Yan Chen

List of Publications by Year
in descending order

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83 papers	3,881 citations	201674 27 h-index	133252 59 g-index
87 all docs	87 docs citations	87 times ranked	4722 citing authors

#	Article	IF	Citations
1	Gasâ€“solid interfacial modification of oxygen activity in layered oxide cathodes for lithium-ion batteries. Nature Communications, 2016, 7, 12108.	12.8	531
2	A disordered rock salt anode for fast-charging lithium-ion batteries. Nature, 2020, 585, 63-67.	27.8	326
3	Lattice distortion in a strong and ductile refractory high-entropy alloy. Acta Materialia, 2018, 160, 158-172.	7.9	325
4	Efficient Direct Recycling of Lithium-Ion Battery Cathodes by Targeted Healing. Joule, 2020, 4, 2609-2626.	24.0	260
5	An Airâ€Stable Na₃SbS₄ Superionic Conductor Prepared by a Rapid and Economic Synthetic Procedure. Angewandte Chemie - International Edition, 2016, 55, 8551-8555.	13.8	183
6	High performance aluminumâ€“cerium alloys for high-temperature applications. Materials Horizons, 2017, 4, 1070-1078.	12.2	155
7	What is the Role of Nb in Nickel-Rich Layered Oxide Cathodes for Lithium-Ion Batteries?. ACS Energy Letters, 0, , 1377-1382.	17.4	107
8	Enhancing fatigue life by ductile-transformable multicomponent B2 precipitates in a high-entropy alloy. Nature Communications, 2021, 12, 3588.	12.8	102
9	Mixed-conducting interlayer boosting the electrochemical performance of Ni-rich layered oxide cathode materials for lithium ion batteries. Journal of Power Sources, 2019, 421, 91-99.	7.8	101
10	Origin of High Li⁺ Conduction in Doped Li₇La₃Zr₂O₁₂ Garnets. Chemistry of Materials, 2015, 27, 5491-5494.	6.7	100
11	Operando Lithium Dynamics in the Liâ€Rich Layered Oxide Cathode Material via Neutron Diffraction. Advanced Energy Materials, 2016, 6, 1502143.	19.5	98
12	Understanding the Role of NH₄F and Al₂O₃ Surface Co-modification on Lithium-Excess Layered Oxide Li_{1.2}Ni_{0.2}Mn_{0.6}O₂. ACS Applied Materials & Interfaces, 2015, 7, 19189-19200.	8.0	87
13	The effect of submicron grain size on thermal stability and mechanical properties of highâ€entropy carbide ceramics. Journal of the American Ceramic Society, 2020, 103, 4463-4472.	3.8	86
14	Design and Optimization of the Direct Recycling of Spent Li-Ion Battery Cathode Materials. ACS Sustainable Chemistry and Engineering, 2021, 9, 4543-4553.	6.7	81
15	Structure Evolution and Thermoelectric Properties of Carbonized Polydopamine Thin Films. ACS Applied Materials & Interfaces, 2017, 9, 6655-6660.	8.0	77
16	Solving the strength-ductility tradeoff in the medium-entropy NiCoCr alloy via interstitial strengthening of carbon. Intermetallics, 2019, 106, 77-87.	3.9	77
17	A high-conduction Ge substituted Li₃AsS₄ solid electrolyte with exceptional low activation energy. Journal of Materials Chemistry A, 2014, 2, 10396-10403.	10.3	67
18	A study of suppressed formation of low-conductivity phases in doped Li₇La₃Zr₂O₁₂ garnets by in situ neutron diffraction. Journal of Materials Chemistry A, 2015, 3, 22868-22876.	10.3	54

