

# Martin Z Bazant

## List of Publications by Citations

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271  
papers

20,646  
citations

74  
h-index

138  
g-index

296  
ext. papers

24,268  
ext. citations

7.5  
avg, IF

7.62  
L-index

#	Paper	IF	Citations
271	Transition of lithium growth mechanisms in liquid electrolytes. <i>Energy and Environmental Science</i> , <b>2016</b> , 9, 3221-3229	35.4	704
270	Diffuse-charge dynamics in electrochemical systems. <i>Physical Review E</i> , <b>2004</b> , 70, 021506	2.4	695
269	Double layer in ionic liquids: overscreening versus crowding. <i>Physical Review Letters</i> , <b>2011</b> , 106, 046102	7.4	663
268	Towards an understanding of induced-charge electrokinetics at large applied voltages in concentrated solutions. <i>Advances in Colloid and Interface Science</i> , <b>2009</b> , 152, 48-88	14.3	638
267	Induced-charge electro-osmosis. <i>Journal of Fluid Mechanics</i> , <b>2004</b> , 509, 217-252	3.7	549
266	Particle size dependence of the ionic diffusivity. <i>Nano Letters</i> , <b>2010</b> , 10, 4123-7	11.5	544
265	Steric effects in the dynamics of electrolytes at large applied voltages. I. Double-layer charging. <i>Physical Review E</i> , <b>2007</b> , 75, 021502	2.4	522
264	Theory of SEI Formation in Rechargeable Batteries: Capacity Fade, Accelerated Aging and Lifetime Prediction. <i>Journal of the Electrochemical Society</i> , <b>2013</b> , 160, A243-A250	3.9	515
263	Induced-charge electrokinetic phenomena: theory and microfluidic applications. <i>Physical Review Letters</i> , <b>2004</b> , 92, 066101	7.4	499
262	Data-driven prediction of battery cycle life before capacity degradation. <i>Nature Energy</i> , <b>2019</b> , 4, 383-391	162.3	498
261	Theory of chemical kinetics and charge transfer based on nonequilibrium thermodynamics. <i>Accounts of Chemical Research</i> , <b>2013</b> , 46, 1144-60	24.3	386
260	Interatomic potential for silicon defects and disordered phases. <i>Physical Review B</i> , <b>1998</b> , 58, 2539-2550	3.3	360
259	Steric effects in the dynamics of electrolytes at large applied voltages. II. Modified Poisson-Nernst-Planck equations. <i>Physical Review E</i> , <b>2007</b> , 75, 021503	2.4	353
258	Induced-charge electrophoresis of metallodielectric particles. <i>Physical Review Letters</i> , <b>2008</b> , 100, 058302	7.4	343
257	Suppression of phase separation in LiFePO <sub>4</sub> nanoparticles during battery discharge. <i>Nano Letters</i> , <b>2011</b> , 11, 4890-6	11.5	336
256	Environment-dependent interatomic potential for bulk silicon. <i>Physical Review B</i> , <b>1997</b> , 56, 8542-8552	3.3	327
255	Coherency strain and the kinetics of phase separation in LiFePO <sub>4</sub> nanoparticles. <i>ACS Nano</i> , <b>2012</b> , 6, 2215-2225	18.5	291

