

Yang Ren

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.

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|--------------------|--------------------------|----------------|-----------------|
| 830 papers | 28,891 citations | 85 h-index | 133 g-index |
| 880 ext. papers | 35,046 ext. citations | 8.6 avg, IF | 7.32 L-index |

| # | Paper | IF | Citations |
|-----|--|------|-----------|
| 830 | Native lattice strain induced structural earthquake in sodium layered oxide cathodes.. <i>Nature Communications</i> , 2022 , 13, 436 | 17.4 | 3 |
| 829 | Selective laser melted high Ni content TiNi alloy with superior superelasticity and hardwearing. <i>Journal of Materials Science and Technology</i> , 2022 , 116, 246-257 | 9.1 | 0 |
| 828 | Interactions between martensitic NiTi shape memory alloy and Nb nanowires in composite wire during tensile deformation. <i>Composites Part B: Engineering</i> , 2022 , 234, 109690 | 10 | 1 |
| 827 | A highly distorted ultraelastic chemically complex Elinvar alloy.. <i>Nature</i> , 2022 , 602, 251-257 | 50.4 | 4 |
| 826 | High-throughput investigation of structural evolution upon solid-state in Cu _{1-x} Co _x combinatorial multilayer thin-film. <i>Materials and Design</i> , 2022 , 215, 110455 | 8.1 | 1 |
| 825 | Large thermal hysteresis in a single-phase NiTiNb shape memory alloy. <i>Scripta Materialia</i> , 2022 , 212, 114574 | 5.74 | 1 |
| 824 | Folded network and structural transition in molten tin.. <i>Nature Communications</i> , 2022 , 13, 126 | 17.4 | 1 |
| 823 | Extreme fast charge aging: Correlation between electrode scale and heterogeneous degradation in Ni-rich layered cathodes. <i>Journal of Power Sources</i> , 2022 , 521, 230961 | 8.9 | 5 |
| 822 | Layered porous silicon encapsulated in carbon nanotube cage as ultra-stable anode for lithium-ion batteries. <i>Chemical Engineering Journal</i> , 2022 , 431, 133982 | 14.7 | 5 |
| 821 | Large-strain Lüders-type deformation of B19' martensite in Ni ₄₇ Ti ₄₉ Nb ₂ Fe ₂ alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022 , 829, 142136 | 5.3 | 0 |
| 820 | Tuning thermal expansion from strong negative to zero to positive in Cu _{2-x} Zn _x P ₂ O ₇ solid solutions. <i>Scripta Materialia</i> , 2022 , 207, 114289 | 5.6 | 0 |
| 819 | Unblocking Oxygen Charge Compensation for Stabilized High-Voltage Structure in P2-Type Sodium-Ion Cathode.. <i>Advanced Science</i> , 2022 , e2200498 | 13.6 | 2 |
| 818 | Effect of laser scanning speed on the microstructure, phase transformation and mechanical property of NiTi alloys fabricated by LPBF. <i>Materials and Design</i> , 2022 , 215, 110460 | 8.1 | 3 |
| 817 | Thermal dynamics of P2-Na _{0.67} Ni _{0.33} Mn _{0.67} O ₂ cathode materials for sodium ion batteries studied by in situ analysis. <i>Journal of Materials Research</i> , 2022 , 37, 1156-1163 | 2.5 | 1 |
| 816 | Effect of laser hatch spacing on the pore defects, phase transformation and properties of selective laser melting fabricated NiTi shape memory alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022 , 840, 142965 | 5.3 | 3 |
| 815 | Unveiling the origins of work-hardening enhancement and mechanical instability in laser shock peened titanium. <i>Acta Materialia</i> , 2022 , 229, 117810 | 8.4 | 0 |
| 814 | In-situ synchrotron-based high energy X-ray diffraction study of the deformation mechanism of hydrides in a commercially pure titanium. <i>Scripta Materialia</i> , 2022 , 213, 114608 | 5.6 | 1 |

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|-----|---|------|----|
| 813 | High-performance LiNi _{0.8} Mn _{0.1} Co _{0.1} O ₂ cathode by nanoscale lithium sulfide coating via atomic layer deposition. <i>Journal of Energy Chemistry</i> , 2022 , 69, 531-540 | 12 | 0 |
