

List of Publications by Year in  
Descending Order

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**Version:** 2024-04-17

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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.

538 papers	42,976 citations	104 h-index	191 g-index
564 ext. papers	50,096 ext. citations	12.2 avg, IF	7.94 L-index

#	Paper	IF	Citations
538	Machine learning in nuclear materials research. <i>Current Opinion in Solid State and Materials Science</i> , <b>2022</b> , 26, 100975	12	7
537	Learning constitutive relations of plasticity using neural networks and full-field data. <i>Extreme Mechanics Letters</i> , <b>2022</b> , 101645	3.9	0
536	In situ TEM visualization of LiF nanosheet formation on the cathode-electrolyte interphase (CEI) in liquid-electrolyte lithium-ion batteries. <i>Matter</i> , <b>2022</b> ,	12.7	10
535	Deep neural network battery life and voltage prediction by using data of one cycle only. <i>Applied Energy</i> , <b>2022</b> , 306, 118134	10.7	11
534	Rejuvenation of plasticity via deformation graining in magnesium.. <i>Nature Communications</i> , <b>2022</b> , 13, 1060	17.4	2
533	Synthesizing Functional Ceramic Powders for Solid Oxide Cells in Minutes through Thermal Shock. <i>ACS Energy Letters</i> , <b>2022</b> , 7, 1223-1229	20.1	2
532	Cryo-Electron Tomography of Highly Deformable and Adherent Solid-Electrolyte Interphase Exoskeleton in Li-Metal Batteries with Ether-Based Electrolyte (Adv. Mater. 13/2022). <i>Advanced Materials</i> , <b>2022</b> , 34, 2270101	24	
531	TeaNet: Universal neural network interatomic potential inspired by iterative electronic relaxations. <i>Computational Materials Science</i> , <b>2022</b> , 207, 111280	3.2	2
530	Intelligent disassembly of electric-vehicle batteries: a forward-looking overview. <i>Resources, Conservation and Recycling</i> , <b>2022</b> , 182, 106207	11.9	1
529	Healing of donor defect states in monolayer molybdenum disulfide using oxygen-incorporated chemical vapour deposition. <i>Nature Electronics</i> , <b>2022</b> , 5, 28-36	28.4	7
528	Revitalizing interface in protonic ceramic cells by acid etch.. <i>Nature</i> , <b>2022</b> , 604, 479-485	50.4	10
527	Ultralong one-dimensional plastic zone created in aluminum underneath a nanoscale indent. <i>Acta Materialia</i> , <b>2022</b> , 117944	8.4	1
526	Acid-in-clay Electrolyte for Wide-temperature-range and Long-cycle proton Batteries.. <i>Advanced Materials</i> , <b>2022</b> , e2202063	24	4
525	Enhanced Mobility of Cations and Anions in the Redox State: The Polaronium Mechanism. <i>Acta Materialia</i> , <b>2022</b> , 117941	8.4	3
524	Revealing the Brüsted-Evans-Polanyi relation in halide-activated fast MoS growth toward millimeter-sized 2D crystals. <i>Science Advances</i> , <b>2021</b> , 7, eabj3274	14.3	1
523	Porous Mixed Ionic Electronic Conductor Interlayers for Solid-State Batteries. <i>Energy Material Advances</i> , <b>2021</b> , 2021, 1-15	1	5
522	Effects of recoil spectra and electronic energy dissipation on defect survival in 3C-SiC. <i>Materialia</i> , <b>2021</b> , 15, 101023	3.2	3

521	Development of robust neural-network interatomic potential for molten salt. <i>Cell Reports Physical Science</i> , <b>2021</b> , 2, 100359	6.1	20
520	Reactive boride infusion stabilizes Ni-rich cathodes for lithium-ion batteries. <i>Nature Energy</i> , <b>2021</b> , 6, 362-371	6.1	84