254	Origin and hysteresis of lithium compositional spatiodynamics within battery primary particles. <i>Science</i> , <b>2016</b> , 353, 566-71	33.3	281
253	Liquid cell transmission electron microscopy observation of lithium metal growth and dissolution: Root growth, dead lithium and lithium flotsams. <i>Nano Energy</i> , <b>2017</b> , 32, 271-279	17.1	261
252	Intercalation dynamics in rechargeable battery materials: General theory and phase-transformation waves in LiFePO <sub>4</sub> . <i>Electrochimica Acta</i> , <b>2008</b> , 53, 7599-7613	6.7	252
251	Breaking symmetries in induced-charge electro-osmosis and electrophoresis. <i>Journal of Fluid Mechanics</i> , <b>2006</b> , 560, 65	3.7	244
250	Nonlinear dynamics of capacitive charging and desalination by porous electrodes. <i>Physical Review E</i> , <b>2010</b> , 81, 031502	2.4	232
249	Analysis of granular flow in a pebble-bed nuclear reactor. <i>Physical Review E</i> , <b>2006</b> , 74, 021306	2.4	227
248	Current-induced transition from particle-by-particle to concurrent intercalation in phase-separating battery electrodes. <i>Nature Materials</i> , <b>2014</b> , 13, 1149-56	27	220
247	Nonequilibrium Thermodynamics of Porous Electrodes. <i>Journal of the Electrochemical Society</i> , <b>2012</b> , 159, A1967-A1985	3.9	215
246	Attractive forces in microporous carbon electrodes for capacitive deionization. <i>Journal of Solid State Electrochemistry</i> , <b>2014</b> , 18, 1365-1376	2.6	213
245	Current-Voltage Relations for Electrochemical Thin Films. <i>SIAM Journal on Applied Mathematics</i> , <b>2005</b> , 65, 1463-1484	1.8	210
244	Statistical error in particle simulations of hydrodynamic phenomena. <i>Journal of Computational Physics</i> , <b>2003</b> , 187, 274-297	4.1	196
243	Induced-charge electrokinetic phenomena. <i>Current Opinion in Colloid and Interface Science</i> , <b>2010</b> , 15, 203-213	7.6	190
242	Overlimiting current in a microchannel. <i>Physical Review Letters</i> , <b>2011</b> , 107, 118301	7.4	187
241	Diffuse charge and Faradaic reactions in porous electrodes. <i>Physical Review E</i> , <b>2011</b> , 83, 061507	2.4	178
240	Effects of Nanoparticle Geometry and Size Distribution on Diffusion Impedance of Battery Electrodes. <i>Journal of the Electrochemical Society</i> , <b>2013</b> , 160, A15-A24	3.9	171
239	Time-dependent ion selectivity in capacitive charging of porous electrodes. <i>Journal of Colloid and Interface Science</i> , <b>2012</b> , 384, 38-44	9.3	164
238	Size-dependent spinodal and miscibility gaps for intercalation in nanoparticles. <i>Nano Letters</i> , <b>2009</b> , 9, 3795-800	11.5	158
237	Fast ac electro-osmotic micropumps with nonplanar electrodes. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 143508	3.4	148

