

Yan Chen

List of Publications by Year in descending order

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83
papers

3,881
citations

201674

27
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133252

59
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87
all docs

87
docs citations

87
times ranked

4722
citing authors

#	ARTICLE	IF	CITATIONS
1	Unraveling transition-metal-mediated stability of spinel oxide via in situ neutron scattering. Journal of Energy Chemistry, 2022, 68, 60-70.	12.9	3
2	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
3	Discovery of a reversible redox-induced order-disorder transition in a 10-component compositionally complex ceramic. Scripta Materialia, 2022, 215, 114699.	5.2	8
4	Elastic behavior of binary and ternary refractory multi-principal-element alloys. Materials and Design, 2022, 219, 110820.	7.0	9
5	A Seawater-Resistant and Isotropic Zero Thermal Expansion (Zr,Ta)(Fe,Co) ₂ Alloy. Advanced Materials, 2022, 34, .	21.0	12
6	Direct selective laser sintering of hexagonal barium titanate ceramics. Journal of the American Ceramic Society, 2021, 104, 1271-1280.	3.8	14
7	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
8	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
9	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
10	Enhancing fatigue life by ductile-transformable multicomponent B2 precipitates in a high-entropy alloy. Nature Communications, 2021, 12, 3588.	12.8	102
11	Li _{0.625} Al _{0.125} H _{0.25} Cl _{0.75} O _{0.25} Superionic Conductor with Disordered Rock-Salt Structure. ACS Applied Energy Materials, 2021, 4, 7674-7680.	5.1	2
12	Direct evidence of the stacking fault-mediated strain hardening phenomenon. Applied Physics Letters, 2021, 119, .	3.3	18
13	Plastic and low-cost axial zero thermal expansion alloy by a natural dual-phase composite. Nature Communications, 2021, 12, 4701.	12.8	24
14	Magnetic ordering suppressed phase transformation of a TRIP-HEA during thermal cycling. Applied Physics Letters, 2021, 119, 171906.	3.3	1
15	Systematic density functional theory investigations on cubic lithium-rich iron-based Li ₂ FeO ₃ : A multiple electrons cationic and anionic redox cathode material. ETransportation, 2021, 10, 100141.	14.8	8
16	Visualization of Solid-State Synthesis for Chalcogenide Na Superionic Conductors by in-situ Neutron Diffraction. ChemSusChem, 2021, 14, 5161-5166.	6.8	1
17	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
18	Lithium heterogeneities in cylinder-type Li-ion batteries – fatigue induced by cycling. Journal of Power Sources, 2020, 448, 227466.	7.8	21

