

# Shihong Lin

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

91  
papers

6,151  
citations

43  
h-index

78  
g-index

97  
ext. papers

7,753  
ext. citations

11  
avg. IF

6.86  
L-index

#	Paper	IF	Citations
91	Forward osmosis: Where are we now?. <i>Desalination</i> , <b>2015</b> , 356, 271-284	10.3	568
90	Membrane distillation at the water-energy nexus: limits, opportunities, and challenges. <i>Energy and Environmental Science</i> , <b>2018</b> , 11, 1177-1196	35.4	458
89	Nanoparticle-templated nanofiltration membranes for ultrahigh performance desalination. <i>Nature Communications</i> , <b>2018</b> , 9, 2004	17.4	294
88	Omniphobic Membrane for Robust Membrane Distillation. <i>Environmental Science and Technology Letters</i> , <b>2014</b> , 1, 443-447	11	224
87	Environmental Applications of Interfacial Materials with Special Wettability. <i>Environmental Science &amp; Technology</i> , <b>2016</b> , 50, 2132-50	10.3	197
86	Synthesis and characterization of a carbon nanotube/polymer nanocomposite membrane for water treatment. <i>Desalination</i> , <b>2011</b> , 272, 46-50	10.3	196
85	Toxicity Reduction of Polymer-Stabilized Silver Nanoparticles by Sunlight. <i>Journal of Physical Chemistry C</i> , <b>2011</b> , 115, 4425-4432	3.8	178
84	Membrane fouling and wetting in membrane distillation and their mitigation by novel membranes with special wettability. <i>Water Research</i> , <b>2017</b> , 112, 38-47	12.5	174
83	Pathways and challenges for efficient solar-thermal desalination. <i>Science Advances</i> , <b>2019</b> , 5, eaax0763	14.3	172
82	Harvesting low-grade heat energy using thermo-osmotic vapour transport through nanoporous membranes. <i>Nature Energy</i> , <b>2016</b> , 1,	62.3	167
81	Novel Janus Membrane for Membrane Distillation with Simultaneous Fouling and Wetting Resistance. <i>Environmental Science &amp; Technology</i> , <b>2017</b> , 51, 13304-13310	10.3	163
80	Polyamide nanofiltration membrane with highly uniform sub-nanometre pores for sub-1 $\mu$ m precision separation. <i>Nature Communications</i> , <b>2020</b> , 11, 2015	17.4	153
79	Composite Membrane with Underwater-Oleophobic Surface for Anti-Oil-Fouling Membrane Distillation. <i>Environmental Science &amp; Technology</i> , <b>2016</b> , 50, 3866-74	10.3	148
78	Direct contact membrane distillation with heat recovery: Thermodynamic insights from module scale modeling. <i>Journal of Membrane Science</i> , <b>2014</b> , 453, 498-515	9.6	139
77	Silver nanoparticle-alginate composite beads for point-of-use drinking water disinfection. <i>Water Research</i> , <b>2013</b> , 47, 3959-65	12.5	126
76	Thermodynamic limits of extractable energy by pressure retarded osmosis. <i>Energy and Environmental Science</i> , <b>2014</b> , 7, 2706-2714	35.4	124
75	Hybrid pressure retarded osmosis-membrane distillation system for power generation from low-grade heat: thermodynamic analysis and energy efficiency. <i>Environmental Science &amp; Technology</i> , <b>2014</b> , 48, 5306-13	10.3	114

