

Akshay Deshmukh

List of Publications by Year in descending order

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Version: 2024-02-01

26
papers

3,729
citations

331670

21
h-index

526287

27
g-index

27
all docs

27
docs citations

27
times ranked

3477
citing authors

#	ARTICLE	IF	CITATIONS
1	Membrane distillation at the water-energy nexus: limits, opportunities, and challenges. <i>Energy and Environmental Science</i> , 2018, 11, 1177-1196.	30.8	740
2	The Critical Need for Increased Selectivity, Not Increased Water Permeability, for Desalination Membranes. <i>Environmental Science and Technology Letters</i> , 2016, 3, 112-120.	8.7	527
3	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.	7.1	348
4	Pressure-retarded osmosis for power generation from salinity gradients: is it viable?. <i>Energy and Environmental Science</i> , 2016, 9, 31-48.	30.8	289
5	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.	8.7	213
6	Comparison of energy consumption in desalination by capacitive deionization and reverse osmosis. <i>Desalination</i> , 2019, 455, 100-114.	8.2	210
7	The relative insignificance of advanced materials in enhancing the energy efficiency of desalination technologies. <i>Energy and Environmental Science</i> , 2020, 13, 1694-1710.	30.8	206
8	Mechanism of Heterogeneous Fenton Reaction Kinetics Enhancement under Nanoscale Spatial Confinement. <i>Environmental Science & Technology</i> , 2020, 54, 10868-10875.	10.0	188
9	Desalination by forward osmosis: Identifying performance limiting parameters through module-scale modeling. <i>Journal of Membrane Science</i> , 2015, 491, 159-167.	8.2	111
10	Can batch or semi-batch processes save energy in reverse-osmosis desalination?. <i>Desalination</i> , 2017, 402, 109-122.	8.2	105
11	Minimal and zero liquid discharge with reverse osmosis using low-salt-rejection membranes. <i>Water Research</i> , 2020, 170, 115317.	11.3	102
12	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.	8.2	100
13	Multifunctional nanocoated membranes for high-rate electrothermal desalination of hypersaline waters. <i>Nature Nanotechnology</i> , 2020, 15, 1025-1032.	31.5	88
14	Relating Selectivity and Separation Performance of Lamellar Two-Dimensional Molybdenum Disulfide (MoS_2) Membranes to Nanosheet Stacking Behavior. <i>Environmental Science & Technology</i> , 2020, 54, 9640-9651.	10.0	82
15	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.	10.0	80
16	Novel Positively Charged Metal-Coordinated Nanofiltration Membrane for Lithium Recovery. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 16906-16915.	8.0	70
17	Economic performance of membrane distillation configurations in optimal solar thermal desalination systems. <i>Desalination</i> , 2019, 472, 114164.	8.2	53
18	Asymmetric membranes for membrane distillation and thermo-osmotic energy conversion. <i>Desalination</i> , 2019, 452, 141-148.	8.2	46

#	ARTICLE	IF	CITATIONS
19	Techno-economic assessment of a closed-loop osmotic heat engine. <i>Journal of Membrane Science</i> , 2017, 535, 178-187.	8.2	37
20	Membrane distillation assisted by heat pump for improved desalination energy efficiency. <i>Desalination</i> , 2020, 496, 114694.	8.2	27
21	Enhancing the Permselectivity of Thin-Film Composite Membranes Interlayered with MoS ₂ Nanosheets via Precise Thickness Control. <i>Environmental Science & Technology</i> , 2022, 56, 8807-8818.	10.0	27
22	Response to comments on "comparison of energy consumption in desalination by capacitive deionization and reverse osmosis". <i>Desalination</i> , 2019, 462, 48-55.	8.2	22
23	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.	3.6	18
24	Thermodynamics of solvent-driven water extraction from hypersaline brines using dimethyl ether. <i>Chemical Engineering Journal</i> , 2022, 434, 134391.	12.7	17
25	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.	4.8	13
26	Multicomponent Fickian solution-diffusion model for osmotic transport through membranes. <i>Journal of Membrane Science</i> , 2021, 640, 119819.	8.2	7