Sulin Zhang

List of Publications by Year
in descending order

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42 papers	4,605 citations	201575 27 h-index	254106 43 g-index
43 all docs	43 docs citations	43 times ranked	7614 citing authors

#	Article	IF	Citations
1	Physical Principles of Nanoparticle Cellular Endocytosis. ACS Nano, 2015, 9, 8655-8671.	7.3	852
2	Anisotropic Swelling and Fracture of Silicon Nanowires during Lithiation. Nano Letters, 2011, 11, 3312-3318.	4.5	691
3	In Situ TEM Experiments of Electrochemical Lithiation and Delithiation of Individual Nanostructures. Advanced Energy Materials, 2012, 2, 722-741.	10.2	341
4	Highly Stretchable Polymer Composite with Strainâ€Enhanced Electromagnetic Interference Shielding Effectiveness. Advanced Materials, 2020, 32, e1907499.	11.1	242
5	Inward lithium-ion breathing of hierarchically porous silicon anodes. Nature Communications, 2015, 6, 8844.	5.8	217
6	Lithium whisker growth and stress generation in an in situ atomic force microscopeâ€“environmental transmission electron microscope set-up. Nature Nanotechnology, 2020, 15, 94-98.	15.6	217
7	Coupling of electrochemically triggered thermal and mechanical effects to aggravate failure in a layered cathode. Nature Communications, 2018, 9, 2437.	5.8	200
8	Flexible three-dimensional interconnected piezoelectric ceramic foam based composites for highly efficient concurrent mechanical and thermal energy harvesting. Energy and Environmental Science, 2018, 11, 2046-2056.	15.6	188
9	Molecular insights into the complex mechanics of plant epidermal cell walls. Science, 2021, 372, 706-711.	6.0	148
10	Progressive growth of the solidâ€“electrolyte interphase towards the Si anode interior causes capacity fading. Nature Nanotechnology, 2021, 16, 1113-1120.	15.6	147
11	ReaxFF Reactive Force-Field Study of Molybdenum Disulfide (MoS₂). Journal of Physical Chemistry Letters, 2017, 8, 631-640.	2.1	126
12	Electrochemically driven mechanical energy harvesting. Nature Communications, 2016, 7, 10146.	5.8	123
13	Multiple stiffening effects of nanoscale knobs on human red blood cells infected with Plasmodium falciparum malaria parasite. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 6068-6073.	3.3	108
14	Mechanical mismatch-driven rippling in carbon-coated silicon sheets for stress-resilient battery anodes. Nature Communications, 2018, 9, 2924.	5.8	94
15	Chemomechanical modeling of lithiation-induced failure in high-volume-change electrode materials for lithium ion batteries. Npj Computational Materials, 2017, 3, .	3.5	86
16	Reversible host cell remodeling underpins deformability changes in malaria parasite sexual blood stages. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 4800-4805.	3.3	73
17	Strong kinetics-stress coupling in lithiation of Si and Ge anodes. Extreme Mechanics Letters, 2015, 2, 1-6.	2.0	66
18	Germaniumâ€Based Electrode Materials for Lithiumâ€Ion Batteries. ChemElectroChem, 2014, 1, 706-713.	1.7	59

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19	Nanoconfinementâ€Induced Giant Electrocaloric Effect in Ferroelectric Polymer Nanowire Array Integrated with Aluminum Oxide Membrane to Exhibit Record Cooling Power Density. Advanced Materials, 2019, 31, e1806642.	11.1	56
20	Cooperative Transmembrane Penetration of Nanoparticles. Scientific Reports, 2015, 5, 10525.	1.6	51
21	Two-Fold Anisotropy Governs Morphological Evolution and Stress Generation in Sodiated Black Phosphorus for Sodium Ion Batteries. Nano Letters, 2017, 17, 2299-2306.	4.5	48
22	Dynamic shape transformations of fluid vesicles. Soft Matter, 2010, 6, 4571.	1.2	43
23	Ferroelectric Polymer Nanocomposites with Complementary Nanostructured Fillers for Electrocaloric Cooling with High Power Density and Great Efficiency. ACS Applied Energy Materials, 2018, 1, 1344-1354.	2.5	42
24	Mechanical forces drive a reorientation cascade leading to biofilm self-patterning. Nature Communications, 2021, 12, 6632.	5.8	41
25	Mechanotargeting: Mechanicsâ€Dependent Cellular Uptake of Nanoparticles. Advanced Materials, 2018, 30, e1707464.	11.1	38
26	In situ Observation of Li Depositionâ€Induced Cracking in Garnet Solid Electrolytes. Energy and Environmental Materials, 2022, 5, 524-532.	7.3	36
27	Chemomechanics control of tearing paths in graphene. Physical Review B, 2012, 85, .	1.1	33
28	The role of substrate topography on the cellular uptake of nanoparticles. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2016, 104, 488-495.	1.6	31
29	Molecular Ferroelectricâ€Based Flexible Sensors Exhibiting Supersensitivity and Multimodal Capability for Detection. Advanced Materials, 2021, 33, e2104107.	11.1	29
30	Lithiation induced corrosive fracture in defective carbon nanotubes. Applied Physics Letters, 2013, 103, .	1.5	27
31	Coordinated buckling of thick multi-walled carbon nanotubes under uniaxial compression. Nano Research, 2010, 3, 32-42.	5.8	22
32	Effective coarse-grained simulations of super-thick multi-walled carbon nanotubes under torsion. Journal of Applied Physics, 2009, 105, 033516.	1.1	19
33	Coarseâ€grained molecular dynamics modeling of DNAâ€“carbon nanotube complexes. International Journal for Numerical Methods in Engineering, 2010, 83, 968-985.	1.5	18
34	Radial Corrugations of Multi-Walled Carbon Nanotubes Driven by Inter-Wall Nonbonding Interactions. Nanoscale Research Letters, 2011, 6, 53.	3.1	17
35	Active cell-matrix coupling regulates cellular force landscapes of cohesive epithelial monolayers. Npj Computational Materials, 2018, 4, .	3.5	13
36	Actin-ring segment switching drives nonadhesive gap closure. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 33263-33271.	3.3	12

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37	Molar-volume asymmetry enabled low-frequency mechanical energy harvesting in electrochemical cells. Applied Energy, 2020, 273, 115230.	5.1	12
38	Spatiotemporal Oscillation in Confined Epithelial Motion upon Fluid-to-Solid Transition. ACS Nano, 2021, 15, 7618-7627.	7.3	12
39	Extracellular and intercellular force distribution in circularly shaped epithelia. Extreme Mechanics Letters, 2019, 31, 100526.	2.0	10
40	Lithium Deposition-Induced Fracture of Carbon Nanotubes and Its Implication to Solid-State Batteries. Nano Letters, 2021, 21, 6859-6866.	4.5	9
41	Membrane-Mediated Inter-Domain Interactions. BioNanoScience, 2011, 1, 97-102.	1.5	4
42	Probing the Origin of Gold Dissolution and Tunneling Across Ni₂P Shell Using in situ Transmission Electron Microscopy. ACS Applied Materials & Interfaces, 2019, 11, 46947-46952.	4.0	2