluation of DLVO Interaction between a Particle and a Flat Plate. Journal of Colloid and Interface Science, 1997, 193, 273-285.	5.0	316
83	Chemical and physical aspects of cleaning of organic-fouled reverse osmosis membranes. Journal of Membrane Science, 2006, 272, 198-210.	4.1	315
84	Protein (BSA) fouling of reverse osmosis membranes: Implications for wastewater reclamation. Journal of Membrane Science, 2007, 296, 83-92.	4.1	314
85	Covalent Binding of Single-Walled Carbon Nanotubes to Polyamide Membranes for Antimicrobial Surface Properties. ACS Applied Materials & Interfaces, 2011, 3, 2869-2877.	4.0	313
86	Pathways and challenges for efficient solar-thermal desalination. Science Advances, 2019, 5, eaax0763.	4.7	311
87	The search for a chlorine-resistant reverse osmosis membrane. Desalination, 1994, 95, 325-345.	4.0	310
88	Arsenic removal by ferric chloride. Journal - American Water Works Association, 1996, 88, 155-167.	0.2	310
89	Surface Functionalization of Thin-Film Composite Membranes with Copper Nanoparticles for Antimicrobial Surface Properties. Environmental Science & Technology, 2014, 48, 384-393.	4.6	310
90	Colloidal Fouling of Reverse Osmosis Membranes:Â Measurements and Fouling Mechanisms. Environmental Science & Technology, 1997, 31, 3654-3662.	4.6	307

#	Article	IF	Citations
91	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
92	Thermodynamic and Energy Efficiency Analysis of Power Generation from Natural Salinity Gradients by Pressure Retarded Osmosis. Environmental Science & Technology, 2012, 46, 5230-5239.	4.6	301
93	Graphene oxide membranes with stable porous structure for ultrafast water transport. Nature Nanotechnology, 2021, 16, 337-343.	15.6	301
94	Arsenic Removal from Drinking Water during Coagulation. Journal of Environmental Engineering, ASCE, 1997, 123, 800-807.	0.7	297
95	Pressure-retarded osmosis for power generation from salinity gradients: is it viable?. Energy and Environmental Science, 2016, 9, 31-48.	15.6	289
96	Theory of concentration polarization in crossflow filtration. Journal of the Chemical Society, Faraday Transactions, 1995, 91, 3389.	1.7	288
97	Role of Cell Surface Lipopolysaccharides inEscherichia coliK12 Adhesion and Transport. Langmuir, 2004, 20, 7736-7746.	1.6	288
98	Omniphobic Membrane for Robust Membrane Distillation. Environmental Science and Technology Letters, 2014, 1, 443-447.	3.9	288
99	Environmental performance of graphene-based 3D macrostructures. Nature Nanotechnology, 2019, 14, 107-119.	15.6	286
100	Influence of Biomacromolecules and Humic Acid on the Aggregation Kinetics of Single-Walled Carbon Nanotubes. Environmental Science & Technology, 2010, 44, 2412-2418.	4.6	282
101	Highly Hydrophilic Polyvinylidene Fluoride (PVDF) Ultrafiltration Membranes via Postfabrication Grafting of Surface-Tailored Silica Nanoparticles. ACS Applied Materials & Interfaces, 2013, 5, 6694-6703.	4.0	279
102	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
103	Environmental Applications of Interfacial Materials with Special Wettability. Environmental Science & Technology, 2016, 50, 2132-2150.	4.6	273
104	Global Challenges in Energy and Water Supply: The Promise of Engineered Osmosis. Environmental Science & Technology, 2008, 42, 8625-8629.	4.6	271
105	Performance Limiting Effects in Power Generation from Salinity Gradients by Pressure Retarded Osmosis. Environmental Science & Technology, 2011, 45, 10273-10282.	4.6	270
106	Comparison of the removal of hydrophobic trace organic contaminants by forward osmosis and reverse osmosis. Water Research, 2012, 46, 2683-2692.	5.3	270
107	Interaction of Fullerene (C₆₀) Nanoparticles with Humic Acid and Alginate Coated Silica Surfaces: Measurements, Mechanisms, and Environmental Implications. Environmental Science & Technology, 2008, 42, 7607-7614.	4.6	268
108	Antifouling Ultrafiltration Membranes via Post-Fabrication Grafting of Biocidal Nanomaterials. ACS Applied Materials & Interfaces, 2011, 3, 2861-2868.	4.0	268

#	Article	IF	Citations
109	Fabrication of desalination membranes by interfacial polymerization: history, current efforts, and future directions. Chemical Society Reviews, 2021, 50, 6290-6307.	18.7	263
110	Nanofoaming of Polyamide Desalination Membranes To Tune Permeability and Selectivity. Environmental Science and Technology Letters, 2018, 5, 123-130.	3.9	260
111	Seawater desalination for agriculture by integrated forward and reverse osmosis: Improved product water quality for potentially less energy. Journal of Membrane Science, 2012, 415-416, 1-8.	4.1	259
112	Electrochemical Carbon-Nanotube Filter Performance toward Virus Removal and Inactivation in the Presence of Natural Organic Matter. Environmental Science & Technology, 2012, 46, 1556-1564.	4.6	256
113	Antimicrobial Electrospun Biopolymer Nanofiber Mats Functionalized with Graphene Oxideâ€“Silver Nanocomposites. ACS Applied Materials & Interfaces, 2015, 7, 12751-12759.	4.0	256
114	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
115	Influence of Crossflow Membrane Filter Geometry and Shear Rate on Colloidal Fouling in Reverse Osmosis and Nanofiltration Separations. Environmental Engineering Science, 2002, 19, 357-372.	0.8	254
116	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
117	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
118	Fouling of reverse osmosis membranes by hydrophilic organic matter: implications for water reuse. Desalination, 2006, 187, 313-321.	4.0	242
119	Enhanced Aggregation of Alginate-Coated Iron Oxide (Hematite) Nanoparticles in the Presence of Calcium, Strontium, and Barium Cations. Langmuir, 2007, 23, 5920-5928.	1.6	234
120	A Forward Osmosisâ€“Membrane Distillation Hybrid Process for Direct Sewer Mining: System Performance and Limitations. Environmental Science & Technology, 2013, 47, 13486-13493.	4.6	234
121	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
122	Potential and implemented membrane-based technologies for the treatment and reuse of flowback and produced water from shale gas and oil plays: A review. Desalination, 2019, 455, 34-57.	4.0	233
123	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
124	Antifouling Thin-Film Composite Membranes by Controlled Architecture of Zwitterionic Polymer Brush Layer. Environmental Science & Technology, 2017, 51, 2161-2169.	4.6	232
125	Forward with Osmosis: Emerging Applications for Greater Sustainability. Environmental Science & Technology, 2011, 45, 9824-9830.	4.6	230
126	Toward Resource Recovery from Wastewater: Extraction of Phosphorus from Digested Sludge Using a Hybrid Forward Osmosisâ€“Membrane Distillation Process. Environmental Science and Technology Letters, 2014, 1, 191-195.	3.9	229

#	Article	IF	Citations
127	Selective removal of divalent cations by polyelectrolyte multilayer nanofiltration membrane: Role of polyelectrolyte charge, ion size, and ionic strength. Journal of Membrane Science, 2018, 559, 98-106.	4.1	227
128	Antifouling nanofiltration membranes for membrane bioreactors from self-assembling graft copolymers. Journal of Membrane Science, 2006, 285, 81-89.	4.1	226
129	A novel ammoniaâ€“carbon dioxide osmotic heat engine for power generation. Journal of Membrane Science, 2007, 305, 13-19.	4.1	226
130	Harvesting low-grade heat energy using thermo-osmotic vapour transport through nanoporousÂmembranes. Nature Energy, 2016, 1, .	19.8	226
131	Recent advances in ion selectivity with capacitive deionization. Energy and Environmental Science, 2021, 14, 1095-1120.	15.6	226
132	Kinetics of Colloid Deposition onto Heterogeneously Charged Surfaces in Porous Media. Environmental Science & Technology, 1994, 28, 1164-1171.	4.6	225
133	Peer Reviewed: The Promise of Bank Filtration. Environmental Science & Technology, 2002, 36, 422A-428A.	4.6	224
134	Fouling and cleaning of RO membranes fouled by mixtures of organic foulants simulating wastewater effluent. Journal of Membrane Science, 2011, 376, 196-206.	4.1	222
135	Tuning Structure and Properties of Graded Triblock Terpolymer-Based Mesoporous and Hybrid Films. Nano Letters, 2011, 11, 2892-2900.	4.5	220
136	Transport of in Situ Mobilized Colloidal Particles in Packed Soil Columns. Environmental Science & Technology, 1998, 32, 3562-3569.	4.6	219
137	Transport ofCryptosporidiumOocysts in Porous Media:Â Role of Straining and Physicochemical Filtrationâ€. Environmental Science & Technology, 2004, 38, 5932-5938.	4.6	219
138	Transport of Single-Walled Carbon Nanotubes in Porous Media: Filtration Mechanisms and Reversibility. Environmental Science & Technology, 2008, 42, 8317-8323.	4.6	219
139	Mechanisms of colloidal natural organic matter fouling in ultrafiltration. Journal of Membrane Science, 2006, 281, 716-725.	4.1	218
140	Development of Omniphobic Desalination Membranes Using a Charged Electrospun Nanofiber Scaffold. ACS Applied Materials & Interfaces, 2016, 8, 11154-11161.	4.0	218
141	High Performance Nanofiltration Membrane for Effective Removal of Perfluoroalkyl Substances at High Water Recovery. Environmental Science & Technology, 2018, 52, 7279-7288.	4.6	218
142	Influence of Natural Organic Matter and Ionic Composition on the Kinetics and Structure of Hematite Colloid Aggregation:Â Implications to Iron Depletion in Estuaries. Langmuir, 2004, 20, 9000-9006.	1.6	217
143	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
144	Fouling control in a forward osmosis process integrating seawater desalination and wastewater reclamation. Journal of Membrane Science, 2013, 444, 148-156.	4.1	214

