Songbai Han

List of Publications by Year
in descending order

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71 papers	1,193 citations	430754 18 h-index	395590 33 g-index
71 all docs	71 docs citations	71 times ranked	1756 citing authors

#	Article	IF	Citations
1	Decreasing Li/Ni Disorder and Improving the Electrochemical Performances of Ni-Rich LiNi_{0.8}Co_{0.1}Mn_{0.1}O₂ by Ca Doping. Inorganic Chemistry, 2017, 56, 8355-8362.	1.9	171
2	Application of neutron imaging to investigate fundamental aspects of durability of cement-based materials: A review. Cement and Concrete Research, 2018, 108, 152-166.	4.6	136
3	Ultrastrong Boron Frameworks in ZrB₁₂: A Highway for Electron Conducting. Advanced Materials, 2017, 29, 1604003.	11.1	71
4	A Porous Metalâ˜Organic Replica of Î±-PbO₂ for Capture of Nerve Agent Surrogate. Journal of the American Chemical Society, 2010, 132, 17996-17999.	6.6	66
5	Hardness, elastic, and electronic properties of chromium monoboride. Applied Physics Letters, 2015, 106, .	1.5	54
6	The synergic effects of Na and K co-doping on the crystal structure and electrochemical properties of Li4Ti5O12 as anode material for lithium ion battery. Solid State Sciences, 2015, 44, 39-44.	1.5	49
7	Effects of microstructure on water imbibition in sandstones using Xâ€ray computed tomography and neutron radiography. Journal of Geophysical Research: Solid Earth, 2017, 122, 4963-4981.	1.4	39
8	Improving the Performance of Layered Oxide Cathode Materials with Footballâ€Like Hierarchical Structure for Naâ€Ion Batteries by Incorporating Mg²⁺ into Vacancies in Naâ€Ion Layers. ChemSusChem, 2018, 11, 1223-1231.	3.6	35
9	Modulating the Electrochemical Performances of Layered Cathode Materials for Sodium Ion Batteries through Tuning Coulombic Repulsion between Negatively Charged TMO₂ Slabs. ACS Applied Materials & Interfaces, 2018, 10, 1707-1718.	4.0	34
10	A solvent â€˜squeezingâ€™ strategy to graft ethylenediamine on Cu3(BTC)2 for highly efficient CO2/CO separation. Chemical Engineering Science, 2018, 184, 85-92.	1.9	31
11	3D neutron tomography of steel reinforcement corrosion in cement-based composites. Construction and Building Materials, 2018, 162, 561-565.	3.2	28
12	Study of glycol chitosan-carboxymethyl Î²-cyclodextrins as anticancer drugs carrier. Carbohydrate Polymers, 2013, 93, 679-685.	5.1	25
13	Al Substitution Induced Differences in Materials Structure and Electrochemical Performance of Ni-Rich Layered Cathodes for Lithium-Ion Batteries. Journal of Physical Chemistry C, 2019, 123, 19298-19306.	1.5	25
14	Antiperovskite Ionic Conductor Layer for Stabilizing the Interface of NASICON Solid Electrolyte Against Li Metal in Allâ€Solidâ€State Batteries**. Batteries and Supercaps, 2021, 4, 1491-1498.	2.4	23
15	Layered Co/Ni-free Mn-rich oxide P2-Na2/3Mn0.8Fe0.1Mg0.1O2 as high-performance cathode material for sodium-ion batteries. Ionics, 2020, 26, 735-743.	1.2	22
16	Influences of thermal damage on water transport in heat-treated cement mortar: Experimental and theoretical analyses. Construction and Building Materials, 2021, 288, 123100.	3.2	22
17	Phase transition and negative thermal expansion properties of Sc2â˜xCrxMo3O12. Ceramics International, 2012, 38, 6525-6529.	2.3	21
18	Visualization of rapid penetration of water into cracked cement mortar using neutron radiography. Materials Letters, 2017, 195, 1-4.	1.3	20

