

Razi Epsztein

List of Publications by Year in descending order

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Version: 2024-02-01

31
papers

2,525
citations

361413

20
h-index

395702

33
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34
all docs

34
docs citations

34
times ranked

2386
citing authors

#	ARTICLE	IF	CITATIONS
1	Towards single-species selectivity of membranes with subnanometre pores. <i>Nature Nanotechnology</i> , 2020, 15, 426-436.	31.5	389
2	Critical Knowledge Gaps in Mass Transport through Single-Digit Nanopores: A Review and Perspective. <i>Journal of Physical Chemistry C</i> , 2019, 123, 21309-21326.	3.1	234
3	Selective removal of divalent cations by polyelectrolyte multilayer nanofiltration membrane: Role of polyelectrolyte charge, ion size, and ionic strength. <i>Journal of Membrane Science</i> , 2018, 559, 98-106.	8.2	227
4	Comparison of energy consumption in desalination by capacitive deionization and reverse osmosis. <i>Desalination</i> , 2019, 455, 100-114.	8.2	210
5	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
6	Role of Ionic Charge Density in Donnan Exclusion of Monovalent Anions by Nanofiltration. <i>Environmental Science & Technology</i> , 2018, 52, 4108-4116.	10.0	196
7	Selective nitrate removal from groundwater using a hybrid nanofiltration–reverse osmosis filtration scheme. <i>Chemical Engineering Journal</i> , 2015, 279, 372-378.	12.7	192
8	Intrapore energy barriers govern ion transport and selectivity of desalination membranes. <i>Science Advances</i> , 2020, 6, .	10.3	161
9	Activation behavior for ion permeation in ion-exchange membranes: Role of ion dehydration in selective transport. <i>Journal of Membrane Science</i> , 2019, 580, 316-326.	8.2	146
10	Controlling pore structure of polyelectrolyte multilayer nanofiltration membranes by tuning polyelectrolyte-salt interactions. <i>Journal of Membrane Science</i> , 2019, 581, 413-420.	8.2	65
11	Biocatalytic and salt selective multilayer polyelectrolyte nanofiltration membrane. <i>Journal of Membrane Science</i> , 2018, 549, 357-365.	8.2	60
12	Elucidating the mechanisms underlying the difference between chloride and nitrate rejection in nanofiltration. <i>Journal of Membrane Science</i> , 2018, 548, 694-701.	8.2	58
13	Energy barriers to anion transport in polyelectrolyte multilayer nanofiltration membranes: Role of intra-pore diffusion. <i>Journal of Membrane Science</i> , 2020, 603, 117921.	8.2	51
14	Machine learning reveals key ion selectivity mechanisms in polymeric membranes with subnanometer pores. <i>Science Advances</i> , 2022, 8, eabl5771.	10.3	45
15	Similarities and differences between potassium and ammonium ions in liquid water: a first-principles study. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 2540-2548.	2.8	33
16	Enthalpic and Entropic Selectivity of Water and Small Ions in Polyamide Membranes. <i>Environmental Science & Technology</i> , 2021, 55, 14863-14875.	10.0	26
17	Applying Transition-State Theory to Explore Transport and Selectivity in Salt-Rejecting Membranes: A Critical Review. <i>Environmental Science & Technology</i> , 2022, 56, 7467-7483.	10.0	26
18	High-rate hydrogenotrophic denitrification in a pressurized reactor. <i>Chemical Engineering Journal</i> , 2016, 286, 578-584.	12.7	23

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19	Desalinated brackish water with improved mineral composition using monovalent-selective nanofiltration followed by reverse osmosis. <i>Desalination</i> , 2021, 520, 115364.	8.2	23
20	Indications of ion dehydration in diffusion-only and pressure-driven nanofiltration. <i>Journal of Membrane Science</i> , 2022, 648, 120358.	8.2	23
21	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
22	Induced Charge Anisotropy: A Hidden Variable Affecting Ion Transport through Membranes. <i>Matter</i> , 2020, 2, 735-750.	10.0	19
23	Capacitive deionization for simultaneous removal of salt and uncharged organic contaminants from water. <i>Separation and Purification Technology</i> , 2020, 237, 116388.	7.9	17
24	Selective Fluoride Transport in Subnanometer TiO ₂ Pores. <i>ACS Nano</i> , 2021, 15, 16828-16838.	14.6	16
25	Rethinking the role of in-line coagulation in tertiary membrane filtration of municipal effluents. <i>Separation and Purification Technology</i> , 2014, 125, 11-20.	7.9	10
26	Pressurized hydrogenotrophic denitrification reactor for small water systems. <i>Journal of Environmental Management</i> , 2018, 216, 315-319.	7.8	10
27	Optimization of coagulation step in membrane treatment of municipal secondary effluents. <i>Desalination and Water Treatment</i> , 2011, 35, 62-67.	1.0	8
28	Simplified model for hydrogenotrophic denitrification in an unsaturated-flow pressurized reactor. <i>Chemical Engineering Journal</i> , 2016, 306, 233-241.	12.7	7
29	Co-reduction of nitrate and perchlorate in a pressurized hydrogenotrophic reactor with complete H ₂ utilization. <i>Chemical Engineering Journal</i> , 2017, 328, 133-140.	12.7	6
30	A pressurized hydrogenotrophic denitrification reactor system for removal of nitrates at high concentrations. <i>Journal of Water Process Engineering</i> , 2021, 42, 102140.	5.6	6
31	Submerged bed versus unsaturated flow reactor: A pressurized hydrogenotrophic denitrification reactor as a case study. <i>Chemosphere</i> , 2016, 161, 151-156.	8.2	3