#	Article	IF	Citations
145	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
146	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
147	Comparison of energy consumption in desalination by capacitive deionization and reverse osmosis. Desalination, 2019, 455, 100-114.	4.0	210
148	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
149	Highly Hydrophilic Thin-Film Composite Forward Osmosis Membranes Functionalized with Surface-Tailored Nanoparticles. ACS Applied Materials & Interfaces, 2012, 4, 5044-5053.	4.0	204
150	Engineering Surface Energy and Nanostructure of Microporous Films for Expanded Membrane Distillation Applications. Environmental Science & Technology, 2016, 50, 8112-8119.	4.6	203
151	Reinventing Fenton Chemistry: Iron Oxychloride Nanosheet for pH-Insensitive H₂O₂ Activation. Environmental Science and Technology Letters, 2018, 5, 186-191.	3.9	202
152	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
153	Role of electrostatic interactions in the retention of pharmaceutically active contaminants by a loose nanofiltration membrane. Journal of Membrane Science, 2006, 286, 52-59.	4.1	199
154	Effect of electrolyte type on the electrophoretic mobility of polystyrene latex colloids. Colloids and Surfaces, 1990, 44, 165-178.	0.9	198
155	Single-Walled Carbon Nanotubes Exhibit Limited Transport in Soil Columns. Environmental Science & Technology, 2009, 43, 9161-9166.	4.6	198
156	Influence of colloidal fouling on rejection of trace organic contaminants by reverse osmosis. Journal of Membrane Science, 2004, 244, 215-226.	4.1	197
157	Combined influence of natural organic matter (NOM) and colloidal particles on nanofiltration membrane fouling. Journal of Membrane Science, 2005, 262, 27-41.	4.1	196
158	Role of Ionic Charge Density in Donnan Exclusion of Monovalent Anions by Nanofiltration. Environmental Science & Technology, 2018, 52, 4108-4116.	4.6	196
159	The global challenge for adequate and safe water. Journal of Water Supply: Research and Technology - AQUA, 2006, 55, 3-10.	0.6	195
160	Rethinking wastewater risks and monitoring in light of the COVID-19 pandemic. Nature Sustainability, 2020, 3, 981-990.	11.5	195
161	Protein antifouling mechanisms of PAN UF membranes incorporating PAN-g-PEO additive. Journal of Membrane Science, 2007, 296, 42-50.	4.1	194
162	Mechanism of Heterogeneous Fenton Reaction Kinetics Enhancement under Nanoscale Spatial Confinement. Environmental Science & Technology, 2020, 54, 10868-10875.	4.6	188

#	Article	IF	Citations
163	Performance evaluation of sucrose concentration using forward osmosis. Journal of Membrane Science, 2009, 338, 61-66.	4.1	185
164	High performance polyester reverse osmosis desalination membrane with chlorine resistance. Nature Sustainability, 2021, 4, 138-146.	11.5	185
165	Cobalt Single Atoms on Tetrapyridomacrocyclic Support for Efficient Peroxymonosulfate Activation. Environmental Science & Technology, 2021, 55, 1242-1250.	4.6	185
166	Toxic Effects of Single-Walled Carbon Nanotubes in the Development of E. coli Biofilm. Environmental Science & Technology, 2010, 44, 4583-4589.	4.6	183
167	Scalable Fabrication of Polymer Membranes with Vertically Aligned 1 nm Pores by Magnetic Field Directed Self-Assembly. ACS Nano, 2014, 8, 11977-11986.	7.3	183
168	Tailored design of nanofiltration membranes for water treatment based on synthesisâ€“propertyâ€“performance relationships. Chemical Society Reviews, 2022, 51, 672-719.	18.7	182
169	Mitigation of Biofilm Development on Thin-Film Composite Membranes Functionalized with Zwitterionic Polymers and Silver Nanoparticles. Environmental Science & Technology, 2017, 51, 182-191.	4.6	180
170	Thin-film composite forward osmosis membranes functionalized with graphene oxideâ€“silver nanocomposites for biofouling control. Journal of Membrane Science, 2017, 525, 146-156.	4.1	180
171	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
172	Thermodynamic, Energy Efficiency, and Power Density Analysis of Reverse Electrodialysis Power Generation with Natural Salinity Gradients. Environmental Science & Technology, 2014, 48, 4925-4936.	4.6	177
173	In situ monitoring techniques for concentration polarization and fouling phenomena in membrane filtration. Advances in Colloid and Interface Science, 2004, 107, 83-108.	7.0	174
174	Synergistic effects in combined fouling of a loose nanofiltration membrane by colloidal materials and natural organic matter. Journal of Membrane Science, 2006, 278, 72-82.	4.1	174
175	Role of pressure in organic fouling in forward osmosis and reverse osmosis. Journal of Membrane Science, 2015, 493, 748-754.	4.1	174
176	Comparison of Energy Efficiency and Power Density in Pressure Retarded Osmosis and Reverse Electrodialysis. Environmental Science & Technology, 2014, 48, 11002-11012.	4.6	173
177	Colloid Deposition Dynamics in Flow-Through Porous Media: Role of Electrolyte Concentration. Environmental Science & Technology, 1995, 29, 2963-2973.	4.6	172
178	Relating Colloidal Stability of Fullerene (C₆₀) Nanoparticles to Nanoparticle Charge and Electrokinetic Properties. Environmental Science & Technology, 2009, 43, 7270-7276.	4.6	172
179	Adverse Impact of Feed Channel Spacers on the Performance of Pressure Retarded Osmosis. Environmental Science & Technology, 2012, 46, 4673-4681.	4.6	172
180	Emerging electrochemical and membrane-based systems to convert low-grade heat to electricity. Energy and Environmental Science, 2018, 11, 276-285.	15.6	172

#	Article	IF	Citations
181	Colloidal fouling in forward osmosis: Role of reverse salt diffusion. Journal of Membrane Science, 2012, 390-391, 277-284.	4.1	169
182	Interpreting Deposition Patterns of Microbial Particles in Laboratory-Scale Column Experiments. Environmental Science & Technology, 2003, 37, 616-623.	4.6	168
183	Influence of Growth Phase on Adhesion Kinetics of Escherichia coli D21g. Applied and Environmental Microbiology, 2005, 71, 3093-3099.	1.4	168
184	Direct contact membrane distillation with heat recovery: Thermodynamic insights from module scale modeling. Journal of Membrane Science, 2014, 453, 498-515.	4.1	168
185	A Novel Asymmetric Clamping Cell for Measuring Streaming Potential of Flat Surfaces. Langmuir, 2002, 18, 2193-2198.	1.6	167
186	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
187	Amine enrichment and poly(ethylene glycol) (PEG) surface modification of thin-film composite forward osmosis membranes for organic fouling control. Journal of Membrane Science, 2014, 450, 331-339.	4.1	165
188	Control of biofouling on reverse osmosis polyamide membranes modified with biocidal nanoparticles and antifouling polymer brushes. Journal of Materials Chemistry B, 2014, 2, 1724.	2.9	164
189	Interaction of Graphene Oxide with Bacterial Cell Membranes: Insights from Force Spectroscopy. Environmental Science and Technology Letters, 2015, 2, 112-117.	3.9	164
190	Intrapore energy barriers govern ion transport and selectivity of desalination membranes. Science Advances, 2020, 6, .	4.7	161
191	Biofouling Mitigation in Forward Osmosis Using Graphene Oxide Functionalized Thin-Film Composite Membranes. Environmental Science & Technology, 2016, 50, 5840-5848.	4.6	160
192	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
193	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
194	Silica scaling and scaling reversibility in forward osmosis. Desalination, 2013, 312, 75-81.	4.0	154
195	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
196	Effects of feed and draw solution temperature and transmembrane temperature difference on the rejection of trace organic contaminants by forward osmosis. Journal of Membrane Science, 2013, 438, 57-64.	4.1	153
197	Effect of Interparticle Electrostatic Double Layer Interactions on Permeate Flux Decline in Crossflow Membrane Filtration of Colloidal Suspensions: An Experimental Investigation. Journal of Colloid and Interface Science, 1998, 204, 77-86.	5.0	152
198	New Perspectives on Nanomaterial Aquatic Ecotoxicity: Production Impacts Exceed Direct Exposure Impacts for Carbon Nanotoubes. Environmental Science & Technology, 2012, 46, 2902-2910.	4.6	152

