

Martin Z Bazant

List of Publications by Year in Descending Order

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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.

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	Structural Forces in Ionic Liquids: The Role of Ionic Size Asymmetry.. <i>Journal of Physical Chemistry B</i> , 2022 ,	3.4	2
270	Fast charging design for Lithium-ion batteries via Bayesian optimization. <i>Applied Energy</i> , 2022 , 307, 118244-118247	4.7	3
269	Dip coating of bidisperse particulate suspensions. <i>Journal of Fluid Mechanics</i> , 2022 , 936,	3.7	1
268	Salt-in-Ionic-Liquid Electrolytes: Ion Network Formation and Negative Effective Charges of Alkali Metal Cations.. <i>Journal of Physical Chemistry B</i> , 2021 , 125, 13752-13766	3.4	2
267	Monitoring carbon dioxide to quantify the risk of indoor airborne transmission of COVID-19 2021 , 1,		5
266	Nonlinear ion transport mediated by induced charge in ultrathin nanoporous membranes. <i>Physical Review E</i> , 2021 , 104, 044802	2.4	2
265	Theory of freezing point depression in charged porous media. <i>Physical Review E</i> , 2021 , 104, 045102	2.4	1
264	Bayesian learning for rapid prediction of lithium-ion battery-cycling protocols. <i>Joule</i> , 2021 ,	27.8	5
263	Electroneutrality breakdown in nanopore arrays. <i>Physical Review E</i> , 2021 , 104, 044803	2.4	3
262	Perspective Combining Physics and Machine Learning to Predict Battery Lifetime. <i>Journal of the Electrochemical Society</i> , 2021 , 168, 030525	3.9	39
261	Fictitious phase separation in Li layered oxides driven by electro-autocatalysis. <i>Nature Materials</i> , 2021 , 20, 991-999	27	27
260	Large-deformation plasticity and fracture behavior of pure lithium under various stress states. <i>Acta Materialia</i> , 2021 , 208, 116730	8.4	3
259	Guiding the Design of Heterogeneous Electrode Microstructures for Li-Ion Batteries: Microscopic Imaging, Predictive Modeling, and Machine Learning. <i>Advanced Energy Materials</i> , 2021 , 11, 2003908	21.8	21
258	Deionization shocks in crossflow. <i>AIChE Journal</i> , 2021 , 67, e17274	3.6	1
257	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> , 2021 , 118,	11.5	129
256	Theory of Faradaically Modulated Redox Active Electrodes for Electrochemically Mediated Selective Adsorption Processes. <i>Journal of the Electrochemical Society</i> , 2021 , 168, 053501	3.9	0
255	Ion Clusters and Networks in Water-in-Salt Electrolytes. <i>Journal of the Electrochemical Society</i> , 2021 , 168, 050514	3.9	6