236	Charge transfer kinetics at the solid-solid interface in porous electrodes. <i>Nature Communications</i> , <b>2014</b> , 5, 3585	17.4	145
235	Membrane-less hydrogen bromine flow battery. <i>Nature Communications</i> , <b>2013</b> , 4, 2346	17.4	141
234	Tensorial hydrodynamic slip. <i>Journal of Fluid Mechanics</i> , <b>2008</b> , 613, 125-134	3.7	140
233	Theoretical prediction of fast 3D AC electro-osmotic pumps. <i>Lab on A Chip</i> , <b>2006</b> , 6, 1455-61	7.2	135
232	Internal resistance matching for parallel-connected lithium-ion cells and impacts on battery pack cycle life. <i>Journal of Power Sources</i> , <b>2014</b> , 252, 8-13	8.9	133
231	A zinc-iron redox-flow battery under \$100 per kW h of system capital cost. <i>Energy and Environmental Science</i> , <b>2015</b> , 8, 2941-2945	35.4	130
230	Experimental observation of induced-charge electro-osmosis around a metal wire in a microchannel. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , <b>2005</b> , 267, 122-132	5.1	130
229	A guideline to limit indoor airborne transmission of COVID-19. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	129
228	Rate-Dependent Morphology of Li <sub>2</sub> O <sub>2</sub> Growth in Li-O <sub>2</sub> Batteries. <i>Journal of Physical Chemistry Letters</i> , <b>2013</b> , 4, 4217-22	6.4	128
227	Theory of coherent nucleation in phase-separating nanoparticles. <i>Nano Letters</i> , <b>2013</b> , 13, 3036-41	11.5	122
226	Critical Knowledge Gaps in Mass Transport through Single-Digit Nanopores: A Review and Perspective. <i>Journal of Physical Chemistry C</i> , <b>2019</b> , 123, 21309-21326	3.8	121
225	Effective slip over superhydrophobic surfaces in thin channels. <i>Physical Review Letters</i> , <b>2009</b> , 102, 026004	7.4	121
224	Electrochemical Thin Films at and above the Classical Limiting Current. <i>SIAM Journal on Applied Mathematics</i> , <b>2005</b> , 65, 1485-1505	1.8	112
223	Interactions between Lithium Growths and Nanoporous Ceramic Separators. <i>Joule</i> , <b>2018</b> , 2, 2434-2449	27.8	112
222	Electrochemistry and capacitive charging of porous electrodes in asymmetric multicomponent electrolytes. <i>Russian Journal of Electrochemistry</i> , <b>2012</b> , 48, 580-592	1.2	111
221	Deionization shocks in microstructures. <i>Physical Review E</i> , <b>2011</b> , 84, 061504	2.4	111
220	Unified nano-mechanics based probabilistic theory of quasibrittle and brittle structures: I. Strength, static crack growth, lifetime and scaling. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2011</b> , 59, 1291-1321	5.1	110
219	Current-induced membrane discharge. <i>Physical Review Letters</i> , <b>2012</b> , 109, 108301	7.4	109

218	Effects of electrostatic correlations on electrokinetic phenomena. <i>Physical Review E</i> , <b>2012</b> , 86, 056303	2.4	106
217	Nonlinear electrochemical relaxation around conductors. <i>Physical Review E</i> , <b>2006</b> , 74, 011501	2.4	106
216	Energetic, vibrational, and electronic properties of silicon using a nonorthogonal tight-binding model. <i>Physical Review B</i> , <b>2000</b> , 62, 4477-4487	3.3	104
215	Steric effects on ac electro-osmosis in dilute electrolytes. <i>Physical Review E</i> , <b>2008</b> , 77, 036317	2.4	103
214	Modeling of Covalent Bonding in Solids by Inversion of Cohesive Energy Curves. <i>Physical Review Letters</i> , <b>1996</b> , 77, 4370-4373	7.4	102
213	Analysis of diffuse-layer effects on time-dependent interfacial kinetics. <i>Journal of Electroanalytical Chemistry</i> , <b>2001</b> , 500, 52-61	4.1	101
212	Analysis of electrolyte transport through charged nanopores. <i>Physical Review E</i> , <b>2016</b> , 93, 053108	2.4	99
211	Overlimiting current and shock electro dialysis in porous media. <i>Langmuir</i> , <b>2013</b> , 29, 16167-77	4	98
210	Strongly nonlinear dynamics of electrolytes in large ac voltages. <i>Physical Review E</i> , <b>2010</b> , 82, 011501	2.4	98
209	Imposed currents in galvanic cells. <i>Electrochimica Acta</i> , <b>2009</b> , 54, 4857-4871	6.7	98
208	Diffusion and mixing in gravity-driven dense granular flows. <i>Physical Review Letters</i> , <b>2004</b> , 92, 174301	7.4	97
207	Experimental verification of overlimiting current by surface conduction and electro-osmotic flow in microchannels. <i>Physical Review Letters</i> , <b>2015</b> , 114, 114501	7.4	95
206	Theory of the Double Layer in Water-in-Salt Electrolytes. <i>Journal of Physical Chemistry Letters</i> , <b>2018</b> , 9, 5840-5846	6.4	94
205	Diffuse-charge effects on the transient response of electrochemical cells. <i>Physical Review E</i> , <b>2010</b> , 81, 021503	2.4	92
204	Revealing electrolyte oxidation via carbonate dehydrogenation on Ni-based oxides in Li-ion batteries by in situ Fourier transform infrared spectroscopy. <i>Energy and Environmental Science</i> , <b>2020</b> , 13, 183-199	35.4	91
203	Effective slip boundary conditions for arbitrary periodic surfaces: the surface mobility tensor. <i>Journal of Fluid Mechanics</i> , <b>2010</b> , 658, 409-437	3.7	90
202	Velocity profile of granular flows inside silos and hoppers. <i>Journal of Physics Condensed Matter</i> , <b>2005</b> , 17, S2533-S2548	1.8	89
201	Anisotropic electro-osmotic flow over super-hydrophobic surfaces. <i>Journal of Fluid Mechanics</i> , <b>2010</b> , 644, 245-255	3.7	88