#	Article	IF	Citations
199	Potential of osmotic power generation by pressure retarded osmosis using seawater as feed solution: Analysis and experiments. Journal of Membrane Science, 2013, 429, 330-337.	4.1	152
200	Combined organic and colloidal fouling in forward osmosis: Fouling reversibility and the role of applied pressure. Journal of Membrane Science, 2014, 460, 206-212.	4.1	152
201	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
202	Particle Formation during Oxidation Catalysis with Cp* Iridium Complexes. Journal of the American Chemical Society, 2012, 134, 9785-9795.	6.6	150
203	Thermodynamic limits of extractable energy by pressure retarded osmosis. Energy and Environmental Science, 2014, 7, 2706-2714.	15.6	149
204	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
205	Transparent Exopolymer Particles: From Aquatic Environments and Engineered Systems to Membrane Biofouling. Environmental Science & Technology, 2015, 49, 691-707.	4.6	147
206	Activation behavior for ion permeation in ion-exchange membranes: Role of ion dehydration in selective transport. Journal of Membrane Science, 2019, 580, 316-326.	4.1	146
207	Particle deposition on ideal collectors from dilute flowing suspensions: Mathematical formulation, numerical solution, and simulations. Separation and Purification Technology, 1994, 4, 186-212.	0.7	144
208	Removal of trace organic contaminants by the forward osmosis process. Separation and Purification Technology, 2013, 103, 258-266.	3.9	144
209	High Efficiency in Energy Generation from Salinity Gradients with Reverse Electrodialysis. ACS Sustainable Chemistry and Engineering, 2013, 1, 1295-1302.	3.2	143
210	Nanofibers in thin-film composite membrane support layers: Enabling expanded application of forward and pressure retarded osmosis. Desalination, 2013, 308, 73-81.	4.0	143
211	Janus electrocatalytic flow-through membrane enables highly selective singlet oxygen production. Nature Communications, 2020, 11, 6228.	5.8	142
212	Field and Laboratory Investigations of Inactivation of Viruses (PRD1 and MS2) Attached to Iron Oxide-Coated Quartz Sand. Environmental Science & Technology, 2002, 36, 2403-2413.	4.6	141
213	Salt cleaning of organic-fouled reverse osmosis membranes. Water Research, 2007, 41, 1134-1142.	5.3	141
214	Direct quantification of negatively charged functional groups on membrane surfaces. Journal of Membrane Science, 2012, 389, 499-508.	4.1	140
215	Arsenic removal by RO and NF membranes. Journal - American Water Works Association, 1997, 89, 102-114.	0.2	139
216	Antimicrobial biomaterials based on carbon nanotubes dispersed in poly(lactic-co-glycolic acid). Nanoscale, 2010, 2, 1789.	2.8	139

#	Article	IF	Citations
217	Electrified Membranes for Water Treatment Applications. ACS ES&T Engineering, 2021, 1, 725-752.	3.7	139
218	Toxicity of Functionalized Single-Walled Carbon Nanotubes on Soil Microbial Communities: Implications for Nutrient Cycling in Soil. Environmental Science & Technology, 2013, 47, 625-633.	4.6	138
219	Biofouling in forward osmosis and reverse osmosis: Measurements and mechanisms. Journal of Membrane Science, 2015, 493, 703-708.	4.1	137
220	Kinetics of capture of colloidal particles in packed beds under attractive double layer interactions. Journal of Colloid and Interface Science, 1991, 146, 337-352.	5.0	136
221	Relating Silica Scaling in Reverse Osmosis to Membrane Surface Properties. Environmental Science & Technology, 2017, 51, 4396-4406.	4.6	136
222	Coupled reverse draw solute permeation and water flux in forward osmosis with neutral draw solutes. Journal of Membrane Science, 2012, 392-393, 9-17.	4.1	135
223	Membrane-Confined Iron Oxychloride Nanocatalysts for Highly Efficient Heterogeneous Fenton Water Treatment. Environmental Science & Technology, 2021, 55, 9266-9275.	4.6	135
224	Impact of solution chemistry on viral removal by a single-walled carbon nanotube filter. Water Research, 2010, 44, 3773-3780.	5.3	134
225	Predicting collision efficiencies of colloidal particles in porous media. Water Research, 1992, 26, 1-8.	5.3	133
226	Relevance of Electrokinetic Theory for â€œSoftâ€•Particles to Bacterial Cells:â€‰ Implications for Bacterial Adhesion. Langmuir, 2005, 21, 6462-6472.	1.6	133
227	Energy Efficiency of Electro-Driven Brackish Water Desalination: Electrodialysis Significantly Outperforms Membrane Capacitive Deionization. Environmental Science & Technology, 2020, 54, 3663-3677.	4.6	133
228	A novel approach for modeling concentration polarization in crossflow membrane filtration based on the equivalence of osmotic pressure model and filtration theory. Journal of Membrane Science, 1998, 145, 223-241.	4.1	131
229	Influence of colloidal fouling and feed water recovery on salt rejection of RO and NF membranes. Desalination, 2004, 160, 1-12.	4.0	131
230	In situ surface functionalization of reverse osmosis membranes with biocidal copper nanoparticles. Desalination, 2016, 388, 1-8.	4.0	130
231	Kinetics of Permeate Flux Decline in Crossflow Membrane Filtration of Colloidal Suspensions. Journal of Colloid and Interface Science, 1997, 196, 267-277.	5.0	129
232	Calcium sulfate (gypsum) scaling in nanofiltration of agricultural drainage water. Journal of Membrane Science, 2002, 205, 279-291.	4.1	129
233	The road to nowhere: equilibrium partition coefficients for nanoparticles. Environmental Science: Nano, 2014, 1, 317-323.	2.2	129
234	Hybrid Pressure Retarded Osmosisâ€“Membrane Distillation System for Power Generation from Low-Grade Heat: Thermodynamic Analysis and Energy Efficiency. Environmental Science & Technology, 2014, 48, 5306-5313.	4.6	129

#	Article	IF	Citations
235	Advanced Materials, Technologies, and Complex Systems Analyses: Emerging Opportunities to Enhance Urban Water Security. Environmental Science & Technology, 2017, 51, 10274-10281.	4.6	129
236	Forward osmosis desalination of brackish groundwater: Meeting water quality requirements for fertigation by integrating nanofiltration. Journal of Membrane Science, 2013, 436, 1-15.	4.1	125
237	Chemical cleaning of RO membranes fouled by wastewater effluent: Achieving higher efficiency with dual-step cleaning. Journal of Membrane Science, 2011, 382, 100-106.	4.1	124
238	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
239	Reactive, Self-Cleaning Ultrafiltration Membrane Functionalized with Iron Oxychloride Nanocatalysts. Environmental Science & Technology, 2018, 52, 8674-8683.	4.6	124
240	Particle Deposition onto a Permeable Surface in Laminar Flow. Journal of Colloid and Interface Science, 1995, 173, 165-180.	5.0	123
241	Direct microscopic observation of particle deposition in porous media: Role of the secondary energy minimum. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2007, 294, 156-162.	2.3	123
242	Bioinspired Single Bacterial Cell Force Spectroscopy. Langmuir, 2009, 25, 9656-9659.	1.6	121
243	Staged reverse osmosis operation: Configurations, energy efficiency, and application potential. Desalination, 2015, 366, 9-14.	4.0	121
244	Tuning Pb(II) Adsorption from Aqueous Solutions on Ultrathin Iron Oxychloride (FeOCl) Nanosheets. Environmental Science & Technology, 2019, 53, 2075-2085.	4.6	121
245	Plasmid DNA Adsorption on Silica:Â Kinetics and Conformational Changes in Monovalent and Divalent Salts. Biomacromolecules, 2007, 8, 24-32.	2.6	120
246	Dynamics of colloid deposition in porous media: Modeling the role of retained particles. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1993, 73, 49-63.	2.3	119
247	Impact of Surface Functionalization on Bacterial Cytotoxicity of Single-Walled Carbon Nanotubes. Environmental Science & Technology, 2012, 46, 6297-6305.	4.6	119
248	Engineering flat sheet microporous PVDF films for membrane distillation. Journal of Membrane Science, 2015, 492, 355-363.	4.1	118
249	Simultaneous nanocatalytic surface activation of pollutants and oxidants for highly efficient water decontamination. Nature Communications, 2022, 13, .	5.8	117
250	Spatial Distributions ofCryptosporidiumOocysts in Porous Media:Â Evidence for Dual Mode Deposition. Environmental Science & Technology, 2005, 39, 3620-3629.	4.6	116
251	Transport of Iron Oxide Colloids in Packed Quartz Sand Media: Monolayer and Multilayer Deposition. Journal of Colloid and Interface Science, 2000, 231, 32-41.	5.0	115
252	Antibacterial Activity of Electrospun Polymer Mats with Incorporated Narrow Diameter Single-Walled Carbon Nanotubes. ACS Applied Materials & Interfaces, 2011, 3, 462-468.	4.0	114

