Razi Epsztein

List of Publications by Year
in descending order

31 papers	2,525 citations	361388 20 h-index	395678 33 g-index
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. Nature Nanotechnology, 2020, 15, 426-436.	31.5	389
2	Critical Knowledge Gaps in Mass Transport through Single-Digit Nanopores: A Review and Perspective. Journal of Physical Chemistry C, 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. Journal of Membrane Science, 2018, 559, 98-106.	8.2	227
4	Comparison of energy consumption in desalination by capacitive deionization and reverse osmosis. Desalination, 2019, 455, 100-114.	8.2	210
5	The relative insignificance of advanced materials in enhancing the energy efficiency of desalination technologies. Energy and Environmental Science, 2020, 13, 1694-1710.	30.8	206
6	Role of Ionic Charge Density in Donnan Exclusion of Monovalent Anions by Nanofiltration. Environmental Science & Technology, 2018, 52, 4108-4116.	10.0	196
7	Selective nitrate removal from groundwater using a hybrid nanofiltrationâ€“reverse osmosis filtration scheme. Chemical Engineering Journal, 2015, 279, 372-378.	12.7	192
8	Intrapore energy barriers govern ion transport and selectivity of desalination membranes. Science Advances, 2020, 6, .	10.3	161
9	Activation behavior for ion permeation in ion-exchange membranes: Role of ion dehydration in selective transport. Journal of Membrane Science, 2019, 580, 316-326.	8.2	146
10	Controlling pore structure of polyelectrolyte multilayer nanofiltration membranes by tuning polyelectrolyte-salt interactions. Journal of Membrane Science, 2019, 581, 413-420.	8.2	65
11	Biocatalytic and salt selective multilayer polyelectrolyte nanofiltration membrane. Journal of Membrane Science, 2018, 549, 357-365.	8.2	60
12	Elucidating the mechanisms underlying the difference between chloride and nitrate rejection in nanofiltration. Journal of Membrane Science, 2018, 548, 694-701.	8.2	58
13	Energy barriers to anion transport in polyelectrolyte multilayer nanofiltration membranes: Role of intra-pore diffusion. Journal of Membrane Science, 2020, 603, 117921.	8.2	51
14	Machine learning reveals key ion selectivity mechanisms in polymeric membranes with subnanometer pores. Science Advances, 2022, 8, eabl5771.	10.3	45
15	Similarities and differences between potassium and ammonium ions in liquid water: a first-principles study. Physical Chemistry Chemical Physics, 2020, 22, 2540-2548.	2.8	33
16	Enthalpic and Entropic Selectivity of Water and Small Ions in Polyamide Membranes. Environmental Science & Technology, 2021, 55, 14863-14875.	10.0	26
17	Applying Transition-State Theory to Explore Transport and Selectivity in Salt-Rejecting Membranes: A Critical Review. Environmental Science & Technology, 2022, 56, 7467-7483.	10.0	26
18	High-rate hydrogenotrophic denitrification in a pressurized reactor. Chemical Engineering Journal, 2016, 286, 578-584.	12.7	23

#	Article	IF	Citations
19	Desalinated brackish water with improved mineral composition using monovalent-selective nanofiltration followed by reverse osmosis. Desalination, 2021, 520, 115364.	8.2	23
20	Indications of ion dehydration in diffusion-only and pressure-driven nanofiltration. Journal of Membrane Science, 2022, 648, 120358.	8.2	23
21	Response to comments on â€œcomparison of energy consumption in desalination by capacitive deionization and reverse osmosisâ€• Desalination, 2019, 462, 48-55.	8.2	22
22	Induced Charge Anisotropy: A Hidden Variable Affecting Ion Transport through Membranes. Matter, 2020, 2, 735-750.	10.0	19
23	Capacitive deionization for simultaneous removal of salt and uncharged organic contaminants from water. Separation and Purification Technology, 2020, 237, 116388.	7.9	17
24	Selective Fluoride Transport in Subnanometer TiO₂ Pores. ACS Nano, 2021, 15, 16828-16838.	14.6	16
25	Rethinking the role of in-line coagulation in tertiary membrane filtration of municipal effluents. Separation and Purification Technology, 2014, 125, 11-20.	7.9	10
26	Pressurized hydrogenotrophic denitrification reactor for small water systems. Journal of Environmental Management, 2018, 216, 315-319.	7.8	10
27	Optimization of coagulation step in membrane treatment of municipal secondary effluents. Desalination and Water Treatment, 2011, 35, 62-67.	1.0	8
28	Simplified model for hydrogenotrophic denitrification in an unsaturated-flow pressurized reactor. Chemical Engineering Journal, 2016, 306, 233-241.	12.7	7
29	Co-reduction of nitrate and perchlorate in a pressurized hydrogenotrophic reactor with complete H2 utilization. Chemical Engineering Journal, 2017, 328, 133-140.	12.7	6
30	A pressurized hydrogenotrophic denitrification reactor system for removal of nitrates at high concentrations. Journal of Water Process Engineering, 2021, 42, 102140.	5.6	6
31	Submerged bed versus unsaturated flow reactor: A pressurized hydrogenotrophic denitrification reactor as a case study. Chemosphere, 2016, 161, 151-156.	8.2	3