Zhangxin Wang

List of Publications by Year
in descending order

33 papers	3,586 citations	236833 25 h-index	414303 32 g-index
33 all docs	33 docs citations	33 times ranked	3044 citing authors

#	Article	IF	Citations
1	Nanoparticle-templated nanofiltration membranes for ultrahigh performance desalination. Nature Communications, 2018, 9, 2004.	5.8	457
2	Pathways and challenges for efficient solar-thermal desalination. Science Advances, 2019, 5, eaax0763.	4.7	311
3	Environmental Applications of Interfacial Materials with Special Wettability. Environmental Science & Technology, 2016, 50, 2132-2150.	4.6	273
4	Membrane fouling and wetting in membrane distillation and their mitigation by novel membranes with special wettability. Water Research, 2017, 112, 38-47.	5.3	248
5	Novel Janus Membrane for Membrane Distillation with Simultaneous Fouling and Wetting Resistance. Environmental Science & Technology, 2017, 51, 13304-13310.	4.6	227
6	Wetting, Scaling, and Fouling in Membrane Distillation: State-of-the-Art Insights on Fundamental Mechanisms and Mitigation Strategies. ACS ES&T Engineering, 2021, 1, 117-140.	3.7	217
7	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
8	Composite Membrane with Underwater-Oleophobic Surface for Anti-Oil-Fouling Membrane Distillation. Environmental Science & Technology, 2016, 50, 3866-3874.	4.6	190
9	Intrapore energy barriers govern ion transport and selectivity of desalination membranes. Science Advances, 2020, 6, .	4.7	161
10	Tailoring surface charge and wetting property for robust oil-fouling mitigation in membrane distillation. Journal of Membrane Science, 2016, 516, 113-122.	4.1	119
11	Hydrophilic surface coating on hydrophobic PTFE membrane for robust anti-oil-fouling membrane distillation. Applied Surface Science, 2018, 450, 57-65.	3.1	118
12	Mechanism of pore wetting in membrane distillation with alcohol vs. surfactant. Journal of Membrane Science, 2018, 559, 183-195.	4.1	109
13	Minimal and zero liquid discharge with reverse osmosis using low-salt-rejection membranes. Water Research, 2020, 170, 115317.	5.3	102
14	Nanopore-Based Power Generation from Salinity Gradient: Why It Is Not Viable. ACS Nano, 2021, 15, 4093-4107.	7.3	101
15	Coaxially electrospun super-amphiphobic silica-based membrane for anti-surfactant-wetting membrane distillation. Journal of Membrane Science, 2017, 531, 122-128.	4.1	100
16	Composite membrane with electrospun multiscale-textured surface for robust oil-fouling resistance in membrane distillation. Journal of Membrane Science, 2018, 546, 179-187.	4.1	83
17	Probing Pore Wetting in Membrane Distillation Using Impedance: Early Detection and Mechanism of Surfactant-Induced Wetting. Environmental Science and Technology Letters, 2017, 4, 505-510.	3.9	79
18	The impact of low-surface-energy functional groups on oil fouling resistance in membrane distillation. Journal of Membrane Science, 2017, 527, 68-77.	4.1	58

#	Article	IF	Citations
19	Janus Membrane with a Dense Hydrophilic Surface Layer for Robust Fouling and Wetting Resistance in Membrane Distillation: New Insights into Wetting Resistance. Environmental Science & Technology, 2021, 55, 14156-14164.	4.6	57
20	Kinetic model for surfactant-induced pore wetting in membrane distillation. Journal of Membrane Science, 2018, 564, 275-288.	4.1	54
21	Humic acid fouling mitigation by ultrasonic irradiation in membrane distillation process. Separation and Purification Technology, 2015, 154, 328-337.	3.9	41
22	Significance of surface excess concentration in the kinetics of surfactant-induced pore wetting in membrane distillation. Desalination, 2019, 450, 46-53.	4.0	40
23	Ultrasonic assisted direct contact membrane distillation hybrid process for membrane scaling mitigation. Desalination, 2015, 375, 33-39.	4.0	37
24	Gross vs. net energy: Towards a rational framework for assessing the practical viability of pressure retarded osmosis. Journal of Membrane Science, 2016, 503, 132-147.	4.1	31
25	Membrane distillation assisted by heat pump for improved desalination energy efficiency. Desalination, 2020, 496, 114694.	4.0	27
26	Negative Pressure Membrane Distillation for Excellent Gypsum Scaling Resistance and Flux Enhancement. Environmental Science & Technology, 2022, 56, 1405-1412.	4.6	26
27	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
28	Distinct impacts of natural organic matter and colloidal particles on gypsum crystallization. Water Research, 2022, 218, 118500.	5.3	22
29	Viability of Harvesting Salinity Gradient (Blue) Energy by Nanopore-Based Osmotic Power Generation. Engineering, 2022, 9, 51-60.	3.2	21
30	Colloidal interactions between model foulants and engineered surfaces: Interplay between roughness and surface energy. Chemical Engineering Journal Advances, 2021, 8, 100138.	2.4	18
31	One-pot synthesis of magnetic Prussian blue for the highly selective removal of thallium(I) from wastewater: Mechanism and implications. Journal of Hazardous Materials, 2022, 423, 126972.	6.5	12
32	Module-scale analysis of low-salt-rejection reverse osmosis: Design guidelines and system performance. Water Research, 2022, 209, 117936.	5.3	9
33	Interpreting contact angles of surfactant solutions on microporous hydrophobic membranes. , 2022, 2, 100015.		7