| 812 | Uniting tensile ductility with ultrahigh strength via composition undulation.. <i>Nature</i> , 2022 , 604, 273-279 | 50.4 | 2 |
| 811 | Acid-in-clay Electrolyte for Wide-temperature-range and Long-cycle proton Batteries.. <i>Advanced Materials</i> , 2022 , e2202063 | 24 | 4 |
| 810 | Structure and thermodynamics of calcium rare earth silicate oxyapatites, Ca ₂ RE ₈ (SiO ₄) ₆ O ₂ (RE = Pr, Tb, Ho, Tm). <i>Physics and Chemistry of Minerals</i> , 2022 , 49, 1 | 1.6 | 0 |
| 809 | Plastic anisotropy and twin distributions near the fatigue crack tip of textured Mg alloys from in situ synchrotron X-ray diffraction measurements and multiscale mechanics modeling. <i>Journal of the Mechanics and Physics of Solids</i> , 2022 , 165, 104936 | 5 | 0 |
| 808 | Small-scale confined R-phase transformation in Ni ₄₇ Ti ₄₉ Fe ₂ -Nb ₂ alloy. <i>Materialia</i> , 2021 , 20, 101262 | 3.2 | 1 |
| 807 | Local chemical fluctuation mediated ultra-sluggish martensitic transformation in high-entropy intermetallics.. <i>Materials Horizons</i> , 2021 , | 14.4 | 1 |
| 806 | Spontaneous Strain Buffer Enables Superior Cycling Stability in Single-Crystal Nickel-Rich NCM Cathode. <i>Nano Letters</i> , 2021 , 21, 9997-10005 | 11.5 | 10 |
| 805 | Shape memory effect in metallic glasses. <i>Matter</i> , 2021 , 4, 3327-3338 | 12.7 | 0 |
| 804 | Spatial and Temporal Analysis of Sodium-Ion Batteries. <i>ACS Energy Letters</i> , 2021 , 6, 4023-4054 | 20.1 | 12 |
| 803 | Rational design of mechanically robust Ni-rich cathode materials via concentration gradient strategy. <i>Nature Communications</i> , 2021 , 12, 6024 | 17.4 | 21 |
| 802 | Superior High-Temperature Strength in a Supersaturated Refractory High-Entropy Alloy. <i>Advanced Materials</i> , 2021 , 33, e2102401 | 24 | 7 |
| 801 | High-Voltage and High-Safety Practical Lithium Batteries with Ethylene Carbonate-Free Electrolyte. <i>Advanced Energy Materials</i> , 2021 , 11, 2102299 | 21.8 | 14 |
| 800 | Magnetostructural transition, magnetocaloric effect and critical exponent analysis in Nd(Co _{0.8} Fe _{0.2}) ₂ alloy. <i>Journal of Alloys and Compounds</i> , 2021 , 895, 162562 | 5.7 | 0 |
| 799 | Atomic-scale constituting stable interface for improved LiNiMnCoO cathodes of lithium-ion batteries. <i>Nanotechnology</i> , 2021 , 32, 115401 | 3.4 | 5 |
| 798 | Unravel unusual hardening behavior of a PdNiB metallic glass in its supercooled liquid region. <i>Applied Physics Letters</i> , 2021 , 118, 121902 | 3.4 | 0 |
| 797 | Disorder trapping and formation of antiphase nanodomains in Ni ₃ Sn: In situ observation and high resolution characterization. <i>Scripta Materialia</i> , 2021 , 193, 55-58 | 5.6 | 3 |
| 796 | Temperature-dependent deformation behavior of a CuZr-based bulk metallic glass composite. <i>Journal of Alloys and Compounds</i> , 2021 , 858, 158368 | 5.7 | 3 |

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|-----|---|------|----|
| 795 | Engineering Molecular Polymerization for Template-Free SiO _x /C Hollow Spheres as Ultrastable Anodes in Lithium-Ion Batteries. <i>Advanced Functional Materials</i> , 2021 , 31, 2101145 | 15.6 | 18 |
| 794 | In situ monitoring of dislocation, twinning, and detwinning modes in an extruded magnesium alloy under cyclic loading conditions. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 806, 140860 | 5.3 | 5 |
| 793 | Modulating the Surface Ligand Orientation for Stabilized Anionic Redox in Li-Rich Oxide Cathodes. <i>Advanced Energy Materials</i> , 2021 , 11, 2003479 | 21.8 | 14 |
| 792 | Anomalous fast atomic dynamics in bulk metallic glasses. <i>Materials Today Physics</i> , 2021 , 17, 100351 | 8 | 2 |