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19	Water sorptivity of unsaturated fractured sandstone: Fractal modeling and neutron radiography experiment. Advances in Water Resources, 2019, 130, 172-183.	1.7	20
20	Characterization of unsaturated diffusivity of tight sandstones using neutron radiography. International Journal of Heat and Mass Transfer, 2018, 124, 693-705.	2.5	19
21	Local Structural Changes and Inductive Effects on Ion Conduction in Antiperovskite Solid Electrolytes. Chemistry of Materials, 2020, 32, 8827-8835.	3.2	19
22	Fe3O4@porous carbon hybrid as the anode material for a lithium-ion battery: performance optimization by composition and microstructure tailoring. New Journal of Chemistry, 2015, 39, 3435-3443.	1.4	17
23	Improving the Electrochemical Performance of Li₄Ti₅O₁₂Anode through Confinement into Ordered Bimodal Porous Carbon Frameworks. Journal of Physical Chemistry C, 2013, 117, 26889-26895.	1.5	16
24	A charged metalâ€“organic framework for CO2/CH4 and CO2/N2 separation. Inorganica Chimica Acta, 2016, 443, 299-303.	1.2	16
25	Nucleation and dissociation of carbon dioxide hydrate in the inter- and intra-particle pores of dioctahedral smectite: Mechanistic insights from molecular dynamics simulations. Applied Clay Science, 2022, 216, 106344.	2.6	16
26	The effects of Co doping on the crystal structure and electrochemical performance of Mg(Mn2Ââ^'ÂxCox)O4 negative materials for lithium ion battery. Solid State Sciences, 2015, 39, 23-28.	1.5	15
27	Ultrahigh cycling stability and rate capability of ZnFe₂O₄@graphene hybrid anode prepared through a facile syn-graphenization strategy. New Journal of Chemistry, 2016, 40, 3139-3146.	1.4	15
28	Design of Real-time Neutron Radiography at China Advanced Research Reactor. Physics Procedia, 2013, 43, 48-53.	1.2	14
29	Design of Cold Neutron Imaging Facility at China Advanced Research Reactor. Physics Procedia, 2013, 43, 73-78.	1.2	14
30	Quasi-elastic neutron scattering (QENS) and its application for investigating the hydration of cement-based materials: State-of-the-art. Materials Characterization, 2021, 172, 110890.	1.9	14
31	Insights into Carbon Dioxide Hydrate Nucleation on the External Basal Surface of Clay Minerals from Molecular Dynamics Simulations. ACS Sustainable Chemistry and Engineering, 2022, 10, 6358-6369.	3.2	14
32	Neutron diffraction analysis and electrochemical performance of spinel Ni(Mn2â^'Co)O4 as anode materials for lithium ion battery. Materials Research Bulletin, 2016, 77, 265-270.	2.7	10
33	Crystal structure and negative thermal expansion of solid solution Lu2W3â^'x Mo x O12. International Journal of Minerals, Metallurgy and Materials, 2010, 17, 786-790.	2.4	8
34	Structural and multiferroic properties of Pr and Ti co-doped BiFeO 3 ceramics. Ceramics International, 2016, 42, 14675-14678.	2.3	8
35	Neutron powder diffraction study and B-site ordering in microwave dielectric ceramics Ba(Ca1/3Nb2/3)O3. Solid State Sciences, 2009, 11, 170-175.	1.5	7
36	Crystal structure and negative thermal expansion properties of solid solution Er2W3â^'xMoxO12. Transactions of Nonferrous Metals Society of China, 2009, 19, 1623-1627.	1.7	7

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37	Crystal structure and negative thermal expansion of solid solution Y2W3â^'xMoxO12. Journal of Materials Science, 2011, 46, 5160-5164.	1.7	7
38	Experience of the Indirect Neutron Radiography Method Based on the X-ray Imaging Plate at CARR. Physics Procedia, 2015, 69, 258-264.	1.2	7
39	Design of the Testing Set-up for a Nuclear Fuel Rod by Neutron Radiography at CARR. Physics Procedia, 2013, 43, 307-313.	1.2	6
40	Synthesis and structural properties of Nd3â^'xYxFe27.5Ti0.8Mo0.4(0â©½xâ©½1.8) and Nd3â^'xâ€²Yxâ€²Fe27.8Mo1.2(0<xâ€²â©½2 intermetallic compounds. Journal of Alloys and Compounds, 2005, 403, 168-175.	2.8	4
41	Cooperative effects of a combined substitution on the magnetic properties of Nd2â^'xYxFe17â^'ySiy intermetallic compounds (0â©½xâ©½1.5,0â©½yâ©½3.0). Journal of Applied Physics, 2006, 99, 023904.	1.1	4
42	Crystal structure and negative thermal expansion of solid solution Yb₂W_{3-x}Mo_xO₁₂. Materials at High Temperatures, 2010, 27, 151-156.	0.5	4
43	Structure and magnetic properties of (Nd,Y)3(Fe,Co,Ti)29 compounds. Physica B: Condensed Matter, 2005, 369, 266-272.	1.3	3
44	Effects of double substitution on the magnetic properties of Nd2Fe17â^'xâ^'yTixAly: A combined investigation of x-ray diffraction, neutron diffraction, and magnetic measurement. Journal of Applied Physics, 2005, 98, 013537.	1.1	3
45	Large-scale scientific facility at China Advanced Research Reactor for neutron scattering. Chinese Science Bulletin, 2015, 60, 2068-2078.	0.4	3
46	High-Pressure and High-Temperature Synthesis and In Situ High-Pressure Synchrotron X-ray Diffraction Study of HfSi₂. Inorganic Chemistry, 2021, 60, 15215-15222.	1.9	3
47	The effect of Zr addition on the formation and structural properties of 3:29 compounds in the Feâ€“Ndâ€“Tiâ€“Zr system. Journal of Physics Condensed Matter, 2005, 17, 6007-6014.	0.7	2
48	The effects of the combined substitution of Y and Ga on the crystallographic structure of Nd2â^'xYxFe17â^'yGay intermetallic compounds. Journal of Alloys and Compounds, 2005, 400, 178-183.	2.8	2
49	Investigations on the structural and magnetic properties of doubly substituted Nd2Fe17â^'xâ^'yTixGay compounds (0â‰¤xâ‰¤1.0, 0â‰¤yâ‰¤3). Journal of Alloys and Compounds, 2006, 407, 58-64.	2.8	2
50	Crystallographic and magnetic properties of (Nd,Dy)3Fe27.5(Ti,Mo)1.5 compounds. Journal of Magnetism and Magnetic Materials, 2006, 301, 415-421.	1.0	2
51	Formation, structure and magnetic properties of Nd3â^'xZrxFe27.8Mo1.2 (0.1â‰¤xâ‰¤0.5) compounds. Journal of Alloys and Compounds, 2007, 431, 68-71.	2.8	2
52	Crystallographic structure and magnetic properties of NdyDy1â^'yFe11â^'xTiCox compounds. Journal of Alloys and Compounds, 2007, 438, 21-24.	2.8	2
53	New Type of Neutron Image Scintillator based on H310BO3/ZnS(Ag). Physics Procedia, 2013, 43, 216-222.	1.2	2
54	Influence of Y and Al co-doping on the crystal structure and magnetic properties of Nd2â^'xYxFe17â^'yAly. Intermetallics, 2014, 55, 199-203.	1.8	2

