Menachem Elimelech

List of Publications by Year
in descending order

523	109,664	82	198
papers	citations	170 h-index	315 g-index

535	535	535	47836
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Science and technology for water purification in the coming decades. Nature, 2008, 452, 301-310.	27.8	6,795
2	The Future of Seawater Desalination: Energy, Technology, and the Environment. Science, 2011, 333, 712-717.	12.6	4,908
3	Forward osmosis: Principles, applications, and recent developments. Journal of Membrane Science, 2006, 281, 70-87.	8.2	2,089
4	Materials for next-generation desalination and water purification membranes. Nature Reviews Materials, 2016, 1, .	48.7	1,977
5	Maximizing the right stuff: The trade-off between membrane permeability and selectivity. Science, 2017, 356, .	12.6	1,864
6	Environmental Applications of Carbon-Based Nanomaterials. Environmental Science & Technology, 2008, 42, 5843-5859.	10.0	1,337
7	Membrane-based processes for sustainable power generation using water. Nature, 2012, 488, 313-319.	27.8	1,242
8	Environmental applications of graphene-based nanomaterials. Chemical Society Reviews, 2015, 44, 5861-5896.	38.1	1,236
9	Single-Walled Carbon Nanotubes Exhibit Strong Antimicrobial Activity. Langmuir, 2007, 23, 8670-8673.	3.5	1,165
10	Chemical and physical aspects of natural organic matter (NOM) fouling of nanofiltration membranes. Journal of Membrane Science, 1997, 132, 159-181.	8.2	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.	8.2	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.	8.2	1,010
13	Antibacterial Effects of Carbon Nanotubes: Size Does Matter!. Langmuir, 2008, 24, 6409-6413.	3.5	1,003
14	Colloid mobilization and transport in groundwater. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1996, 107, 1-56.	4.7	990
15	Aggregation and Deposition of Engineered Nanomaterials in Aquatic Environments: Role of Physicochemical Interactions. Environmental Science & Technology, 2010, 44, 6532-6549.	10.0	986
16	Correlation Equation for Predicting Single-Collector Efficiency in Physicochemical Filtration in Saturated Porous Media. Environmental Science & Technology, 2004, 38, 529-536.	10.0	983
17	Antifouling membranes for sustainable water purification: strategies and mechanisms. Chemical Society Reviews, 2016, 45, 5888-5924.	38.1	977
18	A novel ammoniaâ€"carbon dioxide forward (direct) osmosis desalination process. Desalination, 2005, 174, 1-11.	8.2	850

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19	Effect of solution chemistry on the surface charge of polymeric reverse osmosis and nanofiltration membranes. Journal of Membrane Science, 1996, 119, 253-268.	8.2	849
20	High Performance Thin-Film Composite Forward Osmosis Membrane. Environmental Science & Technology, 2010, 44, 3812-3818.	10.0	814
21	Antimicrobial Properties of Graphene Oxide Nanosheets: Why Size Matters. ACS Nano, 2015, 9, 7226-7236.	14.6	806
22	Organic fouling of forward osmosis membranes: Fouling reversibility and cleaning without chemical reagents. Journal of Membrane Science, 2010, 348, 337-345.	8.2	744
23	Membrane distillation at the water-energy nexus: limits, opportunities, and challenges. Energy and Environmental Science, 2018, 11, 1177-1196.	30.8	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.	8.2	726
25	Organic Fouling and Chemical Cleaning of Nanofiltration Membranes:Â Measurements and Mechanisms. Environmental Science & Technology, 2004, 38, 4683-4693.	10.0	700
26	Water And Sanitation in Developing Countries: Including Health in the Equation. Environmental Science & Technology, 2007, 41, 17-24.	10.0	698
27	The Global Rise of Zero Liquid Discharge for Wastewater Management: Drivers, Technologies, and Future Directions. Environmental Science & Technology, 2016, 50, 6846-6855.	10.0	682
28	Forward osmosis: Where are we now?. Desalination, 2015, 356, 271-284.	8.2	681
29	Desalination and Reuse of High-Salinity Shale Gas Produced Water: Drivers, Technologies, and Future Directions. Environmental Science & Technology, 2013, 47, 9569-9583.	10.0	655
30	Comparison of fouling behavior in forward osmosis (FO) and reverse osmosis (RO). Journal of Membrane Science, 2010, 365, 34-39.	8.2	645
31	Aggregation and Deposition Kinetics of Fullerene (C60) Nanoparticles. Langmuir, 2006, 22, 10994-11001.	3.5	634
32	Emerging opportunities for nanotechnology to enhance water security. Nature Nanotechnology, 2018, 13, 634-641.	31.5	627
33	Relating Nanofiltration Membrane Performance to Membrane Charge (Electrokinetic) Characteristics. Environmental Science & Technology, 2000, 34, 3710-3716.	10.0	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.	9.4	583
35	Reverse Draw Solute Permeation in Forward Osmosis: Modeling and Experiments. Environmental Science & Technology, 2010, 44, 5170-5176.	10.0	576
36	Internal concentration polarization in forward osmosis: role of membrane orientation. Desalination, 2006, 197, 1-8.	8.2	564