200	Hysteresis from Multiscale Porosity: Modeling Water Sorption and Shrinkage in Cement Paste. <i>Physical Review Applied</i> , <b>2015</b> , 3,	4.3	84
199	Multiphase Porous Electrode Theory. <i>Journal of the Electrochemical Society</i> , <b>2017</b> , 164, E3291-E3310	3.9	82
198	Water purification by shock electro dialysis: Deionization, filtration, separation, and disinfection. <i>Desalination</i> , <b>2015</b> , 357, 77-83	10.3	78
197	Phase Transformation Dynamics in Porous Battery Electrodes. <i>Electrochimica Acta</i> , <b>2014</b> , 146, 89-97	6.7	74
196	Nonlinear electrokinetics at large voltages. <i>New Journal of Physics</i> , <b>2009</b> , 11, 075016	2.9	74
195	Scaling of strength and lifetime probability distributions of quasibrittle structures based on atomistic fracture mechanics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 11484-9	11.5	74
194	Ultrafast high-pressure AC electro-osmotic pumps for portable biomedical microfluidics. <i>Lab on A Chip</i> , <b>2010</b> , 10, 80-5	7.2	73
193	Evolution of the Solid-Electrolyte Interphase on Carbonaceous Anodes Visualized by Atomic-Resolution Cryogenic Electron Microscopy. <i>Nano Letters</i> , <b>2019</b> , 19, 5140-5148	11.5	72
192	Li Intercalation into Graphite: Direct Optical Imaging and Cahn-Hilliard Reaction Dynamics. <i>Journal of Physical Chemistry Letters</i> , <b>2016</b> , 7, 2151-6	6.4	71
191	Fluid-enhanced surface diffusion controls intraparticle phase transformations. <i>Nature Materials</i> , <b>2018</b> , 17, 915-922	27	71
190	Electro-diffusion of ions in porous electrodes for capacitive extraction of renewable energy from salinity differences. <i>Electrochimica Acta</i> , <b>2013</b> , 92, 304-314	6.7	69
189	Over-limiting current and control of dendritic growth by surface conduction in nanopores. <i>Scientific Reports</i> , <b>2014</b> , 4, 7056	4.9	67
188	Spatial dynamics of lithiation and lithium plating during high-rate operation of graphite electrodes. <i>Energy and Environmental Science</i> , <b>2020</b> , 13, 2570-2584	35.4	63
187	Scalable and Continuous Water Deionization by Shock Electro dialysis. <i>Environmental Science and Technology Letters</i> , <b>2015</b> , 2, 367-372	11	61
186	A soft non-porous separator and its effectiveness in stabilizing Li metal anodes cycling at 10 mA cm <sup>2</sup> observed in situ in a capillary cell. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 4300-4307	13	58
185	The effect of step height on the performance of three-dimensional ac electro-osmotic microfluidic pumps. <i>Journal of Colloid and Interface Science</i> , <b>2007</b> , 309, 332-41	9.3	58
184	Theory of water treatment by capacitive deionization with redox active porous electrodes. <i>Water Research</i> , <b>2018</b> , 132, 282-291	12.5	57
183	Particle-Level Modeling of the Charge-Discharge Behavior of Nanoparticulate Phase-Separating Li-Ion Battery Electrodes. <i>Journal of the Electrochemical Society</i> , <b>2014</b> , 161, A535-A546	3.9	56