#	Article	IF	Citations
253	Aggregation and deposition kinetics of mobile colloidal particles in natural porous media. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2001, 191, 179-188.	2.3	112
254	Influence of Active Layer and Support Layer Surface Structures on Organic Fouling Propensity of Thin-Film Composite Forward Osmosis Membranes. Environmental Science & Technology, 2015, 49, 1436-1444.	4.6	112
255	Desalination by forward osmosis: Identifying performance limiting parameters through module-scale modeling. Journal of Membrane Science, 2015, 491, 159-167.	4.1	111
256	Science and technology for water purification in the coming decades. , 2009, , 337-346.		110
257	Organic fouling behavior of superhydrophilic polyvinylidene fluoride (PVDF) ultrafiltration membranes functionalized with surface-tailored nanoparticles: Implications for organic fouling in membrane bioreactors. Journal of Membrane Science, 2014, 463, 94-101.	4.1	110
258	Osmotic equilibrium in the forward osmosis process: Modelling, experiments and implications for process performance. Journal of Membrane Science, 2014, 453, 240-252.	4.1	110
259	Increasing Functional Sustainability of Water and Sanitation Supplies in Rural Sub-Saharan Africa. Environmental Engineering Science, 2009, 26, 1017-1023.	0.8	109
260	Effect of Particle Size on the Kinetics of Particle Deposition under Attractive Double Layer Interactions. Journal of Colloid and Interface Science, 1994, 164, 190-199.	5.0	108
261	Coupled model of concentration polarization and pore transport in crossflow nanofiltration. AICHE Journal, 2001, 47, 2733-2745.	1.8	108
262	Dynamics of coagulation of kaolin particles with ferric chloride. Water Research, 1994, 28, 559-569.	5.3	106
263	Influence of Natural Organic Matter Fouling and Osmotic Backwash on Pressure Retarded Osmosis Energy Production from Natural Salinity Gradients. Environmental Science & Technology, 2013, 47, 12607-12616.	4.6	106
264	Selective membranes in water and wastewater treatment: Role of advanced materials. Materials Today, 2021, 50, 516-532.	8.3	106
265	Can batch or semi-batch processes save energy in reverse-osmosis desalination?. Desalination, 2017, 402, 109-122.	4.0	105
266	Calcium and Magnesium Cations Enhance the Adhesion of Motile and Nonmotile Pseudomonas aeruginosa on Alginate Films. Langmuir, 2008, 24, 3392-3399.	1.6	104
267	Impact of humic acid fouling on membrane performance and transport of pharmaceutically active compounds in forward osmosis. Water Research, 2013, 47, 4567-4575.	5.3	104
268	Module-Scale Analysis of Pressure Retarded Osmosis: Performance Limitations and Implications for Full-Scale Operation. Environmental Science & Technology, 2014, 48, 12435-12444.	4.6	104
269	Self-cleaning anti-fouling hybrid ultrafiltration membranes via side chain grafting of poly(aryl ether) Tj ETQq1 1 0.784314 rgBT /Overlo	4.1	104
270	Designing block copolymer architectures for targeted membrane performance. Polymer, 2014, 55, 347-353.	1.8	103

#	Article	IF	Citations
271	Application of membrane dewatering for algal biofuel. Algal Research, 2015, 11, 1-12.	2.4	103
272	Multiwalled Carbon Nanotube Filter: Improving Viral Removal at Low Pressure. Langmuir, 2010, 26, 14975-14982.	1.6	102
273	Minimal and zero liquid discharge with reverse osmosis using low-salt-rejection membranes. Water Research, 2020, 170, 115317.	5.3	102
274	Membrane scaling and flux decline during fertiliser-drawn forward osmosis desalination of brackish groundwater. Water Research, 2014, 57, 172-182.	5.3	101
275	Nanopore-Based Power Generation from Salinity Gradient: Why It Is Not Viable. ACS Nano, 2021, 15, 4093-4107.	7.3	101
276	Concentration Polarization of Interacting Solute Particles in Cross-Flow Membrane Filtration. Journal of Colloid and Interface Science, 1999, 212, 81-99.	5.0	100
277	Formation of Polysaccharide Gel Layers in the Presence of Ca2+and K+Ions:Â Measurements and Mechanisms. Biomacromolecules, 2007, 8, 113-121.	2.6	100
278	Performance evaluation of trimethylamineâ€“carbon dioxide thermolytic draw solution for engineered osmosis. Journal of Membrane Science, 2015, 473, 302-309.	4.1	100
279	Understanding the impact of membrane properties and transport phenomena on the energetic performance of membrane distillation desalination. Journal of Membrane Science, 2017, 539, 458-474.	4.1	100
280	Membrane Materials for Selective Ion Separations at the Waterâ€“Energy Nexus. Advanced Materials, 2021, 33, e2101312.	11.1	100
281	Influence of Growth Phase on Bacterial Deposition:Â Interaction Mechanisms in Packed-Bed Column and Radial Stagnation Point Flow Systemsâ€. Environmental Science & Technology, 2005, 39, 6405-6411.	4.6	99
282	SWNTâˆ’MWNT Hybrid Filter Attains High Viral Removal and Bacterial Inactivation. Langmuir, 2010, 26, 19153-19158.	1.6	99
283	Effect of Ferric Oxyhydroxide Grain Coatings on the Transport of Bacteriophage PRD1 andCryptosporidium parvumOocysts in Saturated Porous Mediaâ€. Environmental Science & Technology, 2005, 39, 6412-6419.	4.6	98
284	Shape-Dependent Surface Reactivity and Antimicrobial Activity of Nano-Cupric Oxide. Environmental Science & Technology, 2016, 50, 3975-3984.	4.6	96
285	Bidirectional Diffusion of Ammonium and Sodium Cations in Forward Osmosis: Role of Membrane Active Layer Surface Chemistry and Charge. Environmental Science & Technology, 2014, 48, 14369-14376.	4.6	95
286	Bidirectional Permeation of Electrolytes in Osmotically Driven Membrane Processes. Environmental Science & Technology, 2011, 45, 10642-10651.	4.6	94
287	DLVO interaction energy between spheroidal particles and a flat surface. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2000, 165, 143-156.	2.3	93
288	Thin Polymer Films with Continuous Vertically Aligned 1 nm Pores Fabricated by Soft Confinement. ACS Nano, 2016, 10, 150-158.	7.3	92