519	Ultra-high-voltage Ni-rich layered cathodes in practical Li metal batteries enabled by a sulfonamide-based electrolyte. <i>Nature Energy</i> , <b>2021</b> , 6, 495-505	6.3	82
518	Hybrid diffusive-displacive helium outgassing in Cu/Nb multilayer composites. <i>Scripta Materialia</i> , <b>2021</b> , 194, 113706	5.6	3
517	Machine learning of metal-ceramic wettability. <i>Journal of Materiomics</i> , <b>2021</b> ,	6.7	1
516	De novo Powered Air-Purifying Respirator Design and Fabrication for Pandemic Response <b>2021</b> ,		2
515	Phase transitions in 2D materials. <i>Nature Reviews Materials</i> , <b>2021</b> , 6, 829-846	7.3	43
514	Terahertz Driven Reversible Topological Phase Transition of Monolayer Transition Metal Dichalcogenides. <i>Advanced Science</i> , <b>2021</b> , 8, e2003832	13.6	11
513	Poor Stability of Li CO in the Solid Electrolyte Interphase of a Lithium-Metal Anode Revealed by Cryo-Electron Microscopy. <i>Advanced Materials</i> , <b>2021</b> , 33, e2100404	24	37
512	Self-Perpetuating Carbon Foam Microwave Plasma Conversion of Hydrocarbon Wastes into Useful Fuels and Chemicals. <i>Environmental Science &amp; Technology</i> , <b>2021</b> , 55, 6239-6247	10.3	12
511	Switching of metal-oxygen hybridization for selective CO <sub>2</sub> electrohydrogenation under mild temperature and pressure. <i>Nature Catalysis</i> , <b>2021</b> , 4, 274-283	36.5	19
510	Machine learning for deep elastic strain engineering of semiconductor electronic band structure and effective mass. <i>Npj Computational Materials</i> , <b>2021</b> , 7,	10.9	6
509	Tension-compression asymmetry in amorphous silicon. <i>Nature Materials</i> , <b>2021</b> , 20, 1371-1377	27	12
508	Determining the Criticality of Li-Excess for Disordered-Rocksalt Li-Ion Battery Cathodes. <i>Advanced Energy Materials</i> , <b>2021</b> , 11, 2100204	21.8	8
507	Modeling LiF and FLiBe Molten Salts with Robust Neural Network Interatomic Potential. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 24582-24592	9.5	6
506	Air-Stable Li <sub>x</sub> Al Foil as Free-Standing Electrode with Improved Electrochemical Ductility by Shot-Peening Treatment. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2100978	15.6	3
505	Light-induced static magnetization: Nonlinear Edelstein effect. <i>Physical Review B</i> , <b>2021</b> , 103,	3.3	5
504	Dense All-Electrochem-Active Electrodes for All-Solid-State Lithium Batteries. <i>Advanced Materials</i> , <b>2021</b> , 33, e2008723	24	11

503	Thermally Aged Li-Mn-O Cathode with Stabilized Hybrid Cation and Anion Redox. <i>Nano Letters</i> , <b>2021</b> , 21, 4176-4184	11.5	1
502	Ultralow contact resistance between semimetal and monolayer semiconductors. <i>Nature</i> , <b>2021</b> , 593, 211-217	30.4	154
501	Highly efficient parallel grand canonical simulations of interstitial-driven diffusion-deformation processes. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2021</b> , 29, 055018	2	
500	Hollow-grained Voronoi foam ceramics with high strength and thermal superinsulation up to 1400 °C. <i>Materials Today</i> , <b>2021</b> , 46, 35-43	21.8	6
499	Topological Phase Transition: Terahertz Driven Reversible Topological Phase Transition of Monolayer Transition Metal Dichalcogenides (Adv. Sci. 12/2021). <i>Advanced Science</i> , <b>2021</b> , 8, 2170072	13.6	78
498	Assessing the filtration efficiency and regulatory status of N95s and nontraditional filtering face-piece respirators available during the COVID-19 pandemic. <i>BMC Infectious Diseases</i> , <b>2021</b> , 21, 712	4	9