182	Nonlinear dynamics of ion concentration polarization in porous media: The leaky membrane model. <i>AIChE Journal</i> , <b>2013</b> , 59, 3539-3555	3.6	56
181	Assessing continuum postulates in simulations of granular flow. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2009</b> , 57, 828-839	5	55
180	Droplet breakup in flow past an obstacle: A capillary instability due to permeability variations. <i>Europhysics Letters</i> , <b>2010</b> , 92, 54002	1.6	54
179	Simple formula for Marcus-Hush-Chidsey kinetics. <i>Journal of Electroanalytical Chemistry</i> , <b>2014</b> , 735, 77-83	4.1	53
178	Thermodynamic stability of driven open systems and control of phase separation by electro-autocatalysis. <i>Faraday Discussions</i> , <b>2017</b> , 199, 423-463	3.6	52
177	Homogenization of the Poisson-Nernst-Planck equations for Ion Transport in Charged Porous Media. <i>SIAM Journal on Applied Mathematics</i> , <b>2015</b> , 75, 1369-1401	1.8	52
176	Induced-charge electrophoresis near a wall. <i>Electrophoresis</i> , <b>2011</b> , 32, 614-28	3.6	51
175	Diffuse Charge Effects in Fuel Cell Membranes. <i>Journal of the Electrochemical Society</i> , <b>2009</b> , 156, B225	3.9	51
174	Conformal mapping of some non-harmonic functions in transport theory. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , <b>2004</b> , 460, 1433-1452	2.4	50
173	Intercalation Kinetics in Multiphase-Layered Materials. <i>Journal of Physical Chemistry C</i> , <b>2017</b> , 121, 12505-12523	3.8	48
172	Anisometric charge dependent swelling of porous carbon in an ionic liquid. <i>Electrochemistry Communications</i> , <b>2013</b> , 34, 196-199	5.1	48
171	Electrochemical Kinetics of SEI Growth on Carbon Black: Part I. Experiments. <i>Journal of the Electrochemical Society</i> , <b>2019</b> , 166, E97-E106	3.9	47
170	Effect of concentration polarization on permselectivity. <i>Physical Review E</i> , <b>2014</b> , 89, 012302	2.4	47
169	Application of the cell potential method to predict phase equilibria of multicomponent gas hydrate systems. <i>Journal of Physical Chemistry B</i> , <b>2005</b> , 109, 8153-63	3.4	47
168	Electrostatic and electrokinetic contributions to the elastic moduli of a driven membrane. <i>European Physical Journal E</i> , <b>2009</b> , 28, 243-64	1.5	46
167	Interplay of Lithium Intercalation and Plating on a Single Graphite Particle. <i>Joule</i> , <b>2021</b> , 5, 393-414	27.8	46
166	Stochastic flow rule for granular materials. <i>Physical Review E</i> , <b>2007</b> , 75, 041301	2.4	44
165	In Situ Observation and Mathematical Modeling of Lithium Distribution within Graphite. <i>Journal of the Electrochemical Society</i> , <b>2017</b> , 164, E3063-E3072	3.9	42