#	Article	IF	Citations
289	Post-fabrication modification of electrospun nanofiber mats with polymer coating for membrane distillation applications. Journal of Membrane Science, 2017, 530, 158-165.	4.1	91
290	Functionalization of ultrafiltration membrane with polyampholyte hydrogel and graphene oxide to achieve dual antifouling and antibacterial properties. Journal of Membrane Science, 2018, 565, 293-302.	4.1	90
291	Role of spatial distribution of porous medium surface charge heterogeneity in colloid transport. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2001, 191, 3-15.	2.3	89
292	Virus transport in physically and geochemically heterogeneous subsurface porous media. Journal of Contaminant Hydrology, 2002, 57, 161-187.	1.6	89
293	Actinia-like multifunctional nanocoagulant for single-step removal of water contaminants. Nature Nanotechnology, 2019, 14, 64-71.	15.6	89
294	In Situ Characterization of Dehydration during Ion Transport in Polymeric Nanochannels. Journal of the American Chemical Society, 2021, 143, 14242-14252.	6.6	89
295	Physiology and genetic traits of reverse osmosis membrane biofilms: a case study with Pseudomonas aeruginosa. ISME Journal, 2008, 2, 180-194.	4.4	88
296	Multifunctional nanocoated membranes for high-rate electrothermal desalination of hypersaline waters. Nature Nanotechnology, 2020, 15, 1025-1032.	15.6	88
297	Impact of Alginate Conditioning Film on Deposition Kinetics of Motile and Nonmotile Pseudomonas aeruginosa Strains. Applied and Environmental Microbiology, 2007, 73, 5227-5234.	1.4	87
298	Adsorption of Plasmid DNA to a Natural Organic Matter-Coated Silica Surface:Â Kinetics, Conformation, and Reversibility. Langmuir, 2007, 23, 3273-3279.	1.6	87
299	Relating Organic Fouling in Membrane Distillation to Intermolecular Adhesion Forces and Interfacial Surface Energies. Environmental Science & Technology, 2018, 52, 14198-14207.	4.6	87
300	Nanocomposites of Vertically Aligned Single-Walled Carbon Nanotubes by Magnetic Alignment and Polymerization of a Lyotropic Precursor. ACS Nano, 2010, 4, 6651-6658.	7.3	86
301	A facile method to quantify the carboxyl group areal density in the active layer of polyamide thin-film composite membranes. Journal of Membrane Science, 2017, 534, 100-108.	4.1	86
302	Transient Deposition of Colloidal Particles in Heterogeneous Porous Media. Journal of Colloid and Interface Science, 1994, 167, 301-313.	5.0	85
303	Ultrafiltration Membranes Incorporating Amphiphilic Comb Copolymer Additives Prevent Irreversible Adhesion of Bacteria. Environmental Science & Technology, 2010, 44, 2406-2411.	4.6	85
304	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
305	Efficacy of antifouling modification of ultrafiltration membranes by grafting zwitterionic polymer brushes. Separation and Purification Technology, 2017, 189, 389-398.	3.9	84
306	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

#	Article	IF	Citations
307	In Situ Electrochemical Generation of Reactive Chlorine Species for Efficient Ultrafiltration Membrane Self-Cleaning. Environmental Science & Technology, 2020, 54, 6997-7007.	4.6	84
308	Fouling of Reverse Osmosis Membranes by Aluminum Oxide Colloids. Journal of Environmental Engineering, ASCE, 1995, 121, 884-892.	0.7	83
309	Post-fabrication modification of forward osmosis membranes with a poly(ethylene glycol) block copolymer for improved organic fouling resistance. Journal of Membrane Science, 2015, 490, 209-219.	4.1	83
310	Highly Selective Vertically Aligned Nanopores in Sustainably Derived Polymer Membranes by Molecular Templating. ACS Nano, 2017, 11, 3911-3921.	7.3	83
311	Adsorption and Aggregation Properties of Norovirus GI and GII Virus-like Particles Demonstrate Differing Responses to Solution Chemistry. Environmental Science & Technology, 2011, 45, 520-526.	4.6	82
312	Effect of hydraulic pressure and membrane orientation on water flux and reverse solute flux in pressure assisted osmosis. Journal of Membrane Science, 2014, 465, 159-166.	4.1	82
313	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
314	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
315	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
316	Salt and Water Transport in Reverse Osmosis Membranes: Beyond the Solution-Diffusion Model. Environmental Science & Technology, 2021, 55, 16665-16675.	4.6	82
317	Energy Consumption of Brackish Water Desalination: Identifying the Sweet Spots for Electrodialysis and Reverse Osmosis. ACS ES&T Engineering, 2021, 1, 851-864.	3.7	81
318	Boron transport in forward osmosis: Measurements, mechanisms, and comparison with reverse osmosis. Journal of Membrane Science, 2012, 419-420, 42-48.	4.1	80
319	Comparison of organic fouling resistance of thin-film composite membranes modified by hydrophilic silica nanoparticles and zwitterionic polymer brushes. Journal of Membrane Science, 2017, 544, 135-142.	4.1	80
320	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
321	Environmental Applications of Engineered Materials with Nanoconfinement. ACS ES&T Engineering, 2021, 1, 706-724.	3.7	80
322	Nanofiltration of Hormone Mimicking Trace Organic Contaminants. Separation Science and Technology, 2005, 40, 2633-2649.	1.3	79
323	Precise nanofiltration in a fouling-resistant self-assembled membrane with water-continuous transport pathways. Science Advances, 2019, 5, eaav9308.	4.7	79
324	Role of Surface Proteins in the Deposition Kinetics of Cryptosporidium parvum Oocysts. Langmuir, 2005, 21, 710-716.	1.6	78

#	Article	IF	Citations
325	Influence of biofouling on boron removal by nanofiltration and reverse osmosis membranes. Journal of Membrane Science, 2008, 318, 264-270.	4.1	77
326	Carbon nanotube-based antimicrobial biomaterials formed via layer-by-layer assembly with polypeptides. Journal of Colloid and Interface Science, 2012, 388, 268-273.	5.0	77
327	Determination of absolute coagulation rate constants by multiangle light scattering. Journal of Colloid and Interface Science, 1992, 154, 1-7.	5.0	76
328	Role of type 1 fimbriae and mannose in the development ofEscherichia coliK12 biofilm: from initial cell adhesion to biofilm formation. Biofouling, 2009, 25, 401-411.	0.8	76
329	Calicivirus Removal in a Membrane Bioreactor Wastewater Treatment Plant. Applied and Environmental Microbiology, 2011, 77, 5170-5177.	1.4	76
330	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
331	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
332	Structural Growth and Viscoelastic Properties of Adsorbed Alginate Layers in Monovalent and Divalent Salts. Macromolecules, 2006, 39, 6558-6564.	2.2	75
333	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
334	Biofouling and Microbial Communities in Membrane Distillation and Reverse Osmosis. Environmental Science & Technology, 2014, 48, 13155-13164.	4.6	75
335	Impaired Performance of Pressure-Retarded Osmosis due to Irreversible Biofouling. Environmental Science & Technology, 2015, 49, 13050-13058.	4.6	75
336	Biocidal Activity of Plasma Modified Electrospun Polysulfone Mats Functionalized with Polyethyleneimine-Capped Silver Nanoparticles. Langmuir, 2011, 27, 13159-13164.	1.6	73
337	Influence of polyamide membrane surface chemistry on gypsum scaling behavior. Journal of Membrane Science, 2017, 525, 249-256.	4.1	73
338	Thin film composite membrane compaction in high-pressure reverse osmosis. Journal of Membrane Science, 2020, 610, 118268.	4.1	73
339	Biodegradable Polymer (PLGA) Coatings Featuring Cinnamaldehyde and Carvacrol Mitigate Biofilm Formation. Langmuir, 2012, 28, 13993-13999.	1.6	72
340	Permselectivity limits of biomimetic desalination membranes. Science Advances, 2018, 4, eaar8266.	4.7	72
341	Pathways and Challenges for Biomimetic Desalination Membranes with Sub-Nanometer Channels. ACS Nano, 2020, 14, 10894-10916.	7.3	72
342	Adhesion Kinetics of ViableCryptosporidium parvumOocysts to Quartz Surfaces. Environmental Science & Technology, 2004, 38, 6839-6845.	4.6	71