74	Energy Efficiency of Capacitive Deionization. <i>Environmental Science &amp; Technology</i> , <b>2019</b> , 53, 3366-3378	10.3	106
73	Polymeric coatings on silver nanoparticles hinder autoaggregation but enhance attachment to uncoated surfaces. <i>Langmuir</i> , <b>2012</b> , 28, 4178-86	4	102
72	Tailoring surface charge and wetting property for robust oil-fouling mitigation in membrane distillation. <i>Journal of Membrane Science</i> , <b>2016</b> , 516, 113-122	9.6	98
71	Desalination by forward osmosis: Identifying performance limiting parameters through module-scale modeling. <i>Journal of Membrane Science</i> , <b>2015</b> , 491, 159-167	9.6	96
70	Biofouling of membrane distillation, forward osmosis and pressure retarded osmosis: Principles, impacts and future directions. <i>Journal of Membrane Science</i> , <b>2017</b> , 542, 378-398	9.6	96
69	Staged reverse osmosis operation: Configurations, energy efficiency, and application potential. <i>Desalination</i> , <b>2015</b> , 366, 9-14	10.3	88
68	Module-scale analysis of pressure retarded osmosis: performance limitations and implications for full-scale operation. <i>Environmental Science &amp; Technology</i> , <b>2014</b> , 48, 12435-44	10.3	88
67	Deposition of silver nanoparticles in geochemically heterogeneous porous media: predicting affinity from surface composition analysis. <i>Environmental Science &amp; Technology</i> , <b>2011</b> , 45, 5209-15	10.3	83
66	Mechanism of Selective Ion Removal in Membrane Capacitive Deionization for Water Softening. <i>Environmental Science &amp; Technology</i> , <b>2019</b> , 53, 5797-5804	10.3	76
65	Coaxially electrospun super-amphiphobic silica-based membrane for anti-surfactant-wetting membrane distillation. <i>Journal of Membrane Science</i> , <b>2017</b> , 531, 122-128	9.6	75
64	Robust Superhydrophobic Membrane for Membrane Distillation with Excellent Scaling Resistance. <i>Environmental Science &amp; Technology</i> , <b>2019</b> , 53, 11801-11809	10.3	74
63	Mechanism of pore wetting in membrane distillation with alcohol vs. surfactant. <i>Journal of Membrane Science</i> , <b>2018</b> , 559, 183-195	9.6	71
62	Wetting, Scaling, and Fouling in Membrane Distillation: State-of-the-Art Insights on Fundamental Mechanisms and Mitigation Strategies. <i>ACS ES&amp;T Engineering</i> , <b>2021</b> , 1, 117-140		71
61	Energy Efficiency of Desalination: Fundamental Insights from Intuitive Interpretation. <i>Environmental Science &amp; Technology</i> , <b>2020</b> , 54, 76-84	10.3	68
60	Membrane-based osmotic heat engine with organic solvent for enhanced power generation from low-grade heat. <i>Environmental Science &amp; Technology</i> , <b>2015</b> , 49, 5820-7	10.3	67
59	Influence of natural organic matter on transport and retention of polymer coated silver nanoparticles in porous media. <i>Journal of Hazardous Materials</i> , <b>2014</b> , 264, 161-8	12.8	67
58	Intrinsic tradeoff between kinetic and energetic efficiencies in membrane capacitive deionization. <i>Water Research</i> , <b>2018</b> , 129, 394-401	12.5	66
57	Heterogeneities in fullerene nanoparticle aggregates affecting reactivity, bioactivity, and transport. <i>ACS Nano</i> , <b>2010</b> , 4, 5011-8	16.7	64

56	Composite membrane with electrospun multiscale-textured surface for robust oil-fouling resistance in membrane distillation. <i>Journal of Membrane Science</i> , <b>2018</b> , 546, 179-187	9.6	55
55	Membrane Capacitive Deionization with Constant Current vs Constant Voltage Charging: Which Is Better?. <i>Environmental Science &amp; Technology</i> , <b>2018</b> , 52, 4051-4060	10.3	51
54	Kinetics and energetics trade-off in reverse osmosis desalination with different configurations. <i>Desalination</i> , <b>2017</b> , 401, 42-52	10.3	47
53	Distinct Behaviors between Gypsum and Silica Scaling in Membrane Distillation. <i>Environmental Science &amp; Technology</i> , <b>2020</b> , 54, 568-576	10.3	47
52	Reversible thermodynamic cycle analysis for capacitive deionization with modified Donnan model. <i>Journal of Colloid and Interface Science</i> , <b>2018</b> , 512, 522-528	9.3	44
51	The impact of low-surface-energy functional groups on oil fouling resistance in membrane distillation. <i>Journal of Membrane Science</i> , <b>2017</b> , 527, 68-77	9.6	43
50	Probing Pore Wetting in Membrane Distillation Using Impedance: Early Detection and Mechanism of Surfactant-Induced Wetting. <i>Environmental Science and Technology Letters</i> , <b>2017</b> , 4, 505-510	11	43
49	Deposition of aggregated nanoparticles--a theoretical and experimental study on the effect of aggregation state on the affinity between nanoparticles and a collector surface. <i>Environmental Science &amp; Technology</i> , <b>2012</b> , 46, 13270-7	10.3	43
48	Highly Effective Scaling Mitigation in Membrane Distillation Using a Superhydrophobic Membrane with Gas Purging. <i>Environmental Science and Technology Letters</i> , <b>2019</b> , 6, 423-429	11	36
47	Differentiating Solutes with Precise Nanofiltration for Next Generation Environmental Separations: A Review. <i>Environmental Science &amp; Technology</i> , <b>2021</b> , 55, 1359-1376	10.3	36
46	Kinetic model for surfactant-induced pore wetting in membrane distillation. <i>Journal of Membrane Science</i> , <b>2018</b> , 564, 275-288	9.6	35
45	Highly compact, free-standing porous electrodes from polymer-derived nanoporous carbons for efficient electrochemical capacitive deionization. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 1768-1778	13	33
44	Effects of humic acid and electrolytes on photocatalytic reactivity and transport of carbon nanoparticle aggregates in water. <i>Water Research</i> , <b>2012</b> , 46, 4053-62	12.5	32
43	Exact analytical expressions for the potential of electrical double layer interactions for a sphere-plate system. <i>Langmuir</i> , <b>2010</b> , 26, 16638-41	4	32
42	Energy efficiency of membrane distillation: Simplified analysis, heat recovery, and the use of waste-heat. <i>Environment International</i> , <b>2020</b> , 138, 105588	12.9	31
41	Theoretical framework for designing a desalination plant based on membrane capacitive deionization. <i>Water Research</i> , <b>2019</b> , 158, 359-369	12.5	30
40	Significance of surface excess concentration in the kinetics of surfactant-induced pore wetting in membrane distillation. <i>Desalination</i> , <b>2019</b> , 450, 46-53	10.3	27
39	Superhydrophobic-omniphobic membrane with anti-deformable pores for membrane distillation with excellent wetting resistance. <i>Journal of Membrane Science</i> , <b>2021</b> , 620, 118768	9.6	27