164	Thermodynamics of Ion Separation by Electrosorption. <i>Environmental Science &amp; Technology</i> , <b>2018</b> , 52, 10196-10204	10.3	42
163	Topology and shape optimization of induced-charge electro-osmotic micropumps. <i>New Journal of Physics</i> , <b>2009</b> , 11, 075019	2.9	42
162	Sulfur point defects in crystalline and amorphous silicon. <i>Physical Review B</i> , <b>2004</b> , 70,	3.3	42
161	Thermodynamic behavior of a model covalent material described by the environment-dependent interatomic potential. <i>Physical Review B</i> , <b>2002</b> , 66,	3.3	41
160	Largest cluster in subcritical percolation. <i>Physical Review E</i> , <b>2000</b> , 62, 1660-9	2.4	41
159	Front Dynamics during Diffusion-Limited Corrosion of Ramified Electrodeposits. <i>Journal of Physical Chemistry B</i> , <b>1999</b> , 103, 5841-5851	3.4	41
158	Electrochemical Impedance Imaging via the Distribution of Diffusion Times. <i>Physical Review Letters</i> , <b>2018</b> , 120, 116001	7.4	40
157	Electrochemical Kinetics of SEI Growth on Carbon Black: Part II. Modeling. <i>Journal of the Electrochemical Society</i> , <b>2019</b> , 166, E107-E118	3.9	39
156	Perspective Combining Physics and Machine Learning to Predict Battery Lifetime. <i>Journal of the Electrochemical Society</i> , <b>2021</b> , 168, 030525	3.9	39
155	Soft Multifaced and Patchy Colloids by Constrained Volume Self-Assembly. <i>Macromolecules</i> , <b>2016</b> , 49, 3580-3585	5.5	39
154	Phase Separation Dynamics in Isotropic Ion-Intercalation Particles. <i>SIAM Journal on Applied Mathematics</i> , <b>2014</b> , 74, 980-1004	1.8	38
153	Theory of sorption hysteresis in nanoporous solids: Part II Molecular condensation. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2012</b> , 60, 1660-1675	5	37
152	The Spot Model for random-packing dynamics. <i>Mechanics of Materials</i> , <b>2006</b> , 38, 717-731	3.3	37
151	Analysis of ionic conductance of carbon nanotubes. <i>Physical Review E</i> , <b>2016</b> , 94, 050601	2.4	36
150	Electrodifusiophoresis: Particle motion in electrolytes under direct current. <i>Physics of Fluids</i> , <b>2010</b> , 22, 112109	4.4	36
149	Dendrite Suppression by Shock Electrodeposition in Charged Porous Media. <i>Scientific Reports</i> , <b>2016</b> , 6, 28054	4.9	35
148	Boundary Layer Analysis of Membraneless Electrochemical Cells. <i>Journal of the Electrochemical Society</i> , <b>2013</b> , 160, A2056-A2063	3.9	35
147	Effective zero-thickness model for a conductive membrane driven by an electric field. <i>Physical Review E</i> , <b>2010</b> , 81, 031912	2.4	35