#	Article	IF	Citations
343	High-Performance Capacitive Deionization via Manganese Oxide-Coated, Vertically Aligned Carbon Nanotubes. Environmental Science and Technology Letters, 2018, 5, 692-700.	3.9	69
344	Bacterial Swimming Motility Enhances Cell Deposition and Surface Coverage. Environmental Science & Technology, 2008, 42, 4371-4377.	4.6	67
345	Influence of shear on the production of extracellular polymeric substances in membrane bioreactors. Water Research, 2009, 43, 4305-4315.	5.3	67
346	Performance limitation of the full-scale reverse osmosis process. Journal of Membrane Science, 2003, 214, 239-244.	4.1	66
347	Thermally Switchable Aligned Nanopores by Magneticâ€Field Directed Selfâ€Assembly of Block Copolymers. Advanced Materials, 2014, 26, 5148-5154.	11.1	66
348	Assessing the current state of commercially available membranes and spacers for energy production with pressure retarded osmosis. Desalination, 2016, 389, 108-118.	4.0	66
349	Combined Organic Fouling and Inorganic Scaling in Reverse Osmosis: Role of Proteinâ€“Silica Interactions. Environmental Science & Technology, 2018, 52, 9145-9153.	4.6	66
350	Mobilization of Natural Colloids from an Iron Oxide-Coated Sand Aquifer:Â Effect of pH and Ionic Strength. Environmental Science & Technology, 2002, 36, 314-322.	4.6	65
351	Norovirus Removal and Particle Association in a Waste Stabilization Pond. Environmental Science & Technology, 2008, 42, 9151-9157.	4.6	65
352	Controlling pore structure of polyelectrolyte multilayer nanofiltration membranes by tuning polyelectrolyte-salt interactions. Journal of Membrane Science, 2019, 581, 413-420.	4.1	65
353	Impact of organic and colloidal fouling on trace organic contaminant rejection by forward osmosis: Role of initial permeate flux. Desalination, 2014, 336, 146-152.	4.0	62
354	Carbon nanotubes keep up the heat. Nature Nanotechnology, 2017, 12, 501-503.	15.6	62
355	The open membrane database: Synthesisâ€“structureâ€“performance relationships of reverse osmosis membranes. Journal of Membrane Science, 2022, 641, 119927.	4.1	62
356	Kinetics and energetics trade-off in reverse osmosis desalination with different configurations. Desalination, 2017, 401, 42-52.	4.0	61
357	Fatty acid fouling of reverse osmosis membranes: Implications for wastewater reclamation. Water Research, 2008, 42, 4393-4403.	5.3	60
358	Cp* Iridium Precatalysts for Selective Câ€“H Oxidation with Sodium Periodate As the Terminal Oxidant. Organometallics, 2013, 32, 957-965.	1.1	60
359	Biocatalytic and salt selective multilayer polyelectrolyte nanofiltration membrane. Journal of Membrane Science, 2018, 549, 357-365.	4.1	60
360	Inorganic Scaling in Membrane Desalination: Models, Mechanisms, and Characterization Methods. Environmental Science & Technology, 2022, 56, 7484-7511.	4.6	60

#	Article	IF	Citations
361	Emergence of thermodynamic restriction and its implications for full-scale reverse osmosis processes. Desalination, 2003, 155, 213-228.	4.0	59
362	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
363	Evaluating ionic organic draw solutes in osmotic membrane bioreactors for water reuse. Journal of Membrane Science, 2016, 514, 636-645.	4.1	59
364	Acyl-chloride quenching following interfacial polymerization to modulate the water permeability, selectivity, and surface charge of desalination membranes. Journal of Membrane Science, 2017, 535, 357-364.	4.1	58
365	Elucidating the mechanisms underlying the difference between chloride and nitrate rejection in nanofiltration. Journal of Membrane Science, 2018, 548, 694-701.	4.1	58
366	Zwitterionic coating on thin-film composite membranes to delay gypsum scaling in reverse osmosis. Journal of Membrane Science, 2021, 618, 118568.	4.1	58
367	Removal of calcium ions from water by selective electrosorption using target-ion specific nanocomposite electrode. Water Research, 2019, 160, 445-453.	5.3	57
368	The role of forward osmosis and microfiltration in an integrated osmotic-microfiltration membrane bioreactor system. Chemosphere, 2015, 136, 125-132.	4.2	56
369	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
370	Particle Deposition onto Solid Surfaces with Micropatterned Charge Heterogeneity:Â The â€œHydrodynamic Bumpâ€•Effect. Langmuir, 2003, 19, 6594-6597.	1.6	55
371	Ion Selectivity in Brackish Water Desalination by Reverse Osmosis: Theory, Measurements, and Implications. Environmental Science and Technology Letters, 2020, 7, 42-47.	3.9	55
372	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
373	Tutorial review of reverse osmosis and electrodialysis. Journal of Membrane Science, 2022, 647, 120221.	4.1	55
374	Cryptosporidium Oocyst Surface Macromolecules Significantly Hinder Oocyst Attachment. Environmental Science & Technology, 2006, 40, 1837-1842.	4.6	54
375	Economic performance of membrane distillation configurations in optimal solar thermal desalination systems. Desalination, 2019, 472, 114164.	4.0	53
376	A novel two-dimensional model for colloid transport in physically and geochemically heterogeneous porous media. Journal of Contaminant Hydrology, 2001, 49, 173-199.	1.6	52
377	Energy barriers to anion transport in polyelectrolyte multilayer nanofiltration membranes: Role of intra-pore diffusion. Journal of Membrane Science, 2020, 603, 117921.	4.1	51
378	Particle Filtration for Wastewater Irrigation. Journal of Irrigation and Drainage Engineering - ASCE, 1989, 115, 474-487.	0.6	50

#	Article	IF	Citations
379	The effect of particle density on collisions between sinking particles: implications for particle aggregation in the ocean. Deep-Sea Research Part I: Oceanographic Research Papers, 1994, 41, 469-483.	0.6	50
380	Elements Provide a Clue: Nanoscale Characterization of Thin-Film Composite Polyamide Membranes. ACS Applied Materials & Interfaces, 2015, 7, 16917-16922.	4.0	50
381	Role of Reverse Divalent Cation Diffusion in Forward Osmosis Biofouling. Environmental Science & Technology, 2015, 49, 13222-13229.	4.6	50
382	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
383	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
384	Derivation of the Theoretical Minimum Energy of Separation of Desalination Processes. Journal of Chemical Education, 2020, 97, 4361-4369.	1.1	50
385	Engineered Nanoconfinement Accelerating Spontaneous Manganese-Catalyzed Degradation of Organic Contaminants. Environmental Science & Technology, 2021, 55, 16708-16715.	4.6	50
386	Designing polymeric membranes with coordination chemistry for high-precision ion separations. Science Advances, 2022, 8, eabm9436.	4.7	50
387	Coupled Influence of Colloidal and Hydrodynamic Interactions on the RSA Dynamic Blocking Function for Particle Deposition onto Packed Spherical Collectors. Journal of Colloid and Interface Science, 2000, 229, 554-567.	5.0	49
388	Silica-Coated Titania and Zirconia Colloids for Subsurface Transport Field Experiments. Environmental Science & Technology, 2000, 34, 2000-2005.	4.6	49
389	Engineering Carbon Nanotube Forest Superstructure for Robust Thermal Desalination Membranes. Advanced Functional Materials, 2019, 29, 1903125.	7.8	48
390	Graphene Oxide-Functionalized Membranes: The Importance of Nanosheet Surface Exposure for Biofouling Resistance. Environmental Science & Technology, 2020, 54, 517-526.	4.6	47
391	Capillary-driven desalination in a synthetic mangrove. Science Advances, 2020, 6, eaax5253.	4.7	47
392	Indirect evidence for hydration forces in the deposition of polystyrene latex colloids on glass surfaces. Journal of the Chemical Society, Faraday Transactions, 1990, 86, 1623.	1.7	46
393	Colloid transport in a geochemically heterogeneous porous medium: aquifer tank experiment and modeling. Journal of Contaminant Hydrology, 2003, 65, 161-182.	1.6	46
394	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
395	Asymmetric membranes for membrane distillation and thermo-osmotic energy conversion. Desalination, 2019, 452, 141-148.	4.0	46
396	Perfect divalent cation selectivity with capacitive deionization. Water Research, 2022, 210, 117959.	5.3	46

#	Article	IF	Citations
397	Adhesion of Nonmotile Pseudomonas aeruginosa on â€œSoftâ€•Polyelectrolyte Layer in a Radial Stagnation Point Flow System:â€‰ Measurements and Model Predictions. Langmuir, 2007, 23, 12301-12308.	1.6	45
398	Machine learning reveals key ion selectivity mechanisms in polymeric membranes with subnanometer pores. Science Advances, 2022, 8, eabl5771.	4.7	45
399	Sensitivity analysis and parameter identifiability for colloid transport in geochemically heterogeneous porous media. Water Resources Research, 2001, 37, 209-222.	1.7	44
400	Micropatterning Microscopic Charge Heterogeneity on Flat Surfaces for Studying the Interaction between Colloidal Particles and Heterogeneously Charged Surfaces. Nano Letters, 2002, 2, 393-396.	4.5	44
401	Yale constructs forward osmosis desalination pilot plant. Membrane Technology, 2007, 2007, 7-8.	0.5	44
402	Osmotic dilution for sustainable greenwall irrigation by liquid fertilizer: Performance and implications. Journal of Membrane Science, 2015, 494, 32-38.	4.1	44
403	Tuning the permselectivity of polymeric desalination membranes via control of polymer crystallite size. Nature Communications, 2019, 10, 2347.	5.8	43
404	Probing the Viability of Oxo-Coupling Pathways in Iridium-Catalyzed Oxygen Evolution. Organometallics, 2013, 32, 5384-5390.	1.1	42
405	Elucidating the Role of Oxidative Debris in the Antimicrobial Properties of Graphene Oxide. ACS Applied Nano Materials, 2018, 1, 1164-1174.	2.4	42
406	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
407	Control of Calcium Sulfate (Gypsum) Scale in Nanofiltration of Saline Agricultural Drainage Water. Environmental Engineering Science, 2002, 19, 387-397.	0.8	40
408	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
409	Removal of arsenic with reduced graphene oxide-TiO2-enabled nanofibrous mats. Chemical Engineering Journal, 2019, 375, 122040.	6.6	40
410	Reverse Osmosis Biofilm Dispersal by Osmotic Back-Flushing: Cleaning via Substratum Perforation. Environmental Science and Technology Letters, 2014, 1, 162-166.	3.9	39
411	Loss of Phospholipid Membrane Integrity Induced by Two-Dimensional Nanomaterials. Environmental Science and Technology Letters, 2017, 4, 404-409.	3.9	39
412	Calculation of particle deposition rate under unfavourable particleâ€“surface interactions. Journal of the Chemical Society, Faraday Transactions, 1993, 89, 3443-3452.	1.7	38
413	Monte Carlo simulation of colloidal membrane filtration: Model development with application to characterization of colloid phase transition. Journal of Membrane Science, 2005, 255, 291-305.	4.1	38
414	Designing a biocidal reverse osmosis membrane coating: Synthesis and biofouling properties. Desalination, 2016, 380, 52-59.	4.0	38