| 791 | Competing Interactions between Mesoscale Length-Scales, Order-Disorder, and Martensitic Transformation in Ferromagnetic Shape Memory Alloys. <i>Acta Materialia</i> , 2021 , 206, 116616 | 8.4 | 8 |
| 790 | Mild water intake orients crystal formation imparting high tolerance on unencapsulated halide perovskite solar cells. <i>Cell Reports Physical Science</i> , 2021 , 2, 100395 | 6.1 | 3 |
| 789 | Dynamic recrystallization of a wrought magnesium alloy: Grain size and texture maps and their application for mechanical behavior predictions. <i>Materials and Design</i> , 2021 , 202, 109562 | 8.1 | 8 |
| 788 | Nanoscale Phase Separation and Large Refrigerant Capacity in Magnetocaloric Material LaFe _{11.5} Si _{1.5} . <i>Chemistry of Materials</i> , 2021 , 33, 2837-2846 | 9.6 | 0 |
| 787 | Insight into the capacity decay mechanism of cycled LiNiCoMnO cathodes via x-ray diffraction. <i>Nanotechnology</i> , 2021 , 32, | 3.4 | 5 |
| 786 | Simultaneously enhancing piezoelectric performance and thermal depolarization in lead-free (Bi,Na)TiO ₃ -BaTiO ₃ via introducing oxygen-defect perovskites. <i>Acta Materialia</i> , 2021 , 208, 116711 | 8.4 | 7 |
| 785 | A medium-range structure motif linking amorphous and crystalline states. <i>Nature Materials</i> , 2021 , 20, 1347-1352 | 27 | 13 |
| 784 | Lightweight Zr _{1.2} V _{0.8} NbTi Al high-entropy alloys with high tensile strength and ductility. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 814, 141234 | 5.3 | 5 |
| 783 | In situ neutron scattering studies of a liquid-liquid phase transition in the supercooled liquid of a Zr ₄₀ Al ₄₀ Ag glass-forming alloy. <i>Applied Physics Letters</i> , 2021 , 118, 191901 | 3.4 | 1 |
| 782 | In-Situ γ Lattice Parameter Evolution and Tertiary Burst Phenomena During Controlled Cooling of Commercial PM Nickel-Base Superalloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2021 , 52, 2973 | 2.3 | 1 |
| 781 | Enabling High-Performance NASICON-Based Solid-State Lithium Metal Batteries Towards Practical Conditions. <i>Advanced Functional Materials</i> , 2021 , 31, 2102765 | 15.6 | 6 |
| 780 | In situ scattering study of multiscale structural evolution during liquid-liquid phase transition in Mg-based metallic glasses. <i>Rare Metals</i> , 2021 , 40, 3107 | 5.5 | 0 |
| 779 | Transferring elastic strain in Mo/Nb/TiNi multilayer nanocomposites by the principle of lattice strain matching. <i>Composites Part B: Engineering</i> , 2021 , 215, 108784 | 10 | 3 |
| 778 | Thermal Stability and Lattice Strain Evolution of High-Nb-Containing TiAl Alloy under Low-Cycle-Fatigue Loading. <i>Advanced Engineering Materials</i> , 2021 , 23, 2001337 | 3.5 | 1 |

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| 777 | Micromechanical Behaviors of Fe ₂₀ Co ₃₀ Cr ₂₅ Ni ₂₅ High Entropy Alloys with Partially and Completely Recrystallized Microstructures Investigated by In-Situ High-Energy X-ray Diffraction. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2021 , 52, 3674-3683 | 2.3 | 1 |
| 776 | Engineering of Exciton Spatial Distribution in CdS Nanoplatelets. <i>Nano Letters</i> , 2021 , 21, 5201-5208 | 11.5 | 4 |
| 775 | Resolving atomic-scale phase transformation and oxygen loss mechanism in ultrahigh-nickel layered cathodes for cobalt-free lithium-ion batteries. <i>Matter</i> , 2021 , 4, 2013-2026 | 12.7 | 20 |
| 774 | Role of Lithium Doping in P2-Na _{0.44} Ni _{0.44} MnO _{1.55} for Sodium-Ion Batteries. <i>Chemistry of Materials</i> , 2021 , 33, 4445-4455 | 9.6 | 18 |
| 773 | New Insights into the High-Performance Black Phosphorus Anode for Lithium-Ion Batteries. <i>Advanced Materials</i> , 2021 , 33, e2101259 | 24 | 14 |
