Peng Bai

List of Publications by Year in descending order

35 papers	3,476 citations	361413 20 h-index	414414 32 g-index
35 all docs	35 docs citations	35 times ranked	4594 citing authors

#	Article	IF	Citations
1	Transition of lithium growth mechanisms in liquid electrolytes. Energy and Environmental Science, 2016, 9, 3221-3229.	30.8	1,054
2	Suppression of Phase Separation in LiFePO₄ Nanoparticles During Battery Discharge. Nano Letters, 2011, 11, 4890-4896.	9.1	404
3	Origin and hysteresis of lithium compositional spatiodynamics within battery primary particles. Science, 2016, 353, 566-571.	12.6	367
4	Liquid cell transmission electron microscopy observation of lithium metal growth and dissolution: Root growth, dead lithium and lithium flotsams. Nano Energy, 2017, 32, 271-279.	16.0	361
5	Charge transfer kinetics at the solidâ€“solid interface in porous electrodes. Nature Communications, 2014, 5, 3585.	12.8	205
6	Interactions between Lithium Growths and Nanoporous Ceramic Separators. Joule, 2018, 2, 2434-2449.	24.0	180
7	A thin multifunctional coating on a separator improves the cyclability and safety of lithium sulfur batteries. Chemical Science, 2017, 8, 6619-6625.	7.4	94
8	Over-limiting Current and Control of Dendritic Growth by Surface Conduction in Nanopores. Scientific Reports, 2014, 4, 7056.	3.3	92
9	Simple formula for Marcusâ€“Hushâ€“Chidsey kinetics. Journal of Electroanalytical Chemistry, 2014, 735, 77-83.	3.8	82
10	Cobaltâ€Free Cathode Materials: Families and their Prospects. Advanced Energy Materials, 2022, 12, .	19.5	77
11	A soft non-porous separator and its effectiveness in stabilizing Li metal anodes cycling at 10 mA cm^{â^'2} observed in situ in a capillary cell. Journal of Materials Chemistry A, 2017, 5, 4300-4307.	10.3	66
12	Theory of coupled ion-electron transfer kinetics. Electrochimica Acta, 2021, 367, 137432.	5.2	64
13	Statistical kinetics of phase-transforming nanoparticles in LiFePO4 porous electrodes. Electrochimica Acta, 2013, 89, 644-651.	5.2	45
14	Dendrite Suppression by Shock Electrodeposition in Charged Porous Media. Scientific Reports, 2016, 6, 28054.	3.3	45
15	Low-Temperature Carbon Coating of Nanosized Li_{1.015}Al_{0.06}Mn_{1.925}O₄ and High-Density Electrode for High-Power Li-Ion Batteries. Nano Letters, 2017, 17, 3744-3751.	9.1	45
16	Active control of viscous fingering using electric fields. Nature Communications, 2019, 10, 4002.	12.8	40
17	Concentration polarization and metal dendrite initiation in isolated electrolyte microchannels. Energy and Environmental Science, 2020, 13, 3504-3513.	30.8	40
18	Simple formula for asymmetric Marcusâ€“Hush kinetics. Journal of Electroanalytical Chemistry, 2015, 748, 52-57.	3.8	30

#	Article	IF	Citations
19	Interplay of phase boundary anisotropy and electro-auto-catalytic surface reactions on the lithium intercalation dynamics in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Li</mml:mi><mml:mi>X</mml:mi></mml:ms plateletlike nanoparticles. Physical Review Materials, 2018, 2, .	2.4	28
20	Dynamic Interfacial Stability Confirmed by Microscopic Optical Operando Experiments Enables Highâ€Retentionâ€Rate Anodeâ€Free Na Metal Full Cells. Advanced Science, 2021, 8, 2005006.	11.2	24
21	Performance and Degradation of A Lithium-Bromine Rechargeable Fuel Cell Using Highly Concentrated Catholytes. Electrochimica Acta, 2016, 202, 216-223.	5.2	19
22	Nanoâ€sized Titanium Nitride Functionalized Separator Improves Cycling Performance of Lithium Sulfur Batteries. ChemistrySelect, 2019, 4, 698-704.	1.5	19
23	A dual-mode rechargeable lithiumâ€“bromine/oxygen fuel cell. Journal of Materials Chemistry A, 2015, 3, 14165-14172.	10.3	17
24	Gradient lithiation to load controllable, high utilization lithium in graphitic carbon host for high-energy batteries. Nano Energy, 2022, 93, 106808.	16.0	14
25	Fast Charging Limits of Ideally Stable Metal Anodes in Liquid Electrolytes. Advanced Energy Materials, 2022, 12, .	19.5	14
26	Operando Electrochemical Kinetics in Particulate Porous Electrodes by Quantifying the Mesoscale Spatiotemporal Heterogeneities. Advanced Energy Materials, 2021, 11, 2003344.	19.5	11
27	Impacts of negative to positive capacities ratios on the performance of next-generation lithium-ion batteries. Electrochimica Acta, 2022, 406, 139878.	5.2	9
28	Dynamic interplay between phase transformation instabilities and reaction heterogeneities in particulate intercalation electrodes. Cell Reports Physical Science, 2022, 3, 100854.	5.6	8
29	IEEE Access Special Section Editorial: Advanced Energy Storage Technologies and Their Applications. IEEE Access, 2020, 8, 218685-218693.	4.2	7
30	Effects of Interfacial Solvation Structures on the Morphological Stability of Potassium Metal Anodes Revealed by Operando Diagnosis. ACS Applied Energy Materials, 2022, 5, 7124-7133.	5.1	6
31	Overlimiting ion transport dynamic toward Sand's time in solid polymer electrolytes. Materials Today Energy, 2022, 27, 101037.	4.7	4
32	Response time analysis of FlexRay communication in fuel cell hybrid vehicle. , 2008, , .		3
33	Cobaltâ€Free Cathode Materials: Families and their Prospects (Adv. Energy Mater. 16/2022). Advanced Energy Materials, 2022, 12, .	19.5	2
34	Using Scanning Transmission X-ray Microscopy to Reveal the Origin of Lithium Compositional Spatiodynamics in Battery Materials. Microscopy and Microanalysis, 2017, 23, 888-889.	0.4	0
35	Interphases for Alkali Metal Anodes. , 2022, , 137-145.		0