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55	Structural and thermodynamic characteristics of sH 2,2-dimethylbutane-methane deuterohydrate. Journal of Chemical Thermodynamics, 2014, 77, 82-86.	1.0	2
56	Characterization of a Real-time Neutron Imaging Test Station at China Advanced Research Reactor. Physics Procedia, 2015, 69, 79-86.	1.2	2
57	A Study on Inhomogeneous Neutron Intensity Distribution Origin from Neutron Guide Transportation. Physics Procedia, 2017, 88, 354-360.	1.2	2
58	sp²-to-sp³ transitions in graphite during cold-compression. Physical Chemistry Chemical Physics, 2022, 24, 10561-10566.	1.3	2
59	Effects of substitution of Dy for Nd on the structural and magnetic properties of Nd3â^'xDyxFe27.5Mo1.5 (0.3â©½xâ©½1.8). Physica B: Condensed Matter, 2005, 367, 275-281.	1.3	1
60	Effects of the substitution of Al for Fe on phase transition, crystal structures, and magnetic properties of Nd3(Fe,Ti)29-type intermetallics. Journal of Applied Physics, 2006, 100, 103910.	1.1	1
61	Structure and magnetic properties of Nd3â^'xDyxFe23â^'yCo6Moy (x=0.5â€“3) compounds. Solid State Sciences, 2008, 10, 1412-1415.	1.5	1
62	A study on optical aberrations in parabolic neutron guides. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2015, 786, 17-22.	0.7	1
63	Structure analysis of Nd3â^'xYxFe23â^'yCo6Moy (x=0.36â€“3.0;y=1.1,0.9) compounds. Journal of Applied Physics, 2005, 98, 033903.	1.1	0
64	Crystal structure of catena-[Î¼2-bis(biphenyl-2,2'-dicarboxylato-O:O')]- (Î¼2-pyrazine-N:N')dicobalt(II), Co(C4H4N2)(C14H8O4)2. Zeitschrift Fur Kristallographie - New Crystal Structures, 2012, 227, .	0.1	0
65	X-ray analysis on crystal structures of crystalline polyimides. , 2013, , .		0
66	Crystal structure of tetraaqua-bis(4-(1,2,4-triazol-4-yl)benzoato-ÎºN)-zinc(II) decahydrate, C18H40N6O18Zn. Zeitschrift Fur Kristallographie - New Crystal Structures, 2013, 228, 319-320.	0.1	0
67	Crystallographic Studies of Nd_{3-x}Y_xFe_{27.5}TM_{1.5}(0.6â‰xâ‰2.4, TM=Ti, Mo) Compounds. Advanced Materials Research, 2013, 785-786, 634-637.	0.3	0
68	Simulation of Fast Neutron Radiography with a Time-of-Flight System. Physics Procedia, 2015, 69, 284-291.	1.2	0
69	Facile Synthesis and Enhanced Electrochemical Performances of Hierarchical ZnFe2O4-Graphene Hybrid as an Anode Material for Li-Ion Batteries. Journal of Nanoscience and Nanotechnology, 2017, 17, 2093-2097.	0.9	0
70	Simulations and systematic neutron beam characterisations on two-dimensional position-sensitive neutron detector multi-wire proportional counter with delay-line readout. Journal of Instrumentation, 2018, 13, T08012-T08012.	0.5	0
71	Application of In-beam Activation Analysis in Elemental Distribution Analysis. IOP Conference Series: Materials Science and Engineering, 2019, 563, 022050.	0.3	0