| 772 | In situ observation of thermal-driven degradation and safety concerns of lithiated graphite anode. <i>Nature Communications</i> , 2021 , 12, 4235 | 17.4 | 17 |
| 771 | High-throughput design of high-performance lightweight high-entropy alloys. <i>Nature Communications</i> , 2021 , 12, 4329 | 17.4 | 25 |
| 770 | A Low-Cost Ni-Mn-Ti-B High-Temperature Shape Memory Alloy with Extraordinary Functional Properties. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 31870-31879 | 9.5 | 5 |
| 769 | Oxygen addition for improving the strength and plasticity of TiZr-based amorphous alloy composites. <i>Journal of Materials Science and Technology</i> , 2021 , 79, 212-221 | 9.1 | 5 |
| 768 | On temperature and strain-rate dependence of flow serration in HfNbTaTiZr high-entropy alloy. <i>Scripta Materialia</i> , 2021 , 200, 113919 | 5.6 | 1 |
| 767 | Large elastic strains and ductile necking of W nanowires embedded in TiNi matrix. <i>Journal of Materials Science and Technology</i> , 2021 , 60, 56-60 | 9.1 | 2 |
| 766 | An advanced low-cost cathode composed of graphene-coated Na _{2.4} Fe _{1.8} (SO ₄) ₃ nanograins in a 3D graphene network for ultra-stable sodium storage. <i>Journal of Energy Chemistry</i> , 2021 , 54, 564-570 | 12 | 5 |
| 765 | A Ni-free Ti alloy with large and stable room temperature super-elasticity. <i>Materials Today Communications</i> , 2021 , 26, 101838 | 2.5 | 0 |
| 764 | A high-energy and long-cycling lithium-sulfur pouch cell via a macroporous catalytic cathode with double-end binding sites. <i>Nature Nanotechnology</i> , 2021 , 16, 166-173 | 28.7 | 153 |
| 763 | Full Concentration Gradient-Tailored Li-Rich Layered Oxides for High-Energy Lithium-Ion Batteries. <i>Advanced Materials</i> , 2021 , 33, e2001358 | 24 | 33 |
| 762 | In-situ synchrotron diffraction study of the localized phase transformation and deformation behavior in NiTi SMA. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 805, 140560 | 5.3 | 3 |
| 761 | Role of tetragonal distortion on domain switching and lattice strain of piezoelectrics by in-situ synchrotron diffraction. <i>Scripta Materialia</i> , 2021 , 194, 113627 | 5.6 | 2 |
| 760 | Highly active and stable Co nanoparticles embedded in nitrogen-doped mesoporous carbon nanofibers for aqueous-phase levulinic acid hydrogenation. <i>Green Energy and Environment</i> , 2021 , 6, 567-577 | 5.7 | 3 |

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|-----|---|------|----|
| 759 | High susceptibility to adiabatic shear banding and high dynamic strength in tungsten heavy alloys with a high-entropy alloy matrix. <i>Journal of Alloys and Compounds</i> , 2021 , 859, 157796 | 5.7 | 1 |
| 758 | Lean duplex TRIP steel: Role of ferrite in the texture development, plastic anisotropy, martensitic transformation kinetics, and stress partitioning. <i>Materialia</i> , 2021 , 15, 100952 | 3.2 | 10 |
| 757 | In-situ high energy X-ray diffraction study of microscopic deformation behavior of martensite variant reorientation in NiTi wire. <i>Applied Materials Today</i> , 2021 , 22, 100904 | 6.6 | 3 |
| 756 | Solid-solid phase transition via the liquid in a Pd ₄₃ Cu ₂₇ Ni ₁₀ P ₂₀ bulk metallic glass under conventional conditions. <i>Journal of Alloys and Compounds</i> , 2021 , 859, 157802 | 5.7 | 3 |
| 755 | Structural origin of size effect on piezoelectric performance of Pb(Zr,Ti)O ₃ . <i>Ceramics International</i> , 2021 , 47, 5256-5264 | 5.1 | 4 |
| 754 | Enhanced negative thermal expansion of boron-doped Fe ₄₃ Mn ₂₈ Ga _{28.97} B _{0.03} alloy. <i>Journal of Alloys and Compounds</i> , 2021 , 857, 157572 | 5.7 | 2 |