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37	Chemical and physical aspects of organic fouling of forward osmosis membranes. Journal of Membrane Science, 2008, 320, 292-302.	8.2	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.	8.2	535
39	Mobile Subsurface Colloids and Their Role in Contaminant Transport. Advances in Agronomy, 1999, 66, 121-193.	5.2	531
40	Cake-Enhanced Concentration Polarization:Â A New Fouling Mechanism for Salt-Rejecting Membranes. Environmental Science & Technology, 2003, 37, 5581-5588.	10.0	531
41	The Critical Need for Increased Selectivity, Not Increased Water Permeability, for Desalination Membranes. Environmental Science and Technology Letters, 2016, 3, 112-120.	8.7	527
42	Removal of Natural Hormones by Nanofiltration Membranes:Â Measurement, Modeling, and Mechanisms. Environmental Science & Technology, 2004, 38, 1888-1896.	10.0	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.	8.2	517
44	Biofouling of reverse osmosis membranes: Role of biofilm-enhanced osmotic pressure. Journal of Membrane Science, 2007, 295, 11-20.	8.2	517
45	Energy requirements of ammoniaâ€“carbon dioxide forward osmosis desalination. Desalination, 2007, 207, 370-382.	8.2	494
46	Thin-Film Composite Pressure Retarded Osmosis Membranes for Sustainable Power Generation from Salinity Gradients. Environmental Science & Technology, 2011, 45, 4360-4369.	10.0	479
47	Kinetics of deposition of colloidal particles in porous media. Environmental Science & Technology, 1990, 24, 1528-1536.	10.0	470
48	Thin-Film Composite Polyamide Membranes Functionalized with Biocidal Graphene Oxide Nanosheets. Environmental Science and Technology Letters, 2014, 1, 71-76.	8.7	460
49	Electronic-Structure-Dependent Bacterial Cytotoxicity of Single-Walled Carbon Nanotubes. ACS Nano, 2010, 4, 5471-5479.	14.6	456
50	Bacterial Adhesion and Transport in Porous Media:Â Role of the Secondary Energy Minimum. Environmental Science & Technology, 2004, 38, 1777-1785.	10.0	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.	3.1	435
52	Pharmaceutical Retention Mechanisms by Nanofiltration Membranes. Environmental Science & Technology, 2005, 39, 7698-7705.	10.0	434
53	A Singleâ€Walledâ€Carbonâ€Nanotube Filter for Removal of Viral and Bacterial Pathogens. Small, 2008, 4, 481-484.	10.0	431
54	Effect of Membrane Surface Roughness on Colloidâ^'Membrane DLVO Interactions. Langmuir, 2003, 19, 4836-4847.	3.5	419