497	Light-Induced Quantum Anomalous Hall Effect on the 2D Surfaces of 3D Topological Insulators. <i>Advanced Science</i> , <b>2021</b> , 8, e2101508	13.6	2
496	Ultralow Resistance Two-Stage Electrostatically Assisted Air Filtration by Polydopamine Coated PET Coarse Filter. <i>Small</i> , <b>2021</b> , 17, e2102051	11	12
495	Extreme mixing in nanoscale transition metal alloys. <i>Matter</i> , <b>2021</b> , 4, 2340-2353	12.7	30
494	Composition manipulation of bis(fluorosulfonyl)imide-based ionic liquid electrolyte for high-voltage graphite//LiNi <sub>0.5</sub> Mn <sub>1.5</sub> O <sub>4</sub> lithium-ion batteries. <i>Chemical Engineering Journal</i> , <b>2021</b> , 415, 128904	14.7	3
493	Electrospinning-Based Strategies for Battery Materials. <i>Advanced Energy Materials</i> , <b>2021</b> , 11, 2000845	21.8	78
492	Lithium Manganese Spinel Cathodes for Lithium-Ion Batteries. <i>Advanced Energy Materials</i> , <b>2021</b> , 11, 2000997	21.7	75
491	Ultra-Uniform Nanocrystalline Materials via Two-Step Sintering. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2007750	15.6	22
490	Coarse-grained reduced Mo <sub>x</sub> Ti <sub>1-x</sub> Nb <sub>2</sub> O <sub>7+y</sub> anodes for high-rate lithium-ion batteries. <i>Energy Storage Materials</i> , <b>2021</b> , 34, 574-581	19.4	5
489	Carbon nanotube (CNT) metal composites exhibit greatly reduced radiation damage. <i>Acta Materialia</i> , <b>2021</b> , 203, 116483	8.4	12
488	Additive manufacturing for energy: A review. <i>Applied Energy</i> , <b>2021</b> , 282, 116041	10.7	36
487	Chemical and structural origin of hole states in yttria-stabilized zirconia. <i>Acta Materialia</i> , <b>2021</b> , 203, 116487	8.4	4
486	Achieving large uniform tensile elasticity in microfabricated diamond. <i>Science</i> , <b>2021</b> , 371, 76-78	33.3	29

485	Additive stabilization of SEI on graphite observed using cryo-electron microscopy. <i>Energy and Environmental Science</i> , <b>2021</b> , 14, 4882-4889	35.4	20
484	The impact of hydrogen valence on its bonding and transport in molten fluoride salts. <i>Journal of Materials Chemistry A</i> , <b>2021</b> , 9, 1784-1794	13	5
483	Analysis of SteraMist ionized hydrogen peroxide technology in the sterilization of N95 respirators and other PPE. <i>Scientific Reports</i> , <b>2021</b> , 11, 2051	4.9	14
482	Layer number dependent ferroelasticity in 2D Ruddlesden-Popper organic-inorganic hybrid perovskites. <i>Nature Communications</i> , <b>2021</b> , 12, 1332	17.4	10
481	Boosting photocatalytic hydrogen production from water by photothermally induced biphasic systems. <i>Nature Communications</i> , <b>2021</b> , 12, 1343	17.4	61
480	Colossal switchable photocurrents in topological Janus transition metal dichalcogenides. <i>Npj Computational Materials</i> , <b>2021</b> , 7,	10.9	8
479	Interplay of Lithium Intercalation and Plating on a Single Graphite Particle. <i>Joule</i> , <b>2021</b> , 5, 393-414	27.8	46
478	Complex Structure of Molten NaCl <sub>0.7</sub> CrCl <sub>3</sub> Salt: Cr <sup>III</sup> Octahedral Network and Intermediate-Range Order. <i>ACS Applied Energy Materials</i> , <b>2021</b> , 4, 3044-3056	6.1	6
477	CMOS-Compatible Protonic Programmable Resistor Based on Phosphosilicate Glass Electrolyte for Analog Deep Learning. <i>Nano Letters</i> , <b>2021</b> , 21, 6111-6116	11.5	4