254	Theory of shock electro dialysis I: Water dissociation and electrosmotic vortices. <i>Journal of Colloid and Interface Science</i> , 2021 , 589, 605-615	9.3	8
253	Electrochemical ion insertion from the atomic to the device scale. <i>Nature Reviews Materials</i> , 2021 , 6, 847-867	73.3	19
252	Enabling a Stable High-Power Lithium-Bromine Flow Battery Using Task-Specific Ionic Liquids. <i>Journal of the Electrochemical Society</i> , 2021 , 168, 070542	3.9	2
251	Theory of coupled ion-electron transfer kinetics. <i>Electrochimica Acta</i> , 2021 , 367, 137432	6.7	14
250	Theory of shock electro dialysis II: Mechanisms of selective ion removal. <i>Journal of Colloid and Interface Science</i> , 2021 , 589, 616-621	9.3	6
249	The Application of Data-Driven Methods and Physics-Based Learning for Improving Battery Safety. <i>Joule</i> , 2021 , 5, 316-329	27.8	34
248	Cation-Dependent Interfacial Structures and Kinetics for Outer-Sphere Electron-Transfer Reactions. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 4397-4411	3.8	13
247	Interplay of Lithium Intercalation and Plating on a Single Graphite Particle. <i>Joule</i> , 2021 , 5, 393-414	27.8	46
246	Correlated Ion Transport and the Gel Phase in Room Temperature Ionic Liquids. <i>Journal of Physical Chemistry B</i> , 2021 , 125, 2677-2689	3.4	3
245	Image inversion and uncertainty quantification for constitutive laws of pattern formation. <i>Journal of Computational Physics</i> , 2021 , 436, 110279	4.1	2
244	End-of-life or second-life options for retired electric vehicle batteries. <i>Cell Reports Physical Science</i> , 2021 , 2, 100537	6.1	17
243	Modeling and multiobjective optimization of indoor airborne disease transmission risk and associated energy consumption for building HVAC systems. <i>Energy and Buildings</i> , 2021 , 253, 111497	7	5
242	MethodsBETLION: Open-Source Software for Millisecond-Scale Porous Electrode Theory-Based Lithium-Ion Battery Simulations. <i>Journal of the Electrochemical Society</i> , 2021 , 168, 090504	3.9	0
241	Single-flow multiphase flow batteries: Theory. <i>Electrochimica Acta</i> , 2021 , 389, 138554	6.7	3
240	A physics-guided neural network framework for elastic plates: Comparison of governing equations-based and energy-based approaches. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2021 , 383, 113933	5.7	10
239	Nonlinear Identifiability Analysis of the Porous Electrode Theory Model of Lithium-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2021 , 168, 090546	3.9	2
238	Mercury cyclic porosimetry: Measuring pore-size distributions corrected for both pore-space accessibility and contact-angle hysteresis. <i>Journal of Colloid and Interface Science</i> , 2021 , 599, 255-261	9.3	3
237	Growth morphology and symmetry selection of interfacial instabilities in anisotropic environments. <i>Soft Matter</i> , 2021 , 17, 1202-1209	3.6	2

236	Blistering failure of elastic coatings with applications to corrosion resistance. <i>Soft Matter</i> , 2021 , 17, 9480-9498	3.4	2
235	Continuum Theory of Electrostatic Correlations at Charged Surfaces. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 11414-11421	3.8	22
234	Tuning the stability of electrochemical interfaces by electron transfer reactions. <i>Journal of Chemical Physics</i> , 2020 , 152, 184703	3.9	9
233	Analysis, Design, and Generalization of Electrochemical Impedance Spectroscopy (EIS) Inversion Algorithms. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 106508	3.9	19
232	Theory of ion aggregation and gelation in super-concentrated electrolytes. <i>Journal of Chemical Physics</i> , 2020 , 152, 234506	3.9	24
231	Breakdown of electroneutrality in nanopores. <i>Journal of Colloid and Interface Science</i> , 2020 , 579, 162-176	3.3	30
230	Spatial dynamics of lithiation and lithium plating during high-rate operation of graphite electrodes. <i>Energy and Environmental Science</i> , 2020 , 13, 2570-2584	35.4	63
229	Heat of nervous conduction: A thermodynamic framework. <i>Physical Review E</i> , 2020 , 101, 022406	2.4	6
228	Learning the Physics of Pattern Formation from Images. <i>Physical Review Letters</i> , 2020 , 124, 060201	7.4	19
227	Lithium-Battery Anode Gains Additional Functionality for Neuromorphic Computing through Metal-Insulator Phase Separation. <i>Advanced Materials</i> , 2020 , 32, e1907465	24	25
226	Physics of Electrostatic Projection Revealed by High-Speed Video Imaging. <i>Physical Review Applied</i> , 2020 , 13,	4.3	2
225	Electro-osmotic instability of concentration enrichment in curved geometries for an aqueous electrolyte. <i>Physical Review Fluids</i> , 2020 , 5,	2.8	1
224	Vortices of electro-osmotic flow in heterogeneous porous media. <i>Physical Review Fluids</i> , 2020 , 5,	2.8	2
223	Freezing point depression and freeze-thaw damage by nanofluidic salt trapping. <i>Physical Review Fluids</i> , 2020 , 5,	2.8	4
222	Editors' Choice Perspective Challenges in Moving to Multiscale Battery Models: Where Electrochemistry Meets and Demands More from Math. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 133501	3.9	7
221	Selective adsorption of organic anions in a flow cell with asymmetric redox active electrodes. <i>Water Research</i> , 2020 , 182, 115963	12.5	10
220	A scaling law to determine phase morphologies during ion intercalation. <i>Energy and Environmental Science</i> , 2020 , 13, 2142-2152	35.4	21
219	Ionic activity in concentrated electrolytes: Solvent structure effect revisited. <i>Chemical Physics Letters</i> , 2020 , 738, 136915	2.5	9

