Hui Yang

List of Publications by Year
in descending order

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46	2,771	257101 24	253896 43
papers	citations	h-index	g-index

46	46	46	3518
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ionic Conduction in Composite Polymer Electrolytes: Case of PEO:Ga-LLZO Composites. ACS Applied Materials & Interfaces, 2019, 11, 784-791.	4.0	250
2	Inward lithium-ion breathing of hierarchically porous silicon anodes. Nature Communications, 2015, 6, 8844.	5.8	217
3	Orientation-Dependent Interfacial Mobility Governs the Anisotropic Swelling in Lithiated Silicon Nanowires. Nano Letters, 2012, 12, 1953-1958.	4.5	212
4	Self-Limiting Lithiation in Silicon Nanowires. ACS Nano, 2013, 7, 1495-1503.	7.3	212
5	Tough Germanium Nanoparticles under Electrochemical Cycling. ACS Nano, 2013, 7, 3427-3433.	7.3	184
6	A chemo-mechanical model of lithiation in silicon. Journal of the Mechanics and Physics of Solids, 2014, 70, 349-361.	2.3	181
7	Electrochemically driven mechanical energy harvesting. Nature Communications, 2016, 7, 10146.	5.8	123
8	Surface-Coating Regulated Lithiation Kinetics and Degradation in Silicon Nanowires for Lithium Ion Battery. ACS Nano, 2015, 9, 5559-5566.	7.3	118
9	Surface Coating Constraint Induced Self-Discharging of Silicon Nanoparticles as Anodes for Lithium Ion Batteries. Nano Letters, 2015, 15, 7016-7022.	4.5	113
10	Mechanical properties of amorphous Li_xSi alloys: a reactive force field study. Modelling and Simulation in Materials Science and Engineering, 2013, 21, 074002.	0.8	103
11	Porous N, B co-doped carbon nanotubes as efficient metal-free electrocatalysts for ORR and Zn-air batteries. Chemical Engineering Journal, 2021, 422, 130134.	6.6	98
12	Nanovoid Formation and Annihilation in Gallium Nanodroplets under Lithiationâ€“Delithiation Cycling. Nano Letters, 2013, 13, 5212-5217.	4.5	96
13	Bending-Induced Symmetry Breaking of Lithiation in Germanium Nanowires. Nano Letters, 2014, 14, 4622-4627.	4.5	92
14	Enhanced Oxygen Evolution Reaction Activity by Encapsulating NiFe Alloy Nanoparticles in Nitrogen-Doped Carbon Nanofibers. ACS Applied Materials & Interfaces, 2020, 12, 31503-31513.	4.0	78
15	A mechanistic model for depth-dependent hardness of ion irradiated metals. Journal of Nuclear Materials, 2017, 485, 80-89.	1.3	69
16	Strong kinetics-stress coupling in lithiation of Si and Ge anodes. Extreme Mechanics Letters, 2015, 2, 1-6.	2.0	66
17	Electron density modulation of MoP by rare earth metal as highly efficient electrocatalysts for pH-universal hydrogen evolution reaction. Applied Catalysis B: Environmental, 2021, 299, 120657.	10.8	57
18	Minimized Volume Expansion in Hierarchical Porous Silicon upon Lithiation. ACS Applied Materials & Interfaces, 2019, 11, 13257-13263.	4.0	51