476	Supercritical CO <sub>2</sub> -Assisted SiO <sub>x</sub> /Carbon Multi-Layer Coating on Si Anode for Lithium-Ion Batteries. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2104135	15.6	14
475	EML webinar overview: Elastic Strain Engineering for unprecedented properties. <i>Extreme Mechanics Letters</i> , <b>2021</b> , 101430	3.9	1
474	Pure spin photocurrent in non-centrosymmetric crystals: bulk spin photovoltaic effect. <i>Nature Communications</i> , <b>2021</b> , 12, 4330	17.4	12
473	Uranium In Situ Electrolytic Deposition with a Reusable Functional Graphene-Foam Electrode. <i>Advanced Materials</i> , <b>2021</b> , 33, e2102633	24	10
472	3D-Printing Damage-Tolerant Architected Metallic Materials with Shape Recoverability via Special Deformation Design of Constituent Material. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 39915-39924	11.5	3
471	Designing artificial two-dimensional landscapes via atomic-layer substitution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2021</b> , 118,	11.5	9
470	Ultralow Resistance Two-Stage Electrostatically Assisted Air Filtration by Polydopamine Coated PET Coarse Filter (Small 33/2021). <i>Small</i> , <b>2021</b> , 17, 2170172	11	1
469	Peristalsis-like migration of carbon-metabolizing catalytic nanoparticles. <i>Extreme Mechanics Letters</i> , <b>2021</b> , 49, 101463	3.9	0
468	A new approach of using Lorentz force to study single-asperity friction inside TEM. <i>Journal of Materials Science and Technology</i> , <b>2021</b> , 84, 43-48	9.1	2

- 467 Towards pressureless sintering of nanocrystalline tungsten. *Acta Materialia*, **2021**, 117344 8.4 5
- 466 Electrochemically Engineered, Highly Energy-Efficient Conversion of Ethane to Ethylene and Hydrogen below 550 °C in a Protonic Ceramic Electrochemical Cell. *ACS Catalysis*, **2021**, 11, 12194-12202<sup>13.1</sup> 2
- 465 De Novo Powered Air-Purifying Respirator Design and Fabrication for Pandemic Response. *Frontiers in Bioengineering and Biotechnology*, **2021**, 9, 690905 5.8 0
- 464 Atomic-scale investigation of Lithiation/Delithiation mechanism in High-entropy spinel oxide with superior electrochemical performance. *Chemical Engineering Journal*, **2021**, 420, 129838 14.7 13
- 463 Beating 1 Sievert: Optimal Radiation Shielding of Astronauts on a Mission to Mars. *Space Weather*, **2021**, 19, e2021SW002749 3.7 3
- 462 Friction and Adhesion Govern Yielding of Disordered Nanoparticle Packings: A Multiscale Adhesive Discrete Element Method Study. *Nano Letters*, **2021**, 21, 7989-7997 11.5
- 461 High-voltage lithium-metal battery with three-dimensional mesoporous carbon anode host and ether/carbonate binary electrolyte. *Carbon*, **2021**, 184, 752-763 10.4 6
- 460 Lithium Plating Mechanism, Detection, and Mitigation in Lithium-Ion Batteries. *Progress in Energy and Combustion Science*, **2021**, 87, 100953 33.6 17
- 459 Electrospinning Techniques: Electrospinning-Based Strategies for Battery Materials (Adv. Energy Mater. 2/2021). *Advanced Energy Materials*, **2021**, 11, 2170010 21.8 7
- 458 Efficient polysulfide trapping in lithium-sulfur batteries using ultrathin and flexible BaTiO<sub>3</sub>/graphene oxide/carbon nanotube layers. *Nanoscale*, **2021**, 13, 6863-6870 7.7 1
- 457 A Robust Flow-Through Platform for Organic Contaminant Removal. *Cell Reports Physical Science*, **2021**, 2, 100296-100296 6.1 4