218	Continuous ion-selective separations by shock electrodialysis. <i>AIChE Journal</i> , 2020 , 66, e16751	3.6	14
217	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> , 2020 , 13, 183-199	35.4	91
216	Small-scale desalination of seawater by shock electrodialysis. <i>Desalination</i> , 2020 , 476, 114219	10.3	23
215	Novel ionic separation mechanisms in electrically driven membrane processes. <i>Advances in Colloid and Interface Science</i> , 2020 , 284, 102269	14.3	16
214	Entrainment of particles during the withdrawal of a fibre from a dilute suspension. <i>Journal of Fluid Mechanics</i> , 2020 , 903,	3.7	8
213	Imaging Arrangements of Discrete Ions at Liquid-Solid Interfaces. <i>Nano Letters</i> , 2020 , 20, 7927-7932	11.5	3
212	Dielectric Breakdown by Electric-field Induced Phase Separation. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 113504	3.9	3
211	Simultaneous inversion of optical and infra-red image data to determine thermo-mechanical properties of thermally conductive solid materials. <i>International Journal of Heat and Mass Transfer</i> , 2020 , 163, 120445	4.9	2
210	Interfacial Layering in the Electric Double Layer of Ionic Liquids. <i>Physical Review Letters</i> , 2020 , 125, 116001	11.4	25
209	Continuous Separation of Radionuclides from Contaminated Water by Shock Electrodialysis. <i>Environmental Science & Technology</i> , 2020 , 54, 527-536	10.3	23
208	Active control of viscous fingering using electric fields. <i>Nature Communications</i> , 2019 , 10, 4002	17.4	16
207	Electrochemical impedance of electrodiffusion in charged medium under dc bias. <i>Physical Review E</i> , 2019 , 100, 042204	2.4	3
206	Dip-coating of suspensions. <i>Soft Matter</i> , 2019 , 15, 252-261	3.6	32
205	Multiscale poromechanics of wet cement paste. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 10652-10657	11.5	21
204	Impact of network heterogeneity on electrokinetic transport in porous media. <i>Journal of Colloid and Interface Science</i> , 2019 , 553, 451-464	9.3	17
203	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	3.8	121
202	Electrochemical Kinetics of SEI Growth on Carbon Black: Part I. Experiments. <i>Journal of the Electrochemical Society</i> , 2019 , 166, E97-E106	3.9	47
201	Electrochemical Kinetics of SEI Growth on Carbon Black: Part II. Modeling. <i>Journal of the Electrochemical Society</i> , 2019 , 166, E107-E118	3.9	39