146	Surface conservation laws at microscopically diffuse interfaces. <i>Journal of Colloid and Interface Science</i> , <b>2007</b> , 315, 319-29	9.3	35
145	Transverse flow in thin superhydrophobic channels. <i>Physical Review E</i> , <b>2010</b> , 82, 055301	2.4	34
144	The Application of Data-Driven Methods and Physics-Based Learning for Improving Battery Safety. <i>Joule</i> , <b>2021</b> , 5, 316-329	27.8	34
143	Dip-coating of suspensions. <i>Soft Matter</i> , <b>2019</b> , 15, 252-261	3.6	32
142	Efficient Conservative Numerical Schemes for 1D Nonlinear Spherical Diffusion Equations with Applications in Battery Modeling. <i>Journal of the Electrochemical Society</i> , <b>2013</b> , 160, A1565-A1571	3.9	32
141	Phase-Transformation Wave Dynamics in LiFePO <sub>4</sub> . <i>Solid State Phenomena</i> , <b>2008</b> , 139, 95-100	0.4	32
140	Regulation of ramified electrochemical growth by a diffusive wave. <i>Physical Review E</i> , <b>1995</b> , 52, 1903-1914	1.4	32
139	Dynamics of random packings in granular flow. <i>Physical Review E</i> , <b>2006</b> , 73, 051306	2.4	31
138	Breakdown of electroneutrality in nanopores. <i>Journal of Colloid and Interface Science</i> , <b>2020</b> , 579, 162-176	6.3	30
137	Theory of sorption hysteresis in nanoporous solids: Part I. <i>Journal of the Mechanics and Physics of Solids</i> , <b>2012</b> , 60, 1644-1659	5	30
136	Elastic constants of defected and amorphous silicon with the environment-dependent interatomic potential. <i>Physical Review B</i> , <b>2004</b> , 70,	3.3	30
135	Theory of Surface Forces in Multivalent Electrolytes. <i>Langmuir</i> , <b>2019</b> , 35, 11550-11565	4	29
134	Asymptotics of reaction-diffusion fronts with one static and one diffusing reactant. <i>Physica D: Nonlinear Phenomena</i> , <b>2000</b> , 147, 95-121	3.3	29
133	Multicomponent Gas Diffusion in Porous Electrodes. <i>Journal of the Electrochemical Society</i> , <b>2015</b> , 162, F613-F621	3.9	28
132	Toward Optimal Performance and In-Depth Understanding of Spinel Li <sub>4</sub> Ti <sub>5</sub> O <sub>12</sub> Electrodes through Phase Field Modeling. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1705992	15.6	28
131	Dynamics of conformal maps for a class of non-Laplacian growth phenomena. <i>Physical Review Letters</i> , <b>2003</b> , 91, 045503	7.4	27
130	A method to extract potentials from the temperature dependence of Langmuir constants for clathrate-hydrates. <i>Physica A: Statistical Mechanics and Its Applications</i> , <b>2001</b> , 300, 139-173	3.3	27
129	Fictitious phase separation in Li layered oxides driven by electro-autocatalysis. <i>Nature Materials</i> , <b>2021</b> , 20, 991-999	27	27

128	Size-dependent phase morphologies in LiFePO <sub>4</sub> battery particles. <i>Electrochemistry Communications</i> , <b>2018</b> , 95, 33-37	5.1	26
127	Lithium-Battery Anode Gains Additional Functionality for Neuromorphic Computing through Metal-Insulator Phase Separation. <i>Advanced Materials</i> , <b>2020</b> , 32, e1907465	24	25
126	Electrokinetics meets electrohydrodynamics. <i>Journal of Fluid Mechanics</i> , <b>2015</b> , 782, 1-4	3.7	25
125	Heterogeneous electrocatalysis in porous cathodes of solid oxide fuel cells. <i>Electrochimica Acta</i> , <b>2015</b> , 159, 71-80	6.7	25
124	Interfacial Layering in the Electric Double Layer of Ionic Liquids. <i>Physical Review Letters</i> , <b>2020</b> , 125, 116001	9.1	25
123	Theory of ion aggregation and gelation in super-concentrated electrolytes. <i>Journal of Chemical Physics</i> , <b>2020</b> , 152, 234506	3.9	24
122	Explaining key properties of lithiation in TiO <sub>2</sub> -anatase Li-ion battery electrodes using phase-field modeling. <i>Physical Review Materials</i> , <b>2017</b> , 1,	3.2	24
121	Theory of linear sweep voltammetry with diffuse charge: Unsupported electrolytes, thin films, and leaky membranes. <i>Physical Review E</i> , <b>2017</b> , 95, 033303	2.4	23
120	Simple formula for asymmetric Marcus-Hush kinetics. <i>Journal of Electroanalytical Chemistry</i> , <b>2015</b> , 748, 52-57	4.1	23
119	Steady advection-diffusion around finite absorbers in two-dimensional potential flows. <i>Journal of Fluid Mechanics</i> , <b>2005</b> , 536, 155-184	3.7	23
118	Small-scale desalination of seawater by shock electro dialysis. <i>Desalination</i> , <b>2020</b> , 476, 114219	10.3	23
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- 2 A Two-Species Reaction-Diffusion Problem with One Static Reactant: The Case of Higher Order Kinetics **2002**, 1-10
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