- 456 Cryo-Electron Tomography of Highly Deformable and Adherent Solid-Electrolyte Interphase Exoskeleton in Li-Metal Batteries with Ether-based Electrolyte. *Advanced Materials*, **2021**, e2108252 24 5
- 455 Dislocation-Mediated Hydride Precipitation in Zirconium.. *Small*, **2021**, e2105881 11 2
- 454 Reusable Polyacrylonitrile-Sulfur Extractor of Heavy Metal Ions from Wastewater (Adv. Funct. Mater. 51/2021). *Advanced Functional Materials*, **2021**, 31, 2170381 15.6 1
- 453 Coexistence of multi-deformation modes in beta Ti alloys with improved yielding strength and ductility. *MATEC Web of Conferences*, **2020**, 321, 11069 0.3
- 452 In Situ Scanning Transmission Electron Microscopy Observations of Fracture at the Atomic Scale. *Physical Review Letters*, **2020**, 125, 246102 7.4 16
- 451 EELS Evidence for Nascent Polymerization of Carbon and Silicon in Amorphization of SiC. *Microscopy and Microanalysis*, **2020**, 26, 648-651 0.5
- 450 A Surface Se-Substituted LiCo[O Se] Cathode with Ultrastable High-Voltage Cycling in Pouch Full-Cells. *Advanced Materials*, **2020**, 32, e2005182 24 38

449	Sacrificial Poly(propylene carbonate) Membrane for Dispersing Nanoparticles and Preparing Artificial Solid Electrolyte Interphase on Li Metal Anode. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 27087-27094	9.5	4
448	Gradient-morph LiCoO <sub>2</sub> single crystals with stabilized energy density above 3400 W h L <sup>-1</sup> . <i>Energy and Environmental Science</i> , <b>2020</b> , 13, 1865-1878	35.4	52
447	Assessment of the Qualitative Fit Test and Quantitative Single-Pass Filtration Efficiency of Disposable N95 Masks Following Gamma Irradiation. <i>JAMA Network Open</i> , <b>2020</b> , 3, e209961	10.4	17
446	Molar-volume asymmetry enabled low-frequency mechanical energy harvesting in electrochemical cells. <i>Applied Energy</i> , <b>2020</b> , 273, 115230	10.7	6
445	Radiation-resistant metal-organic framework enables efficient separation of krypton fission gas from spent nuclear fuel. <i>Nature Communications</i> , <b>2020</b> , 11, 3103	17.4	24
444	Electrostatic Air Filtration by Multifunctional Dielectric Heterocaking Filters with Ultralow Pressure Drop. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 29383-29392	9.5	8
443	Origin of micrometer-scale dislocation motion during hydrogen desorption. <i>Science Advances</i> , <b>2020</b> , 6, eaaz1187	14.3	12
442	Manipulation of Nitrogen-Heteroatom Configuration for Enhanced Charge-Storage Performance and Reliability of Nanoporous Carbon Electrodes. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 32797-32805	9.5	10
441	Protonic solid-state electrochemical synapse for physical neural networks. <i>Nature Communications</i> , <b>2020</b> , 11, 3134	17.4	37
440	Semi-Flooded Sulfur Cathode with Ultralean Absorbed Electrolyte in Li-S Battery. <i>Advanced Science</i> , <b>2020</b> , 7, 1903168	13.6	22
439	Toward a Safer Battery Management System: A Critical Review on Diagnosis and Prognosis of Battery Short Circuit. <i>IScience</i> , <b>2020</b> , 23, 101010	6.1	61
438	Dendrimer-Au Nanoparticle Network Covered Alumina Membrane for Ion Rectification and Enhanced Bioanalysis. <i>Nano Letters</i> , <b>2020</b> , 20, 1846-1854	11.5	32
437	Deformation mechanism maps for sub-micron sized aluminum. <i>Acta Materialia</i> , <b>2020</b> , 188, 570-578	8.4	4