200	Capillary Stress and Structural Relaxation in Moist Granular Materials. <i>Langmuir</i> , 2019 , 35, 4397-4402	4	10
199	Data-driven prediction of battery cycle life before capacity degradation. <i>Nature Energy</i> , 2019 , 4, 383-391	62.3	498
198	pH Sensor Benchmarking: A Protocol to Characterize pH Sensing Materials and Systems (Small Methods 2/2019). <i>Small Methods</i> , 2019 , 3, 1970002		12.8
197	Modeling the Metal-Insulator Phase Transition in Li_xCoO_2 for Energy and Information Storage. <i>Advanced Functional Materials</i> , 2019 , 29, 1902821		15.6 19
196	Population dynamics of driven autocatalytic reactive mixtures. <i>Physical Review E</i> , 2019 , 100, 012144	2.4	8
195	Evolution of the Solid-Electrolyte Interphase on Carbonaceous Anodes Visualized by Atomic-Resolution Cryogenic Electron Microscopy. <i>Nano Letters</i> , 2019 , 19, 5140-5148		11.5 72
194	Theory of Surface Forces in Multivalent Electrolytes. <i>Langmuir</i> , 2019 , 35, 11550-11565		4 29
193	Linear Stability Analysis of Transient Electrodeposition in Charged Porous Media: Suppression of Dendritic Growth by Surface Conduction. <i>Journal of the Electrochemical Society</i> , 2019 , 166, A2280-A2293	3.9	16
192	Capillary filtering of particles during dip coating. <i>Physical Review Fluids</i> , 2019 , 4,		2.8 13
191	Deionization shock driven by electroconvection in a circular channel. <i>Physical Review Fluids</i> , 2019 , 4,		2.8 7
190	Spin-glass charge ordering in ionic liquids. <i>Physical Review Materials</i> , 2019 , 3,		3.2 8
189	The Materials Research Platform: Defining the Requirements from User Stories. <i>Matter</i> , 2019 , 1, 1433-1437		13.7 13
188	A Protocol to Characterize pH Sensing Materials and Systems. <i>Small Methods</i> , 2019 , 3, 1800265		12.8 5
187	Microscopic theory of capillary pressure hysteresis based on pore-space accessibility and radius-resolved saturation. <i>Chemical Engineering Science</i> , 2019 , 196, 225-246		4.4 7
186	Toward Optimal Performance and In-Depth Understanding of Spinel $\text{Li}_4\text{Ti}_5\text{O}_{12}$ Electrodes through Phase Field Modeling. <i>Advanced Functional Materials</i> , 2018 , 28, 1705992		15.6 28
185	Theory of voltammetry in charged porous media. <i>Journal of Electroanalytical Chemistry</i> , 2018 , 811, 105-120		14.0 6
184	Theory of water treatment by capacitive deionization with redox active porous electrodes. <i>Water Research</i> , 2018 , 132, 282-291		12.5 57
183	In-situ visualization of solute-driven phase coexistence within individual nanorods. <i>Nature Communications</i> , 2018 , 9, 1775		17.4 15

182	Electrochemical Impedance Imaging via the Distribution of Diffusion Times. <i>Physical Review Letters</i> , 2018 , 120, 116001	7.4	40
181	Inferring pore connectivity from sorption hysteresis in multiscale porous media. <i>Journal of Colloid and Interface Science</i> , 2018 , 532, 118-127	9.3	17
180	Thermodynamics of Ion Separation by Electrosorption. <i>Environmental Science & Technology</i> , 2018 , 52, 10196-10204	10.3	42
179	Interplay of phase boundary anisotropy and electro-auto-catalytic surface reactions on the lithium intercalation dynamics in LiXFePO ₄ plateletlike nanoparticles. <i>Physical Review Materials</i> , 2018 , 2,	3.2	21
178	Phase separation of stable colloidal clusters. <i>Physical Review Materials</i> , 2018 , 2,	3.2	2
177	Interactions between Lithium Growths and Nanoporous Ceramic Separators. <i>Joule</i> , 2018 , 2, 2434-2449	27.8	112
176	Fluid-enhanced surface diffusion controls intraparticle phase transformations. <i>Nature Materials</i> , 2018 , 17, 915-922	27	71
175	Theory of the Double Layer in Water-in-Salt Electrolytes. <i>Journal of Physical Chemistry Letters</i> , 2018 , 9, 5840-5846	6.4	94
174	Size-dependent phase morphologies in LiFePO ₄ battery particles. <i>Electrochemistry Communications</i> , 2018 , 95, 33-37	5.1	26
173	A soft non-porous separator and its effectiveness in stabilizing Li metal anodes cycling at 10 mA cm ² observed in situ in a capillary cell. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 4300-4307	13	58
172	Thermodynamic stability of driven open systems and control of phase separation by electro-autocatalysis. <i>Faraday Discussions</i> , 2017 , 199, 423-463	3.6	52
171	Intercalation Kinetics in Multiphase-Layered Materials. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 12505-12523	3.8	48
170	Multiphase Porous Electrode Theory. <i>Journal of the Electrochemical Society</i> , 2017 , 164, E3291-E3310	3.9	82
169	Theory of linear sweep voltammetry with diffuse charge: Unsupported electrolytes, thin films, and leaky membranes. <i>Physical Review E</i> , 2017 , 95, 033303	2.4	23
168	In Situ Observation and Mathematical Modeling of Lithium Distribution within Graphite. <i>Journal of the Electrochemical Society</i> , 2017 , 164, E3063-E3072	3.9	42
167	Liquid cell transmission electron microscopy observation of lithium metal growth and dissolution: Root growth, dead lithium and lithium flotsams. <i>Nano Energy</i> , 2017 , 32, 271-279	17.1	261
166	Electrokinetic Control of Viscous Fingering. <i>Physical Review Letters</i> , 2017 , 119, 174501	7.4	19
165	Using Scanning Transmission X-ray Microscopy to Reveal the Origin of Lithium Compositional Spatiodynamics in Battery Materials. <i>Microscopy and Microanalysis</i> , 2017 , 23, 888-889	0.5	