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55	Influence of membrane support layer hydrophobicity on water flux in osmotically driven membrane processes. Journal of Membrane Science, 2008, 318, 458-466.	8.2	417
56	Measuring the zeta (electrokinetic) potential of reverse osmosis membranes by a streaming potential analyzer. Desalination, 1994, 95, 269-286.	8.2	413
57	Aggregation Kinetics of Alginate-Coated Hematite Nanoparticles in Monovalent and Divalent Electrolytes. Environmental Science & Technology, 2006, 40, 1516-1523.	10.0	413
58	Relating Organic Fouling of Reverse Osmosis Membranes to Intermolecular Adhesion Forces. Environmental Science & Technology, 2006, 40, 980-987.	10.0	405
59	Membrane-based processes for wastewater nutrient recovery: Technology, challenges, and future direction. Water Research, 2016, 89, 210-221.	11.3	405
60	Anti-fouling ultrafiltration membranes containing polyacrylonitrile-graft-poly(ethylene oxide) comb copolymer additives. Journal of Membrane Science, 2007, 298, 136-146.	8.2	404
61	Breakdown of Colloid Filtration Theory:Â Role of the Secondary Energy Minimum and Surface Charge Heterogeneities. Langmuir, 2005, 21, 841-852.	3.5	401
62	Aggregation Kinetics of Multiwalled Carbon Nanotubes in Aquatic Systems: Measurements and Environmental Implications. Environmental Science & Technology, 2008, 42, 7963-7969.	10.0	401
63	Polyamide nanofiltration membrane with highly uniform sub-nanometre pores for sub-1â€‰Ã… precision separation. Nature Communications, 2020, 11, 2015.	12.8	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.	8.2	397
65	Towards single-species selectivity of membranes with subnanometre pores. Nature Nanotechnology, 2020, 15, 426-436.	31.5	389
66	The role of nanotechnology in tackling global water challenges. Nature Sustainability, 2018, 1, 166-175.	23.7	377
67	Deviation from the Classical Colloid Filtration Theory in the Presence of Repulsive DLVO Interactions. Langmuir, 2004, 20, 10818-10828.	3.5	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.	8.2	360
69	Effect of particle size on collision efficiency in the deposition of Brownian particles with electrostatic energy barriers. Langmuir, 1990, 6, 1153-1163.	3.5	356
70	Microbial Cytotoxicity of Carbon-Based Nanomaterials: Implications for River Water and Wastewater Effluent. Environmental Science & Technology, 2009, 43, 2648-2653.	10.0	354
71	Colloid Transport in Geochemically Heterogeneous Porous Media:Â Modeling and Measurements. Environmental Science & Technology, 1996, 30, 3284-3293.	10.0	349
72	Standard Methodology for Evaluating Membrane Performance in Osmotically Driven Membrane Processes. Desalination, 2013, 312, 31-38.	8.2	349