| 753 | Enhanced superelasticity of nanocrystalline NiTi/NiTiNbFe laminar composite. <i>Journal of Alloys and Compounds</i> , 2021 , 853, 157309 | 5.7 | 4 |
| 752 | Dual functionality of over-lithiated NMC for high energy silicon-based lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 12818-12829 | 13 | 5 |
| 751 | Boosted piezoelectricity with excellent thermal stability in tetragonal NaNbO ₃ -based ceramics. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 2367-2374 | 13 | 3 |
| 750 | External-Field-Induced Phase Transformation and Associated Properties in a Ni ₅₀ Mn ₃₄ Fe ₃ In ₁₃ Metamagnetic Shape Memory Wire. <i>Metals</i> , 2021 , 11, 309 | 2.3 | 2 |
| 749 | Understanding Co roles towards developing Co-free Ni-rich cathodes for rechargeable batteries. <i>Nature Energy</i> , 2021 , 6, 277-286 | 62.3 | 64 |
| 748 | Alloying-re alloying enabled high durability for Pt-Pd-3d-transition metal nanoparticle fuel cell catalysts. <i>Nature Communications</i> , 2021 , 12, 859 | 17.4 | 43 |
| 747 | A combinatory ferroelectric compound bridging simple ABO and A-site-ordered quadruple perovskite. <i>Nature Communications</i> , 2021 , 12, 747 | 17.4 | 9 |
| 746 | Temperature-Induced Structural Changes in the Liquid GaInSn Eutectic Alloy. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 7413-7420 | 3.8 | 4 |
| 745 | Thermal runaway mechanism of lithium-ion battery with LiNi _{0.8} Mn _{0.1} Co _{0.1} O ₂ cathode materials. <i>Nano Energy</i> , 2021 , 85, 105878 | 17.1 | 43 |
| 744 | Hierarchical crack buffering triples ductility in eutectic herringbone high-entropy alloys. <i>Science</i> , 2021 , 373, 912-918 | 33.3 | 60 |
| 743 | 3D-Printing Damage-Tolerant Architected Metallic Materials with Shape Recoverability via Special Deformation Design of Constituent Material. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 39915-39924 | 39.5 | 3 |
| 742 | Synchrotron x-ray diffraction and crystal plasticity modeling study of martensitic transformation, texture development, and stress partitioning in deep-drawn TRIP steels. <i>Materialia</i> , 2021 , 18, 101162 | 3.2 | 2 |

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|-----|--|------|-----|
| 741 | Revealing causes of macroscale heterogeneity in lithium ion pouch cells via synchrotron X-ray diffraction. <i>Journal of Power Sources</i> , 2021 , 507, 230253 | 8.9 | 8 |
| 740 | Electrolytes Polymerization-Induced Cathode-Electrolyte-Interphase for High Voltage Lithium-Ion Batteries. <i>Advanced Energy Materials</i> , 2021 , 11, 2101956 | 21.8 | 5 |
| 739 | Precipitation and micromechanical behavior of the coherent ordered nanoprecipitation strengthened Al-Cr-Fe-Ni-V high entropy alloy. <i>Acta Materialia</i> , 2021 , 216, 117121 | 8.4 | 5 |
| 738 | Reaction inhomogeneity coupling with metal rearrangement triggers electrochemical degradation in lithium-rich layered cathode. <i>Nature Communications</i> , 2021 , 12, 5370 | 17.4 | 10 |
| 737 | Quantitative evaluation of thixotropy-governed microfabric evolution in soft clays. <i>Applied Clay Science</i> , 2021 , 210, 106157 | 5.2 | 3 |
| 736 | Step-wise R phase transformation rendering high-stability two-way shape memory effect of a NiTiFe-Nb nanowire composite. <i>Acta Materialia</i> , 2021 , 219, 117258 | 8.4 | 2 |
| 735 | Large piezoelectricity and potentially activated polarization reorientation around relaxor MPB in complex perovskite. <i>Journal of the European Ceramic Society</i> , 2021 , 42, 112-112 | 6 | 0 |
| 734 | Structural origin for the high piezoelectric performance of (Na _{0.5} Bi _{0.5})TiO ₃ -BaTiO ₃ -BiAlO ₃ lead-free ceramics. <i>Acta Materialia</i> , 2021 , 218, 117202 | 8.4 | 3 |