164	Electrovariable nanoplasmonics: general discussion. <i>Faraday Discussions</i> , 2017 , 199, 603-613	3.6	1
163	Electroactuators: from understanding to micro-robotics and energy conversion: general discussion. <i>Faraday Discussions</i> , 2017 , 199, 525-545	3.6	2
162	Electrotunable wetting, and micro- and nanofluidics: general discussion. <i>Faraday Discussions</i> , 2017 , 199, 195-237	3.6	2
161	Understanding the electrochemical behaviour of LSM-based SOFC cathodes. Part II - Mechanistic modelling and physically-based interpretation. <i>Solid State Ionics</i> , 2017 , 303, 181-190	3.3	15
160	Explaining key properties of lithiation in TiO ₂ -anatase Li-ion battery electrodes using phase-field modeling. <i>Physical Review Materials</i> , 2017 , 1,	3.2	24
159	Transition of lithium growth mechanisms in liquid electrolytes. <i>Energy and Environmental Science</i> , 2016 , 9, 3221-3229	35.4	704
158	Analysis of electrolyte transport through charged nanopores. <i>Physical Review E</i> , 2016 , 93, 053108	2.4	99
157	Membraneless flow battery leveraging flow-through heterogeneous porous media for improved power density and reduced crossover. <i>RSC Advances</i> , 2016 , 6, 100209-100213	3.7	14
156	Analysis of ionic conductance of carbon nanotubes. <i>Physical Review E</i> , 2016 , 94, 050601	2.4	36
155	Dendrite Suppression by Shock Electrodeposition in Charged Porous Media. <i>Scientific Reports</i> , 2016 , 6, 28054	4.9	35
154	Exact solutions and physical analogies for unidirectional flows. <i>Physical Review Fluids</i> , 2016 , 1,	2.8	16
153	Resistive Switching in Aqueous Nanopores by Shock Electrodeposition. <i>Electrochimica Acta</i> , 2016 , 222, 370-375	6.7	8
152	Li Intercalation into Graphite: Direct Optical Imaging and Cahn-Hilliard Reaction Dynamics. <i>Journal of Physical Chemistry Letters</i> , 2016 , 7, 2151-6	6.4	71
151	Performance and Degradation of A Lithium-Bromine Rechargeable Fuel Cell Using Highly Concentrated Catholytes. <i>Electrochimica Acta</i> , 2016 , 202, 216-223	6.7	14
150	Asymmetric collapse by dissolution or melting in a uniform flow. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2016 , 472, 20150531	2.4	7
149	Soft Multifaced and Patchy Colloids by Constrained Volume Self-Assembly. <i>Macromolecules</i> , 2016 , 49, 3580-3585	5.5	39
148	Origin and hysteresis of lithium compositional spatiodynamics within battery primary particles. <i>Science</i> , 2016 , 353, 566-71	33.3	281
147	A dual-mode rechargeable lithiumBromine/oxygen fuel cell. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 14165-14172	13	15