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19	Efficient Direct Recycling of Lithium-Ion Battery Cathodes by Targeted Healing. <i>Joule</i> , 2020, 4, 2609-2626.	24.0	260
20	High performance and low thermal expansion in Er-Fe-V-Mo dual-phase alloys. <i>Acta Materialia</i> , 2020, 198, 271-280.	7.9	20
21	A disordered rock salt anode for fast-charging lithium-ion batteries. <i>Nature</i> , 2020, 585, 63-67.	27.8	326
22	Correlating work hardening with co-activation of stacking fault strengthening and transformation in a high entropy alloy using in-situ neutron diffraction. <i>Scientific Reports</i> , 2020, 10, 22263.	3.3	17
23	Size effect in stainless steel thin wires under tension. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 790, 139686.	5.6	5
24	The effect of submicron grain size on thermal stability and mechanical properties of high-entropy carbide ceramics. <i>Journal of the American Ceramic Society</i> , 2020, 103, 4463-4472.	3.8	86
25	Recognition of V ³⁺ /V ⁴⁺ /V ⁵⁺ Multielectron Reactions in Na ₃ V(PO ₄) ₂ : A Potential High Energy Density Cathode for Sodium-Ion Batteries. <i>Molecules</i> , 2020, 25, 1000.	3.8	7
26	Dynamic phase transformations in additively manufactured Ti-6Al-4V during thermo-mechanical gyrations. <i>Materialia</i> , 2020, 14, 100883.	2.7	7
27	Operando measurement of lattice strain in internal combustion engine components by neutron diffraction. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 33061-33071.	7.1	7
28	VULCAN: A "hammer" for high-temperature materials research. <i>MRS Bulletin</i> , 2019, 44, 878-885.	3.5	45
29	Elucidating the Limit of Li Insertion into the Spinel Li ₄ Ti ₅ O ₁₂ . , 2019, 1, 96-102.		45
30	Novel Ordered Rocksalt-Type Lithium-Rich Li ₂ Ru _{1-x} Ni _x O ₃ (0.3 ≤ x ≤ 0.5) Cathode Material with Tunable Anionic Redox Potential. <i>ACS Applied Energy Materials</i> , 2019, 2, 5933-5944.	5.1	22
31	Mixed-conducting interlayer boosting the electrochemical performance of Ni-rich layered oxide cathode materials for lithium ion batteries. <i>Journal of Power Sources</i> , 2019, 421, 91-99.	7.8	101
32	In situ investigation of stress-induced martensitic transformation in granular shape memory ceramic packings. <i>Acta Materialia</i> , 2019, 168, 362-375.	7.9	21
33	Elucidating the mobility of H ⁺ and Li ⁺ ions in (Li _{0.625} H _x Al _{0.25})La ₃ Zr ₂ O ₁₂ via ¹ H and ⁷ Li relative neutron and electron spectroscopy. <i>Energy and Environmental Science</i> , 2019, 12, 945-951.	10.8	14
34	Solving the strength-ductility tradeoff in the medium-entropy NiCoCr alloy via interstitial strengthening of carbon. <i>Intermetallics</i> , 2019, 106, 77-87.	3.9	77
35	In-situ neutron diffraction investigation on twinning/detwinning activities during tension-compression load reversal in a twinning induced plasticity steel. <i>Scripta Materialia</i> , 2018, 150, 168-172.	5.2	30
36	Crystal Structure and Transport Properties of Oxygen-Deficient Perovskite Sr _{0.9} Y _{0.1} CoO ₃ . <i>ACS Applied Energy Materials</i> , 2018, 1, 822-832.	5.1	6

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37	Identifying the chemical and structural irreversibility in $\text{LiNi}_{0.8}\text{Co}_{0.15}\text{Al}_{0.05}\text{O}_2$ as a model compound for classical layered intercalation. <i>Journal of Materials Chemistry A</i> , 2018, 6, 4189-4198.	10.3	48
38	Probing the electrolyte infiltration behaviour of activated carbon supercapacitor electrodes by in situ neutron scattering using aqueous NaCl as electrolyte. <i>Carbon</i> , 2018, 136, 139-142.	10.3	19
39	Tracing Phase Transformation and Lattice Evolution in a TRIP Sheet Steel under High-Temperature Annealing by Real-Time In Situ Neutron Diffraction. <i>Crystals</i> , 2018, 8, 360.	2.2	10
40	Time and frequency dependent mechanical properties of LaCoO_3 -based perovskites: Neutron diffraction and domain mobility. <i>Journal of Applied Physics</i> , 2018, 124, .	2.5	3
41	Deformation mechanisms and work-hardening behavior of transformation-induced plasticity high entropy alloys by <i>in-situ</i> neutron diffraction. <i>Materials Research Letters</i> , 2018, 6, 620-626.	8.7	41
42	Understanding Structure-Activity Relationships in $\text{Sr}_{1-x}\text{Y}_x\text{CoO}_{3-\delta}$ through in Situ Neutron Diffraction and Electrochemical Measurements. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 35984-35993.	8.0	5
43	Revealing the Structural Stability and Na-Ion Mobility of 3D Superionic Conductor Na_3SbS_4 at Extremely Low Temperatures. <i>ACS Applied Energy Materials</i> , 2018, 1, 7028-7034.	5.1	20
44	Lattice distortion in a strong and ductile refractory high-entropy alloy. <i>Acta Materialia</i> , 2018, 160, 158-172.	7.9	325
45	An in situ neutron diffraction study of plastic deformation in a $\text{Cu}_{46.5}\text{Zr}_{46.5}\text{Al}_7$ bulk metallic glass composite. <i>Scripta Materialia</i> , 2018, 153, 118-121.	5.2	18
46	Real-Time In Situ Neutron Diffraction Investigation of Phase-Specific Load Sharing in a Cold-Rolled TRIP Sheet Steel. <i>Jom</i> , 2018, 70, 1576-1586.	1.9	15
47	Damage Precursor Assessment in Aerospace Structural Materials. , 2018, , .		1
48	Structure Evolution and Thermoelectric Properties of Carbonized Polydopamine Thin Films. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 6655-6660.	8.0	77
49	Stress-induced charge-ordering process in LiMn_2O_4 . <i>Materials Research Letters</i> , 2017, 5, 89-94.	8.7	9
50	Non-congruence of high-temperature mechanical and structural behaviors of LaCoO_3 based perovskites. <i>Journal of the European Ceramic Society</i> , 2017, 37, 1563-1576.	5.7	10
51	A study of stress-induced phase transformation and micromechanical behavior of CuZr-based alloy by in-situ neutron diffraction. <i>Journal of Alloys and Compounds</i> , 2017, 696, 1096-1104.	5.5	19
52	A Combined Variable-Temperature Neutron Diffraction and Thermogravimetric Analysis Study on a Promising Oxygen Electrode, $\text{SrCo}_{0.9}\text{Nb}_{0.1}\text{O}_{3-\delta}$, for Reversible Solid Oxide Fuel Cells. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 34855-34864.	8.0	18
53	High performance aluminum-cerium alloys for high-temperature applications. <i>Materials Horizons</i> , 2017, 4, 1070-1078.	12.2	155
54	Lattice-Cell Orientation Disorder in Complex Spinel Oxides. <i>Advanced Energy Materials</i> , 2017, 7, 1601950.	19.5	21