| 733 | Solidification texture, variant selection, and phase fraction in a spot-melt electron-beam powder bed fusion processed Ti-6Al-4V. <i>Additive Manufacturing</i> , 2021 , 46, 102136 | 6.1 | 1 |
| 732 | In-built ultraconformal interphases enable high-safety practical lithium batteries. <i>Energy Storage Materials</i> , 2021 , 43, 248-257 | 19.4 | 10 |
| 731 | In situ determination of the interplay of the structure and domain under a subcoercive field in BiScO ₃ PbTiO ₃ . <i>Inorganic Chemistry Frontiers</i> , 2021 , 8, 4415-4422 | 6.8 | |
| 730 | Stress- and Interface-Compatible Red Phosphorus Anode for High-Energy and Durable Sodium-Ion Batteries. <i>ACS Energy Letters</i> , 2021 , 6, 547-556 | 20.1 | 17 |
| 729 | Temperature-dependence of superelastic stress in nanocrystalline NiTi with complete transformation capability. <i>Intermetallics</i> , 2020 , 127, 106970 | 3.5 | 4 |
| 728 | Probing the Thermal-Driven Structural and Chemical Degradation of Ni-Rich Layered Cathodes by Co/Mn Exchange. <i>Journal of the American Chemical Society</i> , 2020 , 142, 19745-19753 | 16.4 | 56 |
| 727 | In-situ synchrotron high energy X-ray diffraction study of micro-mechanical behaviour of R phase reorientation in nanocrystalline NiTi alloy. <i>Acta Materialia</i> , 2020 , 194, 565-576 | 8.4 | 13 |
| 726 | Tuning the Kinetics of Zinc-Ion Insertion/Extraction in V ₂ O ₅ by In Situ Polyaniline Intercalation Enables Improved Aqueous Zinc-Ion Storage Performance. <i>Advanced Materials</i> , 2020 , 32, e2001113 | 24 | 158 |
| 725 | Regulating the Hidden Solvation-Ion-Exchange in Concentrated Electrolytes for Stable and Safe Lithium Metal Batteries. <i>Advanced Energy Materials</i> , 2020 , 10, 2000901 | 21.8 | 39 |
| 724 | Formation of a Three-Phase Spiral Structure Due to Competitive Growth of a Peritectic Phase with a Metastable Eutectic. <i>Jom</i> , 2020 , 72, 2965-2973 | 2.1 | 3 |

- 723 Cryogenic mechanical behaviors of CrMnFeCoNi high-entropy alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2020**, 789, 139579 5.3 13
- 722 Observation of High-Frequency Transverse Phonons in Metallic Glasses. *Physical Review Letters*, **2020**, 124, 225902 7.4 6
- 721 Exploiting ultra-large linear elasticity over a wide temperature range in nanocrystalline NiTi alloy. *Journal of Materials Science and Technology*, **2020**, 57, 197-203 9.1 3
- 720 Magnetocaloric effect in the vicinity of the magnetic phase transition in NdCo₂Fe_x compounds. *Physical Review B*, **2020**, 101, 3.3 6
- 719 Local structure study on magnetostrictive material Tb_{1-x}Dy_xFe₂. *Journal of Applied Physics*, **2020**, 127, 235102 2.5 2
- 718 Revealing the Structural Evolution and Phase Transformation of O3-Type NaNi_{1/3}Fe_{1/3}Mn_{1/3}O₂ Cathode Material on Sintering and Cycling Processes. *ACS Applied Energy Materials*, **2020**, 3, 6107-6114 6.1 3
- 717 Probing solid-state reaction through microstrain: A case study on synthesis of LiCoO₂. *Journal of Power Sources*, **2020**, 469, 228422 8.9 4
- 716 Unprecedented non-hysteretic superelasticity of [001]-oriented NiCoFeGa single crystals. *Nature Materials*, **2020**, 19, 712-718 27 39
- 715 A strategy to achieve high-strength WNiFe composite-like alloys with low W content by laser melting deposition. *Materials and Design*, **2020**, 190, 108554 8.1 12
- 714 Genesis of the periodic lattice distortions in the charge density wave state of 2H-TaSe₂. *Physical Review B*, **2020**, 101, 3.3 3
- 713 Grain size and structure distortion characterization of BiMgAgSb thermoelectric material by powder diffraction. *Chinese Physics B*, **2020**, 29, 106101 1.2 1