146	Homogenization of the Poisson--Nernst--Planck equations for Ion Transport in Charged Porous Media. <i>SIAM Journal on Applied Mathematics</i> , 2015 , 75, 1369-1401	1.8	52
145	Simple formula for asymmetric Marcus-Hush kinetics. <i>Journal of Electroanalytical Chemistry</i> , 2015 , 748, 52-57	4.1	23
144	Experimental verification of overlimiting current by surface conduction and electro-osmotic flow in microchannels. <i>Physical Review Letters</i> , 2015 , 114, 114501	7.4	95
143	Multicomponent Gas Diffusion in Porous Electrodes. <i>Journal of the Electrochemical Society</i> , 2015 , 162, F613-F621	3.9	28
142	Inertial effects on the generation of co-laminar flows. <i>Journal of Fluid Mechanics</i> , 2015 , 767, 85-94	3.7	8
141	A zinc-iron redox-flow battery under \$100 per kW h of system capital cost. <i>Energy and Environmental Science</i> , 2015 , 8, 2941-2945	35.4	130
140	Water purification by shock electro dialysis: Deionization, filtration, separation, and disinfection. <i>Desalination</i> , 2015 , 357, 77-83	10.3	78
139	Electrokinetics meets electrohydrodynamics. <i>Journal of Fluid Mechanics</i> , 2015 , 782, 1-4	3.7	25
138	Hysteresis from Multiscale Porosity: Modeling Water Sorption and Shrinkage in Cement Paste. <i>Physical Review Applied</i> , 2015 , 3,	4.3	84
137	Modelling Hysteresis in the Water Sorption and Drying Shrinkage of Cement Paste 2015 ,		2
136	Scalable and Continuous Water Deionization by Shock Electro dialysis. <i>Environmental Science and Technology Letters</i> , 2015 , 2, 367-372	11	61
135	Heterogeneous electrocatalysis in porous cathodes of solid oxide fuel cells. <i>Electrochimica Acta</i> , 2015 , 159, 71-80	6.7	25
134	Over-limiting current and control of dendritic growth by surface conduction in nanopores. <i>Scientific Reports</i> , 2014 , 4, 7056	4.9	67
133	Internal resistance matching for parallel-connected lithium-ion cells and impacts on battery pack cycle life. <i>Journal of Power Sources</i> , 2014 , 252, 8-13	8.9	133
132	Attractive forces in microporous carbon electrodes for capacitive deionization. <i>Journal of Solid State Electrochemistry</i> , 2014 , 18, 1365-1376	2.6	213
131	Charge transfer kinetics at the solid-solid interface in porous electrodes. <i>Nature Communications</i> , 2014 , 5, 3585	17.4	145
130	Phase Separation Dynamics in Isotropic Ion-Intercalation Particles. <i>SIAM Journal on Applied Mathematics</i> , 2014 , 74, 980-1004	1.8	38
129	Particle-Level Modeling of the Charge-Discharge Behavior of Nanoparticulate Phase-Separating Li-Ion Battery Electrodes. <i>Journal of the Electrochemical Society</i> , 2014 , 161, A535-A546	3.9	56