436	Rafting-Enabled Recovery Avoids Recrystallization in 3D-Printing-Repaired Single-Crystal Superalloys. <i>Advanced Materials</i> , <b>2020</b> , 32, e1907164	24	14
435	Normal-to-topological insulator martensitic phase transition in group-IV monochalcogenides driven by light. <i>NPG Asia Materials</i> , <b>2020</b> , 12,	10.3	9
434	Molecular Dynamics <b>2020</b> , 573-594		5
433	A Novel Moisture-Insensitive and Low-Corrosivity Ionic Liquid Electrolyte for Rechargeable Aluminum Batteries. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1909565	15.6	23
432	Hierarchical {332} twinning in a metastable Ti-alloy showing tolerance to strain localization. <i>Materials Research Letters</i> , <b>2020</b> , 8, 247-253	7.4	15

431	Achieving 5.9% elastic strain in kilograms of metallic glasses: Nanoscopic strain engineering goes macro. <i>Materials Today</i> , <b>2020</b> , 37, 18-26	21.8	12
430	Observation of strong higher-order lattice anharmonicity in Raman and infrared spectra. <i>Physical Review B</i> , <b>2020</b> , 101,	3.3	16
429	Surpassing lithium metal rechargeable batteries with self-supporting Li <sub>5</sub> NbS <sub>2</sub> foil anode. <i>Nano Energy</i> , <b>2020</b> , 74, 104815	17.1	10
428	Advanced Electron Microscopy Characterization of Intergranular Corrosion in Ni-20Cr Alloy Under Molten Salt Environment. <i>Microscopy and Microanalysis</i> , <b>2020</b> , 26, 180-182	0.5	
427	Flexible Ferroelectrics: Periodic Wrinkle-Patterned Single-Crystalline Ferroelectric Oxide Membranes with Enhanced Piezoelectricity (Adv. Mater. 50/2020). <i>Advanced Materials</i> , <b>2020</b> , 32, 2070377 <sup>4</sup>		
426	More Efficient and Accurate Simulations of Primary Radiation Damage in Materials with Nanosized Microstructural Features or Ion Beams <b>2020</b> , 2381-2412		1
425	Li metal deposition and stripping in a solid-state battery via Coble creep. <i>Nature</i> , <b>2020</b> , 578, 251-255	50.4	196
424	Analysis of SteraMist ionized hydrogen peroxide technology in the sterilization of N95 respirators and other PPE: a quality improvement study <b>2020</b> ,		6
423	Assessing the quality of nontraditional N95 filtering face-piece respirators available during the COVID-19 pandemic <b>2020</b> ,		10
422	A low-cost intermediate temperature Fe/Graphite battery for grid-scale energy storage. <i>Energy Storage Materials</i> , <b>2020</b> , 25, 801-810	19.4	5
421	Optimal annealing of Al foil anode for prelithiation and full-cell cycling in Li-ion battery: The role of grain boundaries in lithiation/delithiation ductility. <i>Nano Energy</i> , <b>2020</b> , 67, 104274	17.1	15
420	Focused-helium-ion-beam blow forming of nanostructures: radiation damage and nanofabrication. <i>Nanotechnology</i> , <b>2020</b> , 31, 045302	3.4	9
419	Pressureless two-step sintering of ultrafine-grained tungsten. <i>Acta Materialia</i> , <b>2020</b> , 186, 116-123	8.4	29
418	FSI-inspired solvent and full fluorosulfonyl electrolyte for 4 V class lithium-metal batteries. <i>Energy and Environmental Science</i> , <b>2020</b> , 13, 212-220	35.4	97
417	Nanocrystalline Li-Al-Mn-Si Foil as Reversible Li Host: Electronic Percolation and Electrochemical Cycling Stability. <i>Nano Letters</i> , <b>2020</b> , 20, 896-904	11.5	17
416	Lithium metal electrode protected by stiff and tough self-compacting separator. <i>Nano Energy</i> , <b>2020</b> , 69, 104399	17.1	14