38	Theoretical investigation on the steric interaction in colloidal deposition. <i>Langmuir</i> , <b>2012</b> , 28, 15233-45	4	25
37	Nanopore-Based Power Generation from Salinity Gradient: Why It Is Not Viable. <i>ACS Nano</i> , <b>2021</b> , 15, 4093-4107	16.7	24
36	Gross vs. net energy: Towards a rational framework for assessing the practical viability of pressure retarded osmosis. <i>Journal of Membrane Science</i> , <b>2016</b> , 503, 132-147	9.6	23
35	Comparison of the photosensitivity and bacterial toxicity of spherical and tubular fullerenes of variable aggregate size. <i>Journal of Nanoparticle Research</i> , <b>2011</b> , 13, 5121-5127	2.3	23
34	Pore model for nanofiltration: History, theoretical framework, key predictions, limitations, and prospects. <i>Journal of Membrane Science</i> , <b>2021</b> , 620, 118809	9.6	23
33	Multifold Enhancement of Loose Nanofiltration Membrane Performance by Intercalation of Surfactant Assemblies. <i>Environmental Science and Technology Letters</i> , <b>2018</b> , 5, 668-674	11	20
32	Nutrient recovery from treated wastewater by a hybrid electrochemical sequence integrating bipolar membrane electrodialysis and membrane capacitive deionization. <i>Environmental Science: Water Research and Technology</i> , <b>2020</b> , 6, 383-391	4.2	18
31	Mitigation of bidirectional solute flux in forward osmosis via membrane surface coating of zwitterion functionalized carbon nanotubes. <i>Environment International</i> , <b>2019</b> , 131, 104970	12.9	17
30	High-performance polyamide nanofiltration membrane with arch-bridge structure on a highly hydrated cellulose nanofiber support. <i>Science China Materials</i> , <b>2020</b> , 63, 2570-2581	7.1	16
29	Theoretical investigation on the interaction between a soft particle and a rigid surface. <i>Chemical Engineering Journal</i> , <b>2012</b> , 191, 297-305	14.7	16
28	Mass transfer in forward osmosis with hollow fiber membranes. <i>Journal of Membrane Science</i> , <b>2016</b> , 514, 176-185	9.6	16
27	Paradox of stability of nanoparticles at very low ionic strength. <i>Langmuir</i> , <b>2012</b> , 28, 11032-41	4	15
26	Electric double layer formed by polarized ferroelectric thin films. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2013</b> , 5, 2610-7	9.5	14
25	Equivalent film-electrode model for flow-electrode capacitive deionization: Experimental validation and performance analysis. <i>Water Research</i> , <b>2020</b> , 181, 115917	12.5	14
24	Enhanced adsorption and slow release of phosphate by dolomite-alginate composite beads as potential fertilizer. <i>Water Environment Research</i> , <b>2019</b> , 91, 797-804	2.8	13
23	Quantifying the kinetics-energetics performance tradeoff in bipolar membrane electrodialysis. <i>Journal of Membrane Science</i> , <b>2020</b> , 612, 118279	9.6	12
22	Nanoparticle core properties affect attachment of macromolecule-coated nanoparticles to silica surfaces. <i>Environmental Chemistry</i> , <b>2014</b> , 11, 257	3.2	12
21	Thermodynamic reversible cycles of electrochemical desalination with intercalation materials in symmetric and asymmetric configurations. <i>Journal of Colloid and Interface Science</i> , <b>2020</b> , 574, 152-161	9.3	10