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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.	7.1	348
74	Electrochemical Multiwalled Carbon Nanotube Filter for Viral and Bacterial Removal and Inactivation. Environmental Science & Technology, 2011, 45, 3672-3679.	10.0	345
75	Role of Extracellular Polymeric Substances (EPS) in Biofouling of Reverse Osmosis Membranes. Environmental Science & Technology, 2009, 43, 4393-4398.	10.0	338
76	Physicochemical Determinants of Multiwalled Carbon Nanotube Bacterial Cytotoxicity. Environmental Science & Technology, 2008, 42, 7528-7534.	10.0	335
77	DLVO Interaction between Rough Surfaces. Langmuir, 1998, 14, 3365-3375.	3.5	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.	9.4	331
79	Dynamics of Colloid Deposition in Porous Media: Blocking Based on Random Sequential Adsorption. Langmuir, 1995, 11, 801-812.	3.5	329
80	Gypsum Scaling and Cleaning in Forward Osmosis: Measurements and Mechanisms. Environmental Science & Technology, 2010, 44, 2022-2028.	10.0	324
81	Modeling water flux in forward osmosis: Implications for improved membrane design. AIChE Journal, 2007, 53, 1736-1744.	3.6	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.	9.4	316
83	Chemical and physical aspects of cleaning of organic-fouled reverse osmosis membranes. Journal of Membrane Science, 2006, 272, 198-210.	8.2	315
84	Protein (BSA) fouling of reverse osmosis membranes: Implications for wastewater reclamation. Journal of Membrane Science, 2007, 296, 83-92.	8.2	314
85	Covalent Binding of Single-Walled Carbon Nanotubes to Polyamide Membranes for Antimicrobial Surface Properties. ACS Applied Materials & Interfaces, 2011, 3, 2869-2877.	8.0	313
86	Pathways and challenges for efficient solar-thermal desalination. Science Advances, 2019, 5, eaax0763.	10.3	311
87	The search for a chlorine-resistant reverse osmosis membrane. Desalination, 1994, 95, 325-345.	8.2	310
88	Arsenic removal by ferric chloride. Journal - American Water Works Association, 1996, 88, 155-167.	0.3	310
89	Surface Functionalization of Thin-Film Composite Membranes with Copper Nanoparticles for Antimicrobial Surface Properties. Environmental Science & Technology, 2014, 48, 384-393.	10.0	310
90	Colloidal Fouling of Reverse Osmosis Membranes:Â Measurements and Fouling Mechanisms. Environmental Science & Technology, 1997, 31, 3654-3662.	10.0	307

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91	Omniphobic Polyvinylidene Fluoride (PVDF) Membrane for Desalination of Shale Gas Produced Water by Membrane Distillation. Environmental Science & Technology, 2016, 50, 12275-12282.	10.0	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.	10.0	301
93	Graphene oxide membranes with stable porous structure for ultrafast water transport. Nature Nanotechnology, 2021, 16, 337-343.	31.5	301
94	Arsenic Removal from Drinking Water during Coagulation. Journal of Environmental Engineering, ASCE, 1997, 123, 800-807.	1.4	297
95	Pressure-retarded osmosis for power generation from salinity gradients: is it viable?. Energy and Environmental Science, 2016, 9, 31-48.	30.8	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.	3.5	288
98	Omniphobic Membrane for Robust Membrane Distillation. Environmental Science and Technology Letters, 2014, 1, 443-447.	8.7	288
99	Environmental performance of graphene-based 3D macrostructures. Nature Nanotechnology, 2019, 14, 107-119.	31.5	286
100	Influence of Biomacromolecules and Humic Acid on the Aggregation Kinetics of Single-Walled Carbon Nanotubes. Environmental Science & Technology, 2010, 44, 2412-2418.	10.0	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.	8.0	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.	7.1	275
103	Environmental Applications of Interfacial Materials with Special Wettability. Environmental Science & Technology, 2016, 50, 2132-2150.	10.0	273
104	Global Challenges in Energy and Water Supply: The Promise of Engineered Osmosis. Environmental Science & Technology, 2008, 42, 8625-8629.	10.0	271
105	Performance Limiting Effects in Power Generation from Salinity Gradients by Pressure Retarded Osmosis. Environmental Science & Technology, 2011, 45, 10273-10282.	10.0	270
106	Comparison of the removal of hydrophobic trace organic contaminants by forward osmosis and reverse osmosis. Water Research, 2012, 46, 2683-2692.	11.3	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.	10.0	268
108	Antifouling Ultrafiltration Membranes via Post-Fabrication Grafting of Biocidal Nanomaterials. ACS Applied Materials & Interfaces, 2011, 3, 2861-2868.	8.0	268