#	Article	IF	Citations
415	Assessment of latrine use and quality and association with risk of trachoma in rural Tanzania. Transactions of the Royal Society of Tropical Medicine and Hygiene, 2010, 104, 283-289.	0.7	37
416	Techno-economic assessment of a closed-loop osmotic heat engine. Journal of Membrane Science, 2017, 535, 178-187.	4.1	37
417	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
418	A Path to Ultraselectivity: Support Layer Properties To Maximize Performance of Biomimetic Desalination Membranes. Environmental Science & Technology, 2018, 52, 10737-10747.	4.6	36
419	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
420	Aligned Nanostructured Polymers by Magnetic-Field-Directed Self-Assembly of a Polymerizable Lyotropic Mesophase. ACS Applied Materials & Interfaces, 2014, 6, 19710-19717.	4.0	35
421	Strong Differential Monovalent Anion Selectivity in Narrow Diameter Carbon Nanotube Porins. ACS Nano, 2020, 14, 6269-6275.	7.3	35
422	Complexation between dissolved silica and alginate molecules: Implications for reverse osmosis membrane fouling. Journal of Membrane Science, 2020, 605, 118109.	4.1	35
423	Theoretical investigation of colloid separation from dilute aqueous suspensions by oppositely charged granular media. Separation and Purification Technology, 1992, 2, 2-12.	0.7	34
424	Relationship between Use of Water from Community-Scale Water Treatment Refill Kiosks and Childhood Diarrhea in Jakarta. American Journal of Tropical Medicine and Hygiene, 2012, 87, 979-984.	0.6	34
425	Mitigating biofouling on thin-film composite polyamide membranes using a controlled-release platform. Journal of Membrane Science, 2014, 453, 84-91.	4.1	34
426	Single crystal texture by directed molecular self-assembly along dual axes. Nature Materials, 2019, 18, 1235-1243.	13.3	34
427	Isolation and assessment of phytate-hydrolysing bacteria from the DelMarVa Peninsula. Environmental Microbiology, 2007, 9, 3100-3107.	1.8	33
428	Photografting Graphene Oxide to Inert Membrane Materials to Impart Antibacterial Activity. Environmental Science and Technology Letters, 2019, 6, 141-147.	3.9	33
429	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
430	Spatial assessment of tap-water safety in China. Nature Sustainability, 2022, 5, 689-698.	11.5	33
431	Biological approaches for addressing the grand challenge of providing access to clean drinking water. Journal of Biological Engineering, 2011, 5, 2.	2.0	32
432	Carbon nanotube bundling: influence on layer-by-layer assembly and antimicrobial activity. Soft Matter, 2013, 9, 2136.	1.2	32

#	Article	IF	Citations
433	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
434	Membrane characterization by dynamic hysteresis: Measurements, mechanisms, and implications for membrane fouling. Journal of Membrane Science, 2011, 366, 17-24.	4.1	31
435	Polyamide formation on a cellulose triacetate support for osmotic membranes: Effect of linking molecules on membrane performance. Desalination, 2013, 312, 2-9.	4.0	31
436	More than a Drop in the Bucket: Decentralized Membrane-Based Drinking Water Refill Stations in Southeast Asia. Environmental Science & Technology, 2013, 47, 7580-7588.	4.6	31
437	Vapor-gap membranes for highly selective osmotically driven desalination. Journal of Membrane Science, 2018, 555, 407-417.	4.1	31
438	Electrochemical-Osmotic Process for Simultaneous Recovery of Electric Energy, Water, and Metals from Wastewater. Environmental Science & Technology, 2020, 54, 8430-8442.	4.6	31
439	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
440	Removing particles and THM precursors by enhanced coagulation. Journal - American Water Works Association, 1998, 90, 139-150.	0.2	29
441	Enhanced Photocatalytic Water Decontamination by Microâ€“Nano Bubbles: Measurements and Mechanisms. Environmental Science & Technology, 2021, 55, 7025-7033.	4.6	29
442	Dynamics of Coagulation of Clay Particles with Aluminum Sulfate. Journal of Environmental Engineering, ASCE, 1994, 120, 169-189.	0.7	28
443	Adsorption Kinetics and Reversibility of Linear Plasmid DNA on Silica Surfaces: Influence of Alkaline Earth and Transition Metal Ions. Biomacromolecules, 2010, 11, 1225-1230.	2.6	28
444	The importance of microscopic characterization of membrane biofilms in an unconfined environment. Desalination, 2014, 348, 8-15.	4.0	27
445	Membrane distillation assisted by heat pump for improved desalination energy efficiency. Desalination, 2020, 496, 114694.	4.0	27
446	Water flows, energy demand, and market analysis of the informal water sector in Kisumu, Kenya. Ecological Economics, 2013, 87, 137-144.	2.9	26
447	Photo-electrochemical Osmotic System Enables Simultaneous Metal Recovery and Electricity Generation from Wastewater. Environmental Science & Technology, 2021, 55, 604-613.	4.6	26
448	Synergistic Nanowire-Enhanced Electroporation and Electrochlorination for Highly Efficient Water Disinfection. Environmental Science & Technology, 2022, 56, 10925-10934.	4.6	26
449	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
450	Molecular Simulations to Elucidate Transport Phenomena in Polymeric Membranes. Environmental Science & Technology, 2022, 56, 3313-3323.	4.6	25

#	Article	IF	Citations
451	Controlled grafting of polymer brush layers from porous cellulosic membranes. Journal of Membrane Science, 2020, 596, 117719.	4.1	24
452	Deposition of Brownian particles in porous media: Modified boundary conditions for the sphere-in-cell model. Journal of Colloid and Interface Science, 1992, 153, 294-297.	5.0	23
453	Reverse Permeation of Weak Electrolyte Draw Solutes in Forward Osmosis. Industrial & Engineering Chemistry Research, 2012, 51, 13463-13472.	1.8	23
454	Bacterial inactivation by a carbon nanotubeâ€“iron oxide nanocomposite: a mechanistic study usingE. colimutants. Environmental Science: Nano, 2018, 5, 372-380.	2.2	22
455	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
456	Response to comments on â€œcomparison of energy consumption in desalination by capacitive deionization and reverse osmosisâ€• Desalination, 2019, 462, 48-55.	4.0	22
457	Design principles and challenges of bench-scale high-pressure reverse osmosis up to 150Âbar. Desalination, 2021, 517, 115237.	4.0	22
458	Distinct impacts of natural organic matter and colloidal particles on gypsum crystallization. Water Research, 2022, 218, 118500.	5.3	22
459	The role of endocrine disrupters in water recycling: risk or mania?. Water Science and Technology, 2004, 50, 215-220.	1.2	21
460	Viability of Harvesting Salinity Gradient (Blue) Energy by Nanopore-Based Osmotic Power Generation. Engineering, 2022, 9, 51-60.	3.2	21
461	Biogas sparging to control fouling and enhance resource recovery from anaerobically digested sludge centrate by forward osmosis. Journal of Membrane Science, 2021, 625, 119176.	4.1	21
462	Effect of depletion interactions on transport of colloidal particles in porous media. Journal of Colloid and Interface Science, 2003, 262, 372-383.	5.0	20
463	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
464	Novel numerical method for calculating initial flux of colloid particle adsorption through an energy barrier. Journal of Colloid and Interface Science, 2008, 319, 406-415.	5.0	20
465	Modeling Risk Categories to Predict the Longitudinal Prevalence of Childhood Diarrhea in Indonesia. American Journal of Tropical Medicine and Hygiene, 2013, 89, 884-891.	0.6	20
466	Sub-1 Î¼m Free-Standing Symmetric Membrane for Osmotic Separations. Environmental Science and Technology Letters, 2019, 6, 492-498.	3.9	20
467	True driving force and characteristics of water transport in osmotic membranes. Desalination, 2021, 520, 115360.	4.0	20
468	Comparing the Effectiveness of Shared versus Private Latrines in Preventing Trachoma in Rural Tanzania. American Journal of Tropical Medicine and Hygiene, 2010, 82, 693-695.	0.6	19

