

Akshay Deshmukh

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.

25 papers	2,296 citations	18 h-index	27 g-index
27 ext. papers	3,033 ext. citations	13.5 avg, IF	5.71 L-index

#	Paper	IF	Citations
25	Membrane distillation at the water-energy nexus: limits, opportunities, and challenges. <i>Energy and Environmental Science</i> , 2018 , 11, 1177-1196	35.4	458
24	The Critical Need for Increased Selectivity, Not Increased Water Permeability, for Desalination Membranes. <i>Environmental Science and Technology Letters</i> , 2016 , 3, 112-120	11	392
23	Pressure-retarded osmosis for power generation from salinity gradients: is it viable?. <i>Energy and Environmental Science</i> , 2016 , 9, 31-48	35.4	240
22	Nanophotonics-enabled solar membrane distillation for off-grid water purification. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017 , 114, 6936-6941	11.5	227
21	Comparison of energy consumption in desalination by capacitive deionization and reverse osmosis. <i>Desalination</i> , 2019 , 455, 100-114	10.3	149
20	High-Pressure Reverse Osmosis for Energy-Efficient Hypersaline Brine Desalination: Current Status, Design Considerations, and Research Needs. <i>Environmental Science and Technology Letters</i> , 2018 , 5, 467-475	11	114
19	The relative insignificance of advanced materials in enhancing the energy efficiency of desalination technologies. <i>Energy and Environmental Science</i> , 2020 , 13, 1694-1710	35.4	105
18	Desalination by forward osmosis: Identifying performance limiting parameters through module-scale modeling. <i>Journal of Membrane Science</i> , 2015 , 491, 159-167	9.6	96
17	Understanding the impact of membrane properties and transport phenomena on the energetic performance of membrane distillation desalination. <i>Journal of Membrane Science</i> , 2017 , 539, 458-474	9.6	86
16	Can batch or semi-batch processes save energy in reverse-osmosis desalination?. <i>Desalination</i> , 2017 , 402, 109-122	10.3	78
15	Mechanism of Heterogeneous Fenton Reaction Kinetics Enhancement under Nanoscale Spatial Confinement. <i>Environmental Science & Technology</i> , 2020 , 54, 10868-10875	10.3	56
14	Monte Carlo Simulations of Framework Defects in Layered Two-Dimensional Nanomaterial Desalination Membranes: Implications for Permeability and Selectivity. <i>Environmental Science & Technology</i> , 2019 , 53, 6214-6224	10.3	48
13	Minimal and zero liquid discharge with reverse osmosis using low-salt-rejection membranes. <i>Water Research</i> , 2020 , 170, 115317	12.5	45
12	Asymmetric membranes for membrane distillation and thermo-osmotic energy conversion. <i>Desalination</i> , 2019 , 452, 141-148	10.3	33
11	Relating Selectivity and Separation Performance of Lamellar Two-Dimensional Molybdenum Disulfide (MoS) Membranes to Nanosheet Stacking Behavior. <i>Environmental Science & Technology</i> , 2020 , 54, 9640-9651	10.3	31
10	Multifunctional nanocoated membranes for high-rate electrothermal desalination of hypersaline waters. <i>Nature Nanotechnology</i> , 2020 , 15, 1025-1032	28.7	28
9	Techno-economic assessment of a closed-loop osmotic heat engine. <i>Journal of Membrane Science</i> , 2017 , 535, 178-187	9.6	27

8	Economic performance of membrane distillation configurations in optimal solar thermal desalination systems. <i>Desalination</i> , 2019 , 472, 114164	10.3	27
7	Response to comments on "Comparison of energy consumption in desalination by capacitive deionization and reverse osmosis" <i>Desalination</i> , 2019 , 462, 48-55	10.3	14
6	Novel Positively Charged Metal-Coordinated Nanofiltration Membrane for Lithium Recovery. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 16906-16915	9.5	13
5	Membrane distillation assisted by heat pump for improved desalination energy efficiency. <i>Desalination</i> , 2020 , 496, 114694	10.3	10
4	Membrane desalination performance governed by molecular reflection at the liquid-vapor interface. <i>International Journal of Heat and Mass Transfer</i> , 2019 , 140, 1006-1022	4.9	9
3	Solute displacement in the aqueous phase of water-NaCl-organic ternary mixtures relevant to solvent-driven water treatment.. <i>RSC Advances</i> , 2020 , 10, 29516-29527	3.7	7
2	Multicomponent Fickian solution-diffusion model for osmotic transport through membranes. <i>Journal of Membrane Science</i> , 2021 , 640, 119819	9.6	1
1	Thermodynamics of solvent-driven water extraction from hypersaline brines using dimethyl ether. <i>Chemical Engineering Journal</i> , 2022 , 434, 134391	14.7	0