20	Intercalation of zwitterionic surfactants dramatically enhances the performance of low-pressure nanofiltration membrane. <i>Journal of Membrane Science</i> , <b>2020</b> , 596, 117726	9.6	9
19	On-site treatment capacity of membrane distillation powered by waste heat or natural gas for unconventional oil and gas wastewater in the Denver-Julesburg Basin. <i>Environment International</i> , <b>2020</b> , 145, 106142	12.9	9
18	Two-dimensional fractal nanocrystals templating for substantial performance enhancement of polyamide nanofiltration membrane. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	9
17	Robust zirconia ceramic membrane with exceptional performance for purifying nano-emulsion oily wastewater. <i>Water Research</i> , <b>2022</b> , 208, 117859	12.5	8
16	Metal-organic framework enables ultraselective polyamide membrane for desalination and water reuse.. <i>Science Advances</i> , <b>2022</b> , 8, eabm4149	14.3	8
15	Mechanism of Permselectivity Enhancement in Polyelectrolyte-Dense Nanofiltration Membranes via Surfactant-Assembly Intercalation. <i>Environmental Science &amp; Technology</i> , <b>2021</b> , 55, 738-748	10.3	7
14	Solar-driven desalination and resource recovery of shale gas wastewater by on-site interfacial evaporation. <i>Chemical Engineering Journal</i> , <b>2022</b> , 428, 132624	14.7	7
13	Environmental implications and applications of carbon nanomaterials in water treatment. <i>Water Science and Technology</i> , <b>2013</b> , 67, 2582-6	2.2	6
12	Janus Membrane with a Dense Hydrophilic Surface Layer for Robust Fouling and Wetting Resistance in Membrane Distillation: New Insights into Wetting Resistance. <i>Environmental Science &amp; Technology</i> , <b>2021</b> , 55, 14156-14164	10.3	6
11	Proton-Conducting Composite Membranes Derived from Ferroxane-Polyvinyl Alcohol Complex. <i>Environmental Engineering Science</i> , <b>2012</b> , 29, 124-132	2	5
10	In-situ monitoring of polyelectrolytes adsorption kinetics by electrochemical impedance spectroscopy: Application in fabricating nanofiltration membranes via layer-by-layer deposition. <i>Journal of Membrane Science</i> , <b>2021</b> , 619, 118747	9.6	5
9	Polyamide Nanofiltration Membranes from Emulsion-Mediated Interfacial Polymerization. <i>ACS ES&amp;T Engineering</i> , <b>2021</b> , 1, 533-542		5
8	Colloidal interactions between model foulants and engineered surfaces: Interplay between roughness and surface energy. <i>Chemical Engineering Journal Advances</i> , <b>2021</b> , 8, 100138	3.6	2
7	The use of anti-scalants in gypsum scaling mitigation: Comparison with membrane surface modification and efficiency in combined reverse osmosis and membrane distillation. <i>Journal of Membrane Science</i> , <b>2022</b> , 643, 120077	9.6	1
6	Bipolar Membrane Electrodialysis for Ammonia Recovery from Synthetic Urine: Experiments, Modeling, and Performance Analysis. <i>Environmental Science &amp; Technology</i> , <b>2021</b> , 55, 14886-14896	10.3	1
5	Contact Thermal Resistance between Silver Nanowires with Poly(vinylpyrrolidone) Interlayers. <i>Nano Letters</i> , <b>2021</b> , 21, 4388-4393	11.5	1
4	Mining resources from water. <i>Resources, Conservation and Recycling</i> , <b>2021</b> , 175, 105853	11.9	1
3	Emerging Challenges and Opportunities for Electrified Membranes to Enhance Water Treatment.. <i>Environmental Science &amp; Technology</i> , <b>2022</b> ,	10.3	1

- 2 Interpreting contact angles of surfactant solutions on microporous hydrophobic membranes **2022**, 2, 100015 ○
- 1 Gypsum scaling in membrane distillation: Impacts of temperature and vapor flux. *Desalination*, **2022**, 525, 115499 10,3 ○