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19	Identifying the chemical and structural irreversibility in LiNi_{0.8}Co_{0.15}Al_{0.05}O₂ â€“ a model compound for classical layered intercalation. Journal of Materials Chemistry A, 2018, 6, 4189-4198.	10.3	48
20	Elucidating the mobility of H⁺and Li⁺ions in (Li_{6.25â^'x}H_xAl_{0.25})La₃Zr₂O₁₂<i>via</i> correlative neutron and electron spectroscopy. Energy and Environmental Science, 2019, 12, 945-951.	30.8	48
21	VULCAN: A â€œhammerâ€• for high-temperature materials research. MRS Bulletin, 2019, 44, 878-885.	3.5	45
22	Elucidating the Limit of Li Insertion into the Spinel Li₄Ti₅O₁₂. , 2019, 1, 96-102.		45
23	An Airâ€Stable Na₃SbS₄ Superionic Conductor Prepared by a Rapid and Economic Synthetic Procedure. Angewandte Chemie, 2016, 128, 8693-8697.	2.0	44
24	Revealing the cyclic hardening mechanism of an austenitic stainless steel by real-time in situ neutron diffraction. Scripta Materialia, 2014, 89, 45-48.	5.2	43
25	Novel Chemically Stable Ba₃Ca_{1.18}Nb_{1.82â€“<i>x</i>}Y_{<i>x</i>}O_{9â^'Î´} Proton Conductor: Improved Proton Conductivity through Tailored Cation Ordering. Chemistry of Materials, 2014, 26, 2021-2029.	6.7	42
26	Deformation mechanisms and work-hardening behavior of transformation-induced plasticity high entropy alloys by <i>in -situ</i> neutron diffraction. Materials Research Letters, 2018, 6, 620-626.	8.7	41
27	Phase-specific deformation behavior of a relatively tough NiAlâ€“Cr(Mo) lamellar composite. Scripta Materialia, 2014, 84-85, 59-62.	5.2	34
28	Visualizing the Structural Evolution of LSM/xYSZ Composite Cathodes for SOFC by in-situ Neutron Diffraction. Scientific Reports, 2014, 4, 5179.	3.3	31
29	In-situ neutron diffraction investigation on twinning/detwinning activities during tension-compression load reversal in a twinning induced plasticity steel. Scripta Materialia, 2018, 150, 168-172.	5.2	30
30	Correlation of anisotropy and directional conduction in Î²-Li3PS4 fast Li+ conductor. Applied Physics Letters, 2015, 107, .	3.3	26
31	Plastic and low-cost axial zero thermal expansion alloy by a natural dual-phase composite. Nature Communications, 2021, 12, 4701.	12.8	24
32	Novel Ordered Rocksalt-Type Lithium-Rich Li₂Ru_{1â€“<i>x</i>}Ni_{<i>x</i>}O_{3â^'Î´} (0.3 â‰ <i>x</i> â‰ 0.5) Cathode Material with Tunable Anionic Redox Potential. ACS Applied Energy Materials, 2019, 2, 5933-5944.	5.1	22
33	Latticeâ€Cell Orientation Disorder in Complex Spinel Oxides. Advanced Energy Materials, 2017, 7, 1601950.	19.5	21
34	In situ investigation of stress-induced martensitic transformation in granular shape memory ceramic packings. Acta Materialia, 2019, 168, 362-375.	7.9	21
35	Lithium heterogeneities in cylinder-type Li-ion batteries â€“ fatigue induced by cycling. Journal of Power Sources, 2020, 448, 227466.	7.8	21
36	Revealing the Structural Stability and Na-Ion Mobility of 3D Superionic Conductor Na₃SbS₄ at Extremely Low Temperatures. ACS Applied Energy Materials, 2018, 1, 7028-7034.	5.1	20