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109	Fabrication of desalination membranes by interfacial polymerization: history, current efforts, and future directions. Chemical Society Reviews, 2021, 50, 6290-6307.	38.1	263
110	Nanofoaming of Polyamide Desalination Membranes To Tune Permeability and Selectivity. Environmental Science and Technology Letters, 2018, 5, 123-130.	8.7	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.	8.2	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.	10.0	256
113	Antimicrobial Electrospun Biopolymer Nanofiber Mats Functionalized with Graphene Oxideâ€“Silver Nanocomposites. ACS Applied Materials & Interfaces, 2015, 7, 12751-12759.	8.0	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.	10.0	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.	1.6	254
116	Relative Insignificance of Mineral Grain Zeta Potential to Colloid Transport in Geochemically Heterogeneous Porous Media. Environmental Science & Technology, 2000, 34, 2143-2148.	10.0	245
117	In situ formation of silver nanoparticles on thin-film composite reverse osmosis membranes for biofouling mitigation. Water Research, 2014, 62, 260-270.	11.3	244
118	Fouling of reverse osmosis membranes by hydrophilic organic matter: implications for water reuse. Desalination, 2006, 187, 313-321.	8.2	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.	3.5	234
120	A Forward Osmosisâ€“Membrane Distillation Hybrid Process for Direct Sewer Mining: System Performance and Limitations. Environmental Science & Technology, 2013, 47, 13486-13493.	10.0	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.	3.1	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.	8.2	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.	1.6	232
124	Antifouling Thin-Film Composite Membranes by Controlled Architecture of Zwitterionic Polymer Brush Layer. Environmental Science & Technology, 2017, 51, 2161-2169.	10.0	232
125	Forward with Osmosis: Emerging Applications for Greater Sustainability. Environmental Science & Technology, 2011, 45, 9824-9830.	10.0	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.	8.7	229

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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.	8.2	227
128	Antifouling nanofiltration membranes for membrane bioreactors from self-assembling graft copolymers. Journal of Membrane Science, 2006, 285, 81-89.	8.2	226
129	A novel ammoniaâ€“carbon dioxide osmotic heat engine for power generation. Journal of Membrane Science, 2007, 305, 13-19.	8.2	226
130	Harvesting low-grade heat energy using thermo-osmotic vapour transport through nanoporousÂmembranes. Nature Energy, 2016, 1, .	39.5	226
131	Recent advances in ion selectivity with capacitive deionization. Energy and Environmental Science, 2021, 14, 1095-1120.	30.8	226
132	Kinetics of Colloid Deposition onto Heterogeneously Charged Surfaces in Porous Media. Environmental Science & Technology, 1994, 28, 1164-1171.	10.0	225
133	Peer Reviewed: The Promise of Bank Filtration. Environmental Science & Technology, 2002, 36, 422A-428A.	10.0	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.	8.2	222
135	Tuning Structure and Properties of Graded Triblock Terpolymer-Based Mesoporous and Hybrid Films. Nano Letters, 2011, 11, 2892-2900.	9.1	220
136	Transport of in Situ Mobilized Colloidal Particles in Packed Soil Columns. Environmental Science & Technology, 1998, 32, 3562-3569.	10.0	219
137	Transport ofCryptosporidiumOocysts in Porous Media:Â Role of Straining and Physicochemical Filtrationâ€. Environmental Science & Technology, 2004, 38, 5932-5938.	10.0	219
138	Transport of Single-Walled Carbon Nanotubes in Porous Media: Filtration Mechanisms and Reversibility. Environmental Science & Technology, 2008, 42, 8317-8323.	10.0	219
139	Mechanisms of colloidal natural organic matter fouling in ultrafiltration. Journal of Membrane Science, 2006, 281, 716-725.	8.2	218
140	Development of Omniphobic Desalination Membranes Using a Charged Electrospun Nanofiber Scaffold. ACS Applied Materials & Interfaces, 2016, 8, 11154-11161.	8.0	218
141	High Performance Nanofiltration Membrane for Effective Removal of Perfluoroalkyl Substances at High Water Recovery. Environmental Science & Technology, 2018, 52, 7279-7288.	10.0	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.	3.5	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.	8.0	216
144	Fouling control in a forward osmosis process integrating seawater desalination and wastewater reclamation. Journal of Membrane Science, 2013, 444, 148-156.	8.2	214