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19	Conductive polyaniline doped with phytic acid as a binder and conductive additive for a commercial silicon anode with enhanced lithium storage properties. Journal of Materials Chemistry A, 2020, 8, 16323-16331.	5.2	46
20	Chemomechanics control of tearing paths in graphene. Physical Review B, 2012, 85, .	1.1	33
21	Self-weakening in lithiated graphene electrodes. Chemical Physics Letters, 2013, 563, 58-62.	1.2	33
22	Failure mechanism of Au@Co9S8 yolk-shell anode in Li-ion batteries unveiled by in-situ transmission electron microscopy. Applied Physics Letters, 2019, 114, .	1.5	30
23	Lithiation induced corrosive fracture in defective carbon nanotubes. Applied Physics Letters, 2013, 103, .	1.5	27
24	Enhanced processability and electrochemical cyclability of metallic sodium at elevated temperature using sodium alloy composite. Energy Storage Materials, 2021, 35, 310-316.	9.5	26
25	Hybrid electrolytes with an ultrahigh Li-ion transference number for lithium-metal batteries with fast and stable charge/discharge capability. Journal of Materials Chemistry A, 2021, 9, 18239-18246.	5.2	25
26	Scalable Manufacture of Highâ€Performance Battery Electrodes Enabled by a Templateâ€Free Method. Small Methods, 2021, 5, e2100280.	4.6	24
27	Construction of an N-Decorated Carbon-Encapsulated W₂C/WP Heterostructure as an Efficient Electrocatalyst for Hydrogen Evolution in Both Alkaline and Acidic Media. ACS Applied Materials & Interfaces, 2021, 13, 53955-53964.	4.0	20
28	An atomistic perspective on lithiation-induced stress in silicon nanopillars. Scripta Materialia, 2018, 152, 74-78.	2.6	19
29	Circumventing chemo-mechanical failure of Sn foil battery anode by grain refinement and elaborate porosity design. Journal of Energy Chemistry, 2021, 62, 477-484.	7.1	19
30	Revealing the Chemical and Structural Evolution of V2O5 Nanoribbons in Lithium-Ion Batteries Using in Situ Transmission Electron Microscopy. Analytical Chemistry, 2019, 91, 11055-11062.	3.2	18
31	Synergistic Lithium Storage in Silicaâ€“Tin Composites Enables a Cycle-Stable and High-Capacity Anode for Lithium-Ion Batteries. ACS Applied Energy Materials, 2021, 4, 2741-2750.	2.5	18
32	A Solvent Molecule Driven Pure PEDOT:PSS Actuator. Macromolecular Materials and Engineering, 2020, 305, 2000327.	1.7	17
33	Ultrahigh Malleability of the Lithiation-Induced Li_xSi Phase. ACS Applied Energy Materials, 2018, 1, 4211-4220.	2.5	16
34	Stress generation during anisotropic lithiation in silicon nanopillar electrodes: A reactive force field study. Physics Letters, Section A: General, Atomic and Solid State Physics, 2019, 383, 125955.	0.9	11
35	In Situ TEM of Phosphorus-Dopant-Induced Nanopore Formation in Delithiated Silicon Nanowires. ACS Applied Materials & Interfaces, 2019, 11, 17313-17320.	4.0	11
36	Stressâ€Regulation Design of Lithium Alloy Electrode toward Stable Battery Cycling. Energy and Environmental Materials, 2023, 6, .	7.3	11

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37	In Situ Measurements of the Mechanical Properties of Electrochemically Deposited Li₂CO₃ and Li₂O Nanorods. ACS Applied Materials & Interfaces, 2021, 13, 44479-44487.	4.0	10
38	Fracture toughness of Li<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e513" altimg="si23.svg"><mml:msub><mml:mrow /><mml:mrow><mml:mi>x</mml:mi></mml:mrow></mml:msub></mml:math>Si alloys in lithium ion battery. Extreme Mechanics Letters, 2019, 32, 100555.	2.0	9
39	Ten micrometer thick polyethylene separator modified by Î±-LiAlO2@Î³-Al2O3 nanosheets for simultaneous suppression of Li dendrite growth and polysulfide shuttling in Li-S batteries. Materials Today Energy, 2022, 26, 100990.	2.5	9
40	Enhanced thermal shock response of Al₂O₃â€“graphite composites through a layered architectural design. Journal of the American Ceramic Society, 2019, 102, 3673-3684.	1.9	6
41	Mechanics of electrochemically driven mechanical energy harvesting. Extreme Mechanics Letters, 2017, 15, 78-82.	2.0	5
42	Cobalt doping boosted electrocatalytic activity of CaMn3O6 for hydrogen evolution reaction. Nano Research, 2022, 15, 2870-2876.	5.8	5
43	A Pressure Responsive Artificial Interphase Layer of BaTiO₃ against Dendrite Growth for Stable Lithium Metal Anodes. Batteries and Supercaps, 2022, 5, .	2.4	3
44	Direct and Inverse Solutions for Thermal- and Stress-Transients and the Analytical Determination of Boundary Conditions Using Remote Temperature or Strain Data. Journal of Pressure Vessel Technology, Transactions of the ASME, 2012, 134, .	0.4	0
45	In-situ TEM Study of Internal and External Stress on Lithiation behavior of High Capacity Anode Materials with a Large Volume Change. Microscopy and Microanalysis, 2014, 20, 1536-1537.	0.2	0
46	Numerical and experimental comparison of two nano-structuring processing techniques on making stronger stainless steels. Materials Today Communications, 2020, 24, 100419.	0.9	0