415	Unveiling Nickel Chemistry in Stabilizing High-Voltage Cobalt-Rich Cathodes for Lithium-Ion Batteries. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1907903	15.6	51
414	Is graphite lithiophobic or lithiophilic?. <i>National Science Review</i> , <b>2020</b> , 7, 1208-1217	10.8	66

413	Creep-Enabled 3D Solid-State Lithium-Metal Battery. <i>CheM</i> , <b>2020</b> , 6, 2878-2892	16.2	34
412	Metallization of diamond. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2020</b> , 117, 24634-24639	11.5	13
411	Superconducting Cu/Nb nanolaminate by coded accumulative roll bonding and its helium damage characteristics. <i>Acta Materialia</i> , <b>2020</b> , 197, 212-223	8.4	16
410	Giant Photonic Response of Mexican-Hat Topological Semiconductors for Mid-infrared to Terahertz Applications. <i>Journal of Physical Chemistry Letters</i> , <b>2020</b> , 11, 6119-6126	6.4	7
409	Kinetic Rejuvenation of Li-Rich Li-Ion Battery Cathodes upon Oxygen Redox. <i>ACS Applied Energy Materials</i> , <b>2020</b> , 3, 7931-7943	6.1	7
408	Ultrastrong adhesion of fluorinated graphene on a substrate: In situ electrochemical conversion to ionic-covalent bonding at the interface. <i>Carbon</i> , <b>2020</b> , 169, 248-257	10.4	5
407	Stabilized Co-Free Li-Rich Oxide Cathode Particles with An Artificial Surface Prereconstruction. <i>Advanced Energy Materials</i> , <b>2020</b> , 10, 2001120	21.8	37
406	Hydrogen-Enhanced Vacancy Diffusion in Metals. <i>Journal of Physical Chemistry Letters</i> , <b>2020</b> , 11, 7015-7020	2.4	10
405	Periodic Wrinkle-Patterned Single-Crystalline Ferroelectric Oxide Membranes with Enhanced Piezoelectricity. <i>Advanced Materials</i> , <b>2020</b> , 32, e2004477	24	18
404	Metal-Organic Framework-Polyacrylonitrile Composite Beads for Xenon Capture. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 45342-45350	9.5	8
403	Sample spinning to mitigate polarization artifact and interstitial-vacancy imbalance in ion-beam irradiation. <i>Npj Computational Materials</i> , <b>2020</b> , 6,	10.9	3
402	First-principles investigation of monatomic gold wires under tension. <i>Computational Materials Science</i> , <b>2020</b> , 171, 109226	3.2	3
401	Dynamic Fluid-Like Graphene with Ultralow Frictional Molecular Bearing. <i>Advanced Materials</i> , <b>2019</b> , 31, e1903195	24	2
400	Super-elastic ferroelectric single-crystal membrane with continuous electric dipole rotation. <i>Science</i> , <b>2019</b> , 366, 475-479	33.3	127
399	Manipulating Sulfur Mobility Enables Advanced Li-S Batteries. <i>Matter</i> , <b>2019</b> , 1, 1047-1060	12.7	42
398	In-Situ Observation of Concurrent Oxidation and Mechanical Deformation in Al and Zr. <i>Microscopy and Microanalysis</i> , <b>2019</b> , 25, 1912-1913	0.5	
397	Designing solid solution hardening to retain uniform ductility while quadrupling yield strength. <i>Acta Materialia</i> , <b>2019</b> , 179, 107-118	8.4	11
396	Waterproof molecular monolayers stabilize 2D materials. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 20844-20849	11.5	24

395	Controlled growth of single-crystalline metal nanowires via thermomigration across a nanoscale junction. <i>Nature Communications</i> , <b>2019</b> , 10, 4478	17.4	9
394	Making metals linear super-elastic with ultralow modulus and nearly zero hysteresis. <i>Materials Horizons</i> , <b>2019</b> , 6, 515-523	14.4	13
393	More Efficient and Accurate Simulations of Primary Radiation Damage in Materials with Nanosized Microstructural Features or Ion Beams <b>2019</b> , 1-33		1