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37	High performance and low thermal expansion in Er-Fe-V-Mo dual-phase alloys. Acta Materialia, 2020, 198, 271-280.	7.9	20
38	Annealing effects on the structural and magnetic properties of off-stoichiometric Fe-Mn-Ga ferromagnetic shape memory alloys. Materials and Design, 2016, 104, 327-332.	7.0	19
39	A study of stress-induced phase transformation and micromechanical behavior of CuZr-based alloy by in-situ neutron diffraction. Journal of Alloys and Compounds, 2017, 696, 1096-1104.	5.5	19
40	Probing the electrolyte infiltration behaviour of activated carbon supercapacitor electrodes by in situ neutron scattering using aqueous NaCl as electrolyte. Carbon, 2018, 136, 139-142.	10.3	19
41	A Combined Variable-Temperature Neutron Diffraction and Thermogravimetric Analysis Study on a Promising Oxygen Electrode, SrCo_{0.9}Nb_{0.1}O_{3âˆ'Î´}, for Reversible Solid Oxide Fuel Cells. ACS Applied Materials & Interfaces, 2017, 9, 34855-34864.	8.0	18
42	An in situ neutron diffraction study of plastic deformation in a Cu46.5Zr46.5Al7 bulk metallic glass composite. Scripta Materialia, 2018, 153, 118-121.	5.2	18
43	Investigating the deformation mechanisms of a highly metastable high entropy alloy using in-situ neutron diffraction. Materials Today Communications, 2020, 23, 100858.	1.9	18
44	Direct evidence of the stacking fault-mediated strain hardening phenomenon. Applied Physics Letters, 2021, 119, .	3.3	18
45	A search for temperature induced time-dependent structural transitions in 10 mol%Sc2O3â€"1 mol%CeO2â€"ZrO2 and 8 mol%Y2O3â€"ZrO2 electrolyte ceramics. Journal of the European Ceramic Society, 2015, 35, 951-958.	5.7	17
46	Correlating work hardening with co-activation of stacking fault strengthening and transformation in a high entropy alloy using in-situ neutron diffraction. Scientific Reports, 2020, 10, 22263.	3.3	17
47	Real-Time In Situ Neutron Diffraction Investigation of Phase-Specific Load Sharing in a Cold-Rolled TRIP Sheet Steel. Jom, 2018, 70, 1576-1586.	1.9	15
48	Direct selective laser sintering of hexagonal barium titanate ceramics. Journal of the American Ceramic Society, 2021, 104, 1271-1280.	3.8	14
49	Microstructure, Hardness, and Residual Stress of the Dissimilar Metal Weldments of SA508-309L/308L-304L. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 1927-1938.	2.2	14
50	Size controlled mechanochemical synthesis of ZrSi₂. Chemical Communications, 2013, 49, 707-709.	4.1	13
51	In-situ TOF neutron diffraction studies of cyclic softening in superelasticity of a NiFeGaCo shape memory alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 680, 324-328.	5.6	13
52	A Seawaterâ€Corrosionâ€Resistant and Isotropic Zero Thermal Expansion (Zr,Ta)(Fe,Co)₂ Alloy. Advanced Materials, 2022, 34, .	21.0	12
53	<i>In-situ</i> neutron diffraction of LaCoO3 perovskite under uniaxial compression. II. Elastic properties. Journal of Applied Physics, 2014, 116, .	2.5	11
54	In situ monitoring of dislocation, twinning, and detwinning modes in an extruded magnesium alloy under cyclic loading conditions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 806, 140860.	5.6	11