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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.	10.3	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.	8.7	213
147	Comparison of energy consumption in desalination by capacitive deionization and reverse osmosis. Desalination, 2019, 455, 100-114.	8.2	210
148	The relative insignificance of advanced materials in enhancing the energy efficiency of desalination technologies. Energy and Environmental Science, 2020, 13, 1694-1710.	30.8	206
149	Highly Hydrophilic Thin-Film Composite Forward Osmosis Membranes Functionalized with Surface-Tailored Nanoparticles. ACS Applied Materials & Interfaces, 2012, 4, 5044-5053.	8.0	204
150	Engineering Surface Energy and Nanostructure of Microporous Films for Expanded Membrane Distillation Applications. Environmental Science & Technology, 2016, 50, 8112-8119.	10.0	203
151	Reinventing Fenton Chemistry: Iron Oxychloride Nanosheet for pH-Insensitive H₂O₂ Activation. Environmental Science and Technology Letters, 2018, 5, 186-191.	8.7	202
152	Bacteriophage PRD1 and Silica Colloid Transport and Recovery in an Iron Oxide-Coated Sand Aquifer. Environmental Science & Technology, 1999, 33, 63-73.	10.0	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.	8.2	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.	10.0	198
156	Influence of colloidal fouling on rejection of trace organic contaminants by reverse osmosis. Journal of Membrane Science, 2004, 244, 215-226.	8.2	197
157	Combined influence of natural organic matter (NOM) and colloidal particles on nanofiltration membrane fouling. Journal of Membrane Science, 2005, 262, 27-41.	8.2	196
158	Role of Ionic Charge Density in Donnan Exclusion of Monovalent Anions by Nanofiltration. Environmental Science & Technology, 2018, 52, 4108-4116.	10.0	196
159	The global challenge for adequate and safe water. Journal of Water Supply: Research and Technology - AQUA, 2006, 55, 3-10.	1.4	195
160	Rethinking wastewater risks and monitoring in light of the COVID-19 pandemic. Nature Sustainability, 2020, 3, 981-990.	23.7	195
161	Protein antifouling mechanisms of PAN UF membranes incorporating PAN-g-PEO additive. Journal of Membrane Science, 2007, 296, 42-50.	8.2	194
162	Mechanism of Heterogeneous Fenton Reaction Kinetics Enhancement under Nanoscale Spatial Confinement. Environmental Science & Technology, 2020, 54, 10868-10875.	10.0	188

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163	Performance evaluation of sucrose concentration using forward osmosis. Journal of Membrane Science, 2009, 338, 61-66.	8.2	185
164	High performance polyester reverse osmosis desalination membrane with chlorine resistance. Nature Sustainability, 2021, 4, 138-146.	23.7	185
165	Cobalt Single Atoms on Tetrapyridomacrocyclic Support for Efficient Peroxymonosulfate Activation. Environmental Science & Technology, 2021, 55, 1242-1250.	10.0	185
166	Toxic Effects of Single-Walled Carbon Nanotubes in the Development of E. coli Biofilm. Environmental Science & Technology, 2010, 44, 4583-4589.	10.0	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.	14.6	183
168	Tailored design of nanofiltration membranes for water treatment based on synthesisâ€“propertyâ€“performance relationships. Chemical Society Reviews, 2022, 51, 672-719.	38.1	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.	10.0	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.	8.2	180
171	Improved Antifouling Properties of Polyamide Nanofiltration Membranes by Reducing the Density of Surface Carboxyl Groups. Environmental Science & Technology, 2012, 46, 13253-13261.	10.0	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.	10.0	177
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