#	Article	IF	Citations
469	Induced Charge Anisotropy: A Hidden Variable Affecting Ion Transport through Membranes. Matter, 2020, 2, 735-750.	5.0	19
470	Membrane Separations in Aquatic Systems. Environmental Engineering Science, 2002, 19, 341-341.	0.8	17
471	Gravity-Induced Coagulation of Spherical Particles of Different Size and Density. Journal of Colloid and Interface Science, 1998, 197, 334-347.	5.0	16
472	Particulate and THM Precursor Removal with Ferric Chloride. Journal of Environmental Engineering, ASCE, 1999, 125, 1054-1061.	0.7	16
473	Electrospun silica nanofiber mats functionalized with ceria nanoparticles for water decontamination. RSC Advances, 2019, 9, 19408-19417.	1.7	16
474	Selective Fluoride Transport in Subnanometer TiO₂ Pores. ACS Nano, 2021, 15, 16828-16838.	7.3	16
475	New parametrization method for salt permeability of reverse osmosis desalination membranes. , 2022, 2, 100010.		16
476	Effect of Final Monomer Deposition Steps on Molecular Layer-by-Layer Polyamide Surface Properties. Langmuir, 2016, 32, 10815-10823.	1.6	15
477	Stable Sequestration of Single-Walled Carbon Nanotubes in Self-Assembled Aqueous Nanopores. Journal of the American Chemical Society, 2012, 134, 3950-3953.	6.6	14
478	Precisely Engineered Photoreactive Titanium Nanoarray Coating to Mitigate Biofouling in Ultrafiltration. ACS Applied Materials & Interfaces, 2021, 13, 9975-9984.	4.0	14
479	Mining Nontraditional Water Sources for a Distributed Hydrogen Economy. Environmental Science & Technology, 2022, 56, 10577-10585.	4.6	14
480	Doing nano-enabled water treatment right: sustainability considerations from design and research through development and implementation. Environmental Science: Nano, 2020, 7, 3255-3278.	2.2	13
481	Chlorine-Resistant Epoxide-Based Membranes for Sustainable Water Desalination. Environmental Science and Technology Letters, 2021, 8, 818-824.	3.9	12
482	Joule-Heated Layered Double Hydroxide Sponge for Rapid Removal of Silica from Water. Environmental Science & Technology, 2021, 55, 16130-16142.	4.6	12
483	Natural organic matter fouling and chemical cleaning of nanofiltration membranes. Water Science and Technology: Water Supply, 2004, 4, 245-251.	1.0	11
484	Reply to Comment on Breakdown of Colloid Filtration Theory:Â Role of the Secondary Energy Minimum and Surface Charge Heterogeneities. Langmuir, 2005, 21, 10896-10897.	1.6	10
485	Relationship between distance to social gathering facilities and risk of trachoma for households in rural Tanzanian communities. Social Science and Medicine, 2011, 73, 1-5.	1.8	10
486	Selective and sensitive environmental gas sensors enabled by membrane overlayers. Trends in Chemistry, 2021, 3, 547-560.	4.4	10

#	Article	IF	Citations
487	Surface Cell Density Effects on Escherichia coli Gene Expression during Cell Attachment. Environmental Science & Technology, 2013, 47, 6223-6230.	4.6	9
488	Recent Developments in Forward Osmosis Processes. Water Intelligence Online, 2017, 16, 9781780408125.	0.3	9
489	Nanoscale Thickness Control of Nanoporous Films Derived from Directionally Photopolymerized Mesophases. Advanced Materials Interfaces, 2021, 8, 2001977.	1.9	9
490	Module-scale analysis of low-salt-rejection reverse osmosis: Design guidelines and system performance. Water Research, 2022, 209, 117936.	5.3	9
491	Correlation equation for evaluating energy consumption and process performance of brackish water desalination by electrodialysis. Desalination, 2021, 510, 115089.	4.0	8
492	Electrical properties of interfaces. , 1995, , 9-32.		7
493	Shear-Induced Reorganization of Deformable Molecular Assemblages:Â Monte Carlo Studies. Langmuir, 2001, 17, 552-561.	1.6	7
494	Tethered electrolyte active-layer membranes. Journal of Membrane Science, 2022, 642, 120004.	4.1	7
495	Energy-efficient water purification made possible by Yale engineers. Membrane Technology, 2009, 2009, 10-11.	0.5	6
496	Shape-Dependent Interactions of Manganese Oxide Nanomaterials with Lipid Bilayer Vesicles. Langmuir, 2019, 35, 13958-13966.	1.6	5
497	Optimal design of a microthermoelectric cooler for microelectronics. Microelectronics Journal, 2011, 42, 772-777.	1.1	4
498	Comment on â€œTechno-economic analysis of capacitive and intercalative water deionizationâ€•by M. Metzger, M. Besli, S. Kuppan, S. Hellstrom, S. Kim, E. Sebti, C. Subban and J. Christensen, Energy Environ. Sci., 2020, 13, 1544. Energy and Environmental Science, 2021, 14, 2494-2498.	15.6	4
499	Deposition of Colloids in Porous Media. ACS Symposium Series, 1992, , 26-39.	0.5	3
500	Modelling of particle deposition onto ideal collectors. , 1995, , 113-156.		3
501	Electrical properties of interfaces. , 1995, , 9-32.		3
502	Response to Comment on â€œCorrelation Equation for Predicting Single-Collector Efficiency in Physicochemical Filtration in Saturated Porous Mediaâ€• Environmental Science & Technology, 2005, 39, 5496-5497.	4.6	3
503	Reply to â€œA resurrection of the Haber-Weiss reactionâ€• Nature Communications, 2022, 13, 395.	5.8	3
504	Low flow data logger in membrane distillation: An interdisciplinary laboratory in process control. , 2014, , .		2

#	Article	IF	Citations
505	Studying water and solute transport through desalination membranes via neutron radiography. Journal of Membrane Science, 2018, 548, 667-675.	4.1	2
506	Discussion of â€œColloid Filtration in Fluidized Bedsâ€•by George Sprouse and Bruce E. Rittmann (March/April 1990, Vol. 116, No. 2). Journal of Environmental Engineering, ASCE, 1991, 117, 706-708.	0.7	1
507	Experimental techniques in particle deposition kinetics. , 1995, , 290-309.		1
508	Theoretical predictions compared to experimental observations in particle deposition kinetics. , 1995, , 310-343.		1
509	Modelling of particle deposition onto ideal collectors. , 1995, , 113-156.		1
510	Experimental techniques in particle deposition kinetics. , 1995, , 290-309.		1
511	A Novel, Safe, and Environmentally Friendly Technology for Water Production Through Recovery of Rejected Thermal Energy From Nuclear Power Plants. , 2006, , 355.		1
512	Dynamics of colloid deposition in porous media: modeling the role of retained particles. , 1993, , 49-63.		0
513	Transport of colloidal materials in ground water. , 1995, , 361-375.		0
514	Experimental techniques for aggregation studies. , 1995, , 263-289.		0
515	Experimental techniques for aggregation studies. , 1995, , 263-289.		0
516	Theoretical predictions compared to experimental observations in particle deposition kinetics. , 1995, , 310-343.		0
517	Transport of colloidal materials in ground water. , 1995, , 361-375.		0
518	In situ monitoring techniques for concentration polarization and fouling phenomena in membrane filtration. Advances in Colloid and Interface Science, 2003, 107, 83-83.	7.0	0
519	Particle deposition onto solid surfaces with microscopic charge heterogeneity: the "bump effect". , 0, , .		0
520	In honor of Charles R. O'Melia: Researcher, scholar, engineer, and educator | Guest Editors for the Charles R. O'Melia tribute issue. Environmental Science & Technology, 2005, 39, 352A-353A.	4.6	0
521	Development of a Megasonic System for Cleaning Flat Panel Display. Solid State Phenomena, 0, 187, 181-184.	0.3	0
522	Laser Interferometry for Precise Measurement of Ultralow Flow Rates from Permeable Materials. Environmental Science and Technology Letters, 2022, 9, 233-238.	3.9	0

#	Article	IF	Citations
523	(Invited) Electrified Membranes for Transformation of Nitrate in Wastewaters. ECS Meeting Abstracts, 2022, MA2022-01, 1798-1798.	0.0	0