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55	<i>In-situ</i> neutron diffraction of LaCoO3 perovskite under uniaxial compression. I. Crystal structure analysis and texture development. Journal of Applied Physics, 2014, 116, .	2.5	10
56	Non-congruence of high-temperature mechanical and structural behaviors of LaCoO3 based perovskites. Journal of the European Ceramic Society, 2017, 37, 1563-1576.	5.7	10
57	Tracing Phase Transformation and Lattice Evolution in a TRIP Sheet Steel under High-Temperature Annealing by Real-Time In Situ Neutron Diffraction. Crystals, 2018, 8, 360.	2.2	10
58	Glycineâ€"nitrate synthesis of Sr doped La₂Zr₂O₇pyrochlore powder. Advances in Applied Ceramics, 2011, 110, 54-57.	1.1	9
59	Layered YSZ/SCSZ/YSZ Electrolytes for Intermediate Temperature SOFC Part I: Design and Manufacturing. Fuel Cells, 2012, 12, 722-731.	2.4	9
60	Stress-induced charge-ordering process in LiMn2O4. Materials Research Letters, 2017, 5, 89-94.	8.7	9
61	Elastic behavior of binary and ternary refractory multi-principal-element alloys. Materials and Design, 2022, 219, 110820.	7.0	9
62	Compositional inhomogeneity and segregation in (K0.5Na0.5)NbO3 ceramics. Ceramics International, 2016, 42, 9949-9954.	4.8	8
63	Systematic density functional theory investigations on cubic lithium-rich iron-based Li2FeO3: A multiple electrons cationic and anionic redox cathode material. ETransportation, 2021, 10, 100141.	14.8	8
64	Discovery of a reversible redox-induced order-disorder transition in a 10-component compositionally complex ceramic. Scripta Materialia, 2022, 215, 114699.	5.2	8
65	Residual Stress and Biaxial Strength in Sc₂O₃â€"CeO₂â€"ZrO₂/Y₂O₃â€"ZrO₂ Layered Electrolytes. Fuel Cells, 2013, 13, 1068-1075.	2.4	7
66	Recognition of V3+/V4+/V5+ Multielectron Reactions in Na3V(PO4)2: A Potential High Energy Density Cathode for Sodium-Ion Batteries. Molecules, 2020, 25, 1000.	3.8	7
67	Dynamic phase transformations in additively manufactured Ti-6Al-4V during thermo-mechanical gyrations. Materialia, 2020, 14, 100883.	2.7	7
68	Operando measurement of lattice strain in internal combustion engine components by neutron diffraction. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 33061-33071.	7.1	7
69	Two-Step Reactive Aid Sintering of BaZr0.8Y0.2O3â^'Î´ Proton-Conducting Ceramics. Journal of Electronic Materials, 2015, 44, 4898-4906.	2.2	6
70	Crystal Structure and Transport Properties of Oxygen-Deficient Perovskite Sr_{0.9}Y_{0.1}CoO_{3â^'Î´}. ACS Applied Energy Materials, 2018, 1, 822-832.	5.1	6
71	Improvement in synthesis of (K0.5Na0.5)NbO3 powders by Ge4+ acceptor doping. Frontiers of Materials Science, 2016, 10, 422-427.	2.2	5
72	Understanding Structureâ€"Activity Relationships in Sr_{1â€"<i>x</i>}Y_{<i>x</i>}CoO_{3â^'Î´} through in Situ Neutron Diffraction and Electrochemical Measurements. ACS Applied Materials & Interfaces, 2018, 10, 35984-35993.	8.0	5

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73	Size effect in stainless steel thin wires under tension. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 790, 139686.	5.6	5
74	Microstructure and mechanical properties of Ni/10mol% Sc2O3â€"1mol% CeO2â€"ZrO2 cermet anode for solid oxide fuel cells. Journal of the European Ceramic Society, 2013, 33, 557-564.	5.7	4
75	Residual Stress Distribution in a Hydroformed Advanced High Strength Steel Component: Neutron Diffraction Measurements and Finite Element Simulations. , 0, , .		4
76	In-situ neutron diffraction investigation of two-stage martensitic transformation in a 13%Mn steel with serrated deformation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 840, 142955.	5.6	4
77	Time and frequency dependent mechanical properties of LaCoO3-based perovskites: Neutron diffraction and domain mobility. Journal of Applied Physics, 2018, 124, .	2.5	3
78	Unraveling transition-metal-mediated stability of spinel oxide via in situ neutron scattering. Journal of Energy Chemistry, 2022, 68, 60-70.	12.9	3
79	Li0.625Al0.125H0.25Cl0.75O0.25 Superionic Conductor with Disordered Rock-Salt Structure. ACS Applied Energy Materials, 2021, 4, 7674-7680.	5.1	2
80	Residual Stress Analysis for Additive Manufactured Large Automobile Parts by Using Neutron and Simulation. , 0, , .		2
81	Damage Precursor Assessment in Aerospace Structural Materials. , 2018, , .		1
82	Magnetic ordering suppressed phase transformation of a TRIP-HEA during thermal cycling. Applied Physics Letters, 2021, 119, 171906.	3.3	1
83	Visualization of Solidâ€State Synthesis for Chalcogenide Na Superionic Conductors by inâ€situ Neutron Diffraction. ChemSusChem, 2021, 14, 5161-5166.	6.8	1