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55	In-situ TOF neutron diffraction studies of cyclic softening in superelasticity of a NiFeGaCo shape memory alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 680, 324-328.	5.6	13
56	An Air-stable Na ₃ SbS ₄ Superionic Conductor Prepared by a Rapid and Economic Synthetic Procedure. <i>Angewandte Chemie</i> , 2016, 128, 8693-8697.	2.0	44
57	An Air-stable Na ₃ SbS ₄ Superionic Conductor Prepared by a Rapid and Economic Synthetic Procedure. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 8551-8555.	13.8	183
58	Operando Lithium Dynamics in the Li-rich Layered Oxide Cathode Material via Neutron Diffraction. <i>Advanced Energy Materials</i> , 2016, 6, 1502143.	19.5	98
59	Compositional inhomogeneity and segregation in (K _{0.5} Na _{0.5})NbO ₃ ceramics. <i>Ceramics International</i> , 2016, 42, 9949-9954.	4.8	8
60	Annealing effects on the structural and magnetic properties of off-stoichiometric Fe-Mn-Ga ferromagnetic shape memory alloys. <i>Materials and Design</i> , 2016, 104, 327-332.	7.0	19
61	Improvement in synthesis of (K _{0.5} Na _{0.5})NbO ₃ powders by Ge ⁴⁺ acceptor doping. <i>Frontiers of Materials Science</i> , 2016, 10, 422-427.	2.2	5
62	Gas-solid interfacial modification of oxygen activity in layered oxide cathodes for lithium-ion batteries. <i>Nature Communications</i> , 2016, 7, 12108.	12.8	531
63	Correlation of anisotropy and directional conduction in δ -Li ₃ PS ₄ fast Li ⁺ conductor. <i>Applied Physics Letters</i> , 2015, 107, .	3.3	26
64	Two-Step Reactive Aid Sintering of BaZr _{0.8} Y _{0.2} O _{3-δ} Proton-Conducting Ceramics. <i>Journal of Electronic Materials</i> , 2015, 44, 4898-4906.	2.2	6
65	Origin of High Li ⁺ Conduction in Doped Li ₇ La ₃ Zr ₂ O ₁₂ Garnets. <i>Chemistry of Materials</i> , 2015, 27, 5491-5494.	6.7	100
66	A study of suppressed formation of low-conductivity phases in doped Li ₇ La ₃ Zr ₂ O ₁₂ garnets by in situ neutron diffraction. <i>Journal of Materials Chemistry A</i> , 2015, 3, 22868-22876.	10.3	54
67	Understanding the Role of NH ₄ F and Al ₂ O ₃ Surface Co-modification on Lithium-Excess Layered Oxide Li _{1.2} Ni _{0.2} Mn _{0.6} O ₂ . <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 19189-19200.	8.0	87
68	A search for temperature induced time-dependent structural transitions in 10 mol%Sc ₂ O ₃ -1 mol%CeO ₂ -ZrO ₂ and 8 mol%Y ₂ O ₃ -ZrO ₂ electrolyte ceramics. <i>Journal of the European Ceramic Society</i> , 2015, 35, 951-958.	5.7	17
69	<i>In-situ</i> neutron diffraction of LaCoO ₃ perovskite under uniaxial compression. II. Elastic properties. <i>Journal of Applied Physics</i> , 2014, 116, .	2.5	11
70	<i>In-situ</i> neutron diffraction of LaCoO ₃ perovskite under uniaxial compression. I. Crystal structure analysis and texture development. <i>Journal of Applied Physics</i> , 2014, 116, .	2.5	10
71	Novel Chemically Stable Ba ₃ Ca _{1.18} Nb _{1.82} Y _x O _{9-δ} Proton Conductor: Improved Proton Conductivity through Tailored Cation Ordering. <i>Chemistry of Materials</i> , 2014, 26, 2021-2029.	6.7	42
72	Revealing the cyclic hardening mechanism of an austenitic stainless steel by real-time in situ neutron diffraction. <i>Scripta Materialia</i> , 2014, 89, 45-48.	5.2	43