- 712 Oxygen Inhomogeneity and Reversibility in Single Crystal LaNiO₃. *Crystals*, **2020**, 10, 557 2.3 4
- 711 Consolidating Lithiothermic-Ready Transition Metals for Li S-Based Cathodes. *Advanced Materials*, **2020**, 32, e2002403 24 34
- 710 Understanding the Reactivity of a Thin Li_{1.5}Al_{0.5}Ge_{1.5}(PO₄)₃ Solid-State Electrolyte toward Metallic Lithium Anode. *Advanced Energy Materials*, **2020**, 10, 2001497 21.8 25
- 709 Toward a high-voltage fast-charging pouch cell with TiO₂ cathode coating and enhanced battery safety. *Nano Energy*, **2020**, 71, 104643 17.1 36
- 708 A chiral switchable photovoltaic ferroelectric 1D perovskite. *Science Advances*, **2020**, 6, eaay4213 14.3 60
- 707 Ultralow-Strain Zn-Substituted Layered Oxide Cathode with Suppressed P2₂ Transition for Stable Sodium Ion Storage. *Advanced Functional Materials*, **2020**, 30, 1910327 15.6 54
- 706 Ultralow thermal conductivity from transverse acoustic phonon suppression in distorted crystalline BiMgAgSb. *Nature Communications*, **2020**, 11, 942 17.4 26

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|-----|---|------|----|
| 705 | Transforming Thermal Expansion from Positive to Negative: The Case of Cubic Magnetic Compounds of (Zr,Nb)Fe. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 1954-1961 | 6.4 | 9 |
| 704 | In-situ investigation via high energy X-ray diffraction of stress-induced(0002)→(110) transformation in a Ti-5.5Mo-7.2Al-4.5Zr-2.6Sn-2.1Cr alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 779, 139154 | 5.3 | 1 |
| 703 | Boosting the Oxygen Reduction Performance via Tuning the Synergy between Metal Core and Oxide Shell of Metal-Organic Frameworks-Derived Co@CoOx. <i>ChemElectroChem</i> , 2020 , 7, 1590-1597 | 4.3 | 13 |
| 702 | Surface Integrity and Oxidation of a Powder Metallurgy Ni-Based Superalloy Treated by Laser Shock Peening. <i>Jom</i> , 2020 , 72, 1803-1810 | 2.1 | 3 |
| 701 | Two-way tuning of structural order in metallic glasses. <i>Nature Communications</i> , 2020 , 11, 314 | 17.4 | 17 |
| 700 | Oxygen octahedral tilt ordering in (Na _{1/2} Bi _{1/2})TiO ₃ ferroelectric thin films. <i>Applied Physics Letters</i> , 2020 , 116, 022902 | 3.4 | 0 |
| 699 | The microstructure of a selective laser melting (SLM)-fabricated NiTi shape memory alloy with superior tensile property and shape memory recoverability. <i>Applied Materials Today</i> , 2020 , 19, 100547 | 6.6 | 25 |
| 698 | Negative thermal expansion and the role of hybridization in perovskite-type PbTiO ₃ -Bi(Cu _{0.5} Ti _{0.5})O ₃ . <i>Inorganic Chemistry Frontiers</i> , 2020 , 7, 1190-1195 | 6.8 | 7 |
| 697 | Antisymmetric linear magnetoresistance and the planar Hall effect. <i>Nature Communications</i> , 2020 , 11, 216 | 17.4 | 3 |
| 696 | Effect of Al substitution on the magnetocaloric properties of Ni-Co-Mn-Sn multifunctional alloys. <i>Intermetallics</i> , 2020 , 119, 106706 | 3.5 | 3 |
| 695 | Intrinsic two-way shape memory effect in a Ni-Mn-Sn metamagnetic shape memory microwire. <i>Journal of Materials Science and Technology</i> , 2020 , 45, 44-48 | 9.1 | 8 |
| 694 | Strong Negative Thermal Expansion in a Low-Cost and Facile Oxide of CuPO. <i>Journal of the American Chemical Society</i> , 2020 , 142, 3088-3093 | 16.4 | 27 |
| 693 | A mechanistic study of mesoporous TiO ₂ nanoparticle negative electrode materials with varying crystallinity for lithium ion batteries. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 3333-3343 | 13 | 20 |
| 692 | Magnetic transitions and magnetocaloric effect of Gd ₄ Nd ₁ Si ₂ Ge ₂ . <i>Journal of Alloys and Compounds</i> , 2020 , 826, 154117 | 5.7 | 4 |
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