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391	Hybrid electrolyte enables safe and practical 5 V LiNi <sub>0.5</sub> Mn <sub>1.5</sub> O <sub>4</sub> batteries. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 16516-16525	13	22
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389	Roll-to-roll prelithiation of Sn foil anode suppresses gassing and enables stable full-cell cycling of lithium ion batteries. <i>Energy and Environmental Science</i> , <b>2019</b> , 12, 2991-3000	35.4	79
388	Engineering single-atom dynamics with electron irradiation. <i>Science Advances</i> , <b>2019</b> , 5, eaav2252	14.3	39
387	Colloidal quasi-one-dimensional dual semiconductor core/shell nanorod couple heterostructures with blue fluorescence. <i>Nanoscale</i> , <b>2019</b> , 11, 10190-10197	7.7	8
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384	Low-temperature synthesized LiMnO <sub>2</sub> -like cathode with hybrid cation- and anion-redox capacities. <i>Chemical Communications</i> , <b>2019</b> , 55, 8118-8121	5.8	14
383	Intercalation-conversion hybrid cathodes enabling LiS full-cell architectures with jointly superior gravimetric and volumetric energy densities. <i>Nature Energy</i> , <b>2019</b> , 4, 374-382	62.3	282
382	Strong and ductile beta Ti <sub>8</sub> Zr <sub>3</sub> Mo alloy with multimodal twinning. <i>Materials Research Letters</i> , <b>2019</b> , 7, 251-257	7.4	38
381	Microwave growth and tunable photoluminescence of nitrogen-doped graphene and carbon nitride quantum dots. <i>Journal of Materials Chemistry C</i> , <b>2019</b> , 7, 5468-5476	7.1	47
380	Slip transmission assisted by Shockley partials across $\mu$ Interfaces in Ti-alloys. <i>Acta Materialia</i> , <b>2019</b> , 171, 291-305	8.4	17
379	Full-Cell Cycling of a Self-Supporting Aluminum Foil Anode with a Phosphate Conversion Coating. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 15656-15661	9.5	17
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377	Deep elastic strain engineering of bandgap through machine learning. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 4117-4122	11.5	50
376	Additive manufacturing of patterned 2D semiconductor through recyclable masked growth. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 3437-3442	11.5	25
375	Optomechanical control of stacking patterns of h-BN bilayer. <i>Nano Research</i> , <b>2019</b> , 12, 2634-2639	10	15
374	Anisotropic mechanical properties and strengthening mechanism in superaligned carbon nanotubes-reinforced aluminum. <i>Carbon</i> , <b>2019</b> , 153, 513-524	10.4	10
373	Large plasticity in magnesium mediated by pyramidal dislocations. <i>Science</i> , <b>2019</b> , 365, 73-75	33.3	123
372	Near-infrared optical properties and proposed phase-change usefulness of transition metal disulfides. <i>Applied Physics Letters</i> , <b>2019</b> , 115, 161902	3.4	12
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370	Sn-Alloy Foil Electrode with Mechanical Prelithiation: Full-Cell Performance up to 200 Cycles. <i>Advanced Energy Materials</i> , <b>2019</b> , 9, 1902150	21.8	18
369	Batteries: Sn-Alloy Foil Electrode with Mechanical Prelithiation: Full-Cell Performance up to 200 Cycles (Adv. Energy Mater. 42/2019). <i>Advanced Energy Materials</i> , <b>2019</b> , 9, 1970165	21.8	
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