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73	A high-conduction Ge substituted Li_3As_4 solid electrolyte with exceptional low activation energy. <i>Journal of Materials Chemistry A</i> , 2014, 2, 10396-10403.	10.3	67
74	Phase-specific deformation behavior of a relatively tough NiAl-Cr(Mo) lamellar composite. <i>Scripta Materialia</i> , 2014, 84-85, 59-62.	5.2	34
75	Visualizing the Structural Evolution of LSM/YSZ Composite Cathodes for SOFC by in-situ Neutron Diffraction. <i>Scientific Reports</i> , 2014, 4, 5179.	3.3	31
76	Size controlled mechanochemical synthesis of ZrSi_2 . <i>Chemical Communications</i> , 2013, 49, 707-709.	4.1	13
77	Microstructure and mechanical properties of $\text{Ni/10mol\% Sc}_2\text{O}_3\text{-1mol\% CeO}_2\text{-ZrO}_2$ cermet anode for solid oxide fuel cells. <i>Journal of the European Ceramic Society</i> , 2013, 33, 557-564.	5.7	4
78	Residual Stress and Biaxial Strength in $\text{Sc}_2\text{O}_3\text{-CeO}_2\text{-ZrO}_2\text{/Y}_2\text{O}_3\text{-ZrO}_2$ Layered Electrolytes. <i>Fuel Cells</i> , 2013, 13, 1068-1075.	2.0	27
79	Layered YSZ/SCSZ/YSZ Electrolytes for Intermediate Temperature SOFC Part I: Design and Manufacturing. <i>Fuel Cells</i> , 2012, 12, 722-731.	2.4	9
80	Glycine-nitrate synthesis of Sr doped $\text{La}_2\text{Zr}_2\text{O}_7$ pyrochlore powder. <i>Advances in Applied Ceramics</i> , 2011, 110, 54-57.	1.1	9
81	Residual Stress Distribution in a Hydroformed Advanced High Strength Steel Component: Neutron Diffraction Measurements and Finite Element Simulations. , 0, , .		4
82	What is the Role of Nb in Nickel-Rich Layered Oxide Cathodes for Lithium-Ion Batteries?. <i>ACS Energy Letters</i> , 0, , 1377-1382.	17.4	107
83	Residual Stress Analysis for Additive Manufactured Large Automobile Parts by Using Neutron and Simulation. , 0, , .		2