128	Phase Transformation Dynamics in Porous Battery Electrodes. <i>Electrochimica Acta</i> , 2014 , 146, 89-97	6.7	74
127	Simple formula for Marcus-Hush-Hidsey kinetics. <i>Journal of Electroanalytical Chemistry</i> , 2014 , 735, 77-83	4.1	53
126	Current-induced transition from particle-by-particle to concurrent intercalation in phase-separating battery electrodes. <i>Nature Materials</i> , 2014 , 13, 1149-56	27	220
125	Effect of concentration polarization on permselectivity. <i>Physical Review E</i> , 2014 , 89, 012302	2.4	47
124	Electrochemical Impedance of a Battery Electrode with Anisotropic Active Particles. <i>Electrochimica Acta</i> , 2014 , 131, 214-227	6.7	14
123	Cahn-Hilliard Reaction Model for Isotropic Li-ion Battery Particles. <i>Materials Research Society Symposia Proceedings</i> , 2013 , 1542, 1		5
122	Theory of chemical kinetics and charge transfer based on nonequilibrium thermodynamics. <i>Accounts of Chemical Research</i> , 2013 , 46, 1144-60	24.3	386
121	Membrane-less hydrogen bromine flow battery. <i>Nature Communications</i> , 2013 , 4, 2346	17.4	141
120	Rate-Dependent Morphology of Li ₂ O ₂ Growth in Li-O ₂ Batteries. <i>Journal of Physical Chemistry Letters</i> , 2013 , 4, 4217-22	6.4	128
119	Boundary Layer Analysis of Membraneless Electrochemical Cells. <i>Journal of the Electrochemical Society</i> , 2013 , 160, A2056-A2063	3.9	35
118	Nonlinear dynamics of ion concentration polarization in porous media: The leaky membrane model. <i>AIChE Journal</i> , 2013 , 59, 3539-3555	3.6	56
117	Anisometric charge dependent swelling of porous carbon in an ionic liquid. <i>Electrochemistry Communications</i> , 2013 , 34, 196-199	5.1	48
116	Effects of Nanoparticle Geometry and Size Distribution on Diffusion Impedance of Battery Electrodes. <i>Journal of the Electrochemical Society</i> , 2013 , 160, A15-A24	3.9	171
115	Electro-diffusion of ions in porous electrodes for capacitive extraction of renewable energy from salinity differences. <i>Electrochimica Acta</i> , 2013 , 92, 304-314	6.7	69
114	Theory of coherent nucleation in phase-separating nanoparticles. <i>Nano Letters</i> , 2013 , 13, 3036-41	11.5	122
113	Theory of SEI Formation in Rechargeable Batteries: Capacity Fade, Accelerated Aging and Lifetime Prediction. <i>Journal of the Electrochemical Society</i> , 2013 , 160, A243-A250	3.9	515
112	Overlimiting current and shock electro dialysis in porous media. <i>Langmuir</i> , 2013 , 29, 16167-77	4	98
111	Efficient Conservative Numerical Schemes for 1D Nonlinear Spherical Diffusion Equations with Applications in Battery Modeling. <i>Journal of the Electrochemical Society</i> , 2013 , 160, A1565-A1571	3.9	32

110	Numerical and Analytic Modeling of a Membraneless Hydrogen Bromine Lamina Flow Batter. <i>ECS Transactions</i> , 2013 , 53, 51-62	1	7
109	Nonlinear Electrokinetic Phenomena 2013 , 1-13		
108	Electrochemistry and capacitive charging of porous electrodes in asymmetric multicomponent electrolytes. <i>Russian Journal of Electrochemistry</i> , 2012 , 48, 580-592	1.2	111
107	Effects of electrostatic correlations on electrokinetic phenomena. <i>Physical Review E</i> , 2012 , 86, 056303	2.4	106
106	Current-induced membrane discharge. <i>Physical Review Letters</i> , 2012 , 109, 108301	7.4	109
105	Theory of sorption hysteresis in nanoporous solids: Part I. <i>Journal of the Mechanics and Physics of Solids</i> , 2012 , 60, 1644-1659	5	30
104	Theory of sorption hysteresis in nanoporous solids: Part II Molecular condensation. <i>Journal of the Mechanics and Physics of Solids</i> , 2012 , 60, 1660-1675	5	37
103	Time-dependent ion selectivity in capacitive charging of porous electrodes. <i>Journal of Colloid and Interface Science</i> , 2012 , 384, 38-44	9.3	164
102	Coherency strain and the kinetics of phase separation in LiFePO ₄ nanoparticles. <i>ACS Nano</i> , 2012 , 6, 2215-2225	11.5	291
101	Nonequilibrium Thermodynamics of Porous Electrodes. <i>Journal of the Electrochemical Society</i> , 2012 , 159, A1967-A1985	3.9	215
100	Suppression of phase separation in LiFePO ₄ nanoparticles during battery discharge. <i>Nano Letters</i> , 2011 , 11, 4890-6	11.5	336
99	Overlimiting current in a microchannel. <i>Physical Review Letters</i> , 2011 , 107, 118301	7.4	187
98	Double layer in ionic liquids: overscreening versus crowding. <i>Physical Review Letters</i> , 2011 , 106, 046102	7.4	663
97	Diffuse charge and Faradaic reactions in porous electrodes. <i>Physical Review E</i> , 2011 , 83, 061507	2.4	178
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