Jianming Bai

List of Publications by Year
in descending order

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123	8,088	81900 39	48315 88
papers	citations	h-index	g-index

131	131	131	10180
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Synthesis and Processing by Design of Highâ€Nickel Cathode Materials. Batteries and Supercaps, 2022, 5, .	4.7	11
2	Synthesis and Processing by Design of Highâ€Nickel Cathode Materials. Batteries and Supercaps, 2022, 5, .	4.7	3
3	Synergistic effect from coaxially integrated CNTs@MoS2/MoO2 composite enables fast and stable lithium storage. Journal of Energy Chemistry, 2021, 55, 449-458.	12.9	42
4	Boosting energy efficiency of Li-rich layered oxide cathodes by tuning oxygen redox kinetics and reversibility. Energy Storage Materials, 2021, 35, 388-399.	18.0	42
5	Kinetic Limitations in Singleâ€Crystal Highâ€Nickel Cathodes. Angewandte Chemie - International Edition, 2021, 60, 17350-17355.	13.8	84
6	Kinetic Limitations in Singleâ€Crystal Highâ€Nickel Cathodes. Angewandte Chemie, 2021, 133, 17490-17495.	2.0	2
7	Design nanoporous metal thin films via solid state interfacial dealloying. Nanoscale, 2021, 13, 17725-17736.	5.6	9
8	The Role of Water and Hydroxyl Groups in the Structures of Stetindite and Coffinite, MSiO₄ (M = Ce, U). Inorganic Chemistry, 2021, 60, 718-735.	4.0	18
9	Conditioning the Surface and Bulk of High-Nickel Cathodes with a Nb Coating: An In Situ X-ray Study. Journal of Physical Chemistry Letters, 2021, 12, 7908-7913.	4.6	16
10	Probing Kinetics of Water-in-Salt Aqueous Batteries with Thick Porous Electrodes. ACS Central Science, 2021, 7, 1676-1687.	11.3	8
11	Li₁₅P₄S₁₆Cl₃, a Lithium Chlorothiophosphate as a Solid-State Ionic Conductor. Inorganic Chemistry, 2020, 59, 226-234.	4.0	9
12	Anion and cation co-doping of Na4SnS4 as sodium superionic conductors. Materials Today Physics, 2020, 15, 100281.	6.0	6
13	Unraveling Na and F coupling effects in stabilizing Li, Mn-rich layered oxide cathodes via local ordering modification. Energy Storage Materials, 2020, 31, 459-469.	18.0	41
14	Multimodal Analysis of Reaction Pathways of Cathode Materials for Lithium Ion Batteries. Microscopy and Microanalysis, 2020, 26, 906-908.	0.4	0
15	Kinetic Pathways Templated by Low-Temperature Intermediates during Solid-State Synthesis of Layered Oxides. Chemistry of Materials, 2020, 32, 9906-9913.	6.7	34
16	Ultrafast solid-liquid intercalation enabled by targeted microwave energy delivery. Science Advances, 2020, 6, .	10.3	12
17	High-Temperature Thermodynamics of Cerium Silicates, A-Ce₂Si₂O₇, and Ce_{4.67}(SiO₄)₃O. ACS Earth and Space Chemistry, 2020, 4, 2129-2143.	2.7	23
18	The interplay between thermodynamics and kinetics in the solid-state synthesis of layered oxides. Nature Materials, 2020, 19, 1088-1095.	27.5	129

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19	In situsynchrotron pair distribution function analysis to monitor synthetic pathways under electromagnetic excitation. Journal of Materials Chemistry A, 2020, 8, 15909-15918.	10.3	11
20	3D Morphology of Bimodal Porous Copper with Nano-Sized and Micron-Sized Pores to Enhance Transport Properties for Functional Applications. ACS Applied Nano Materials, 2020, 3, 7524-7534.	5.0	8
21	Revealing Reaction Pathways of Collective Substituted Iron Fluoride Electrode for Lithium Ion Batteries. ACS Nano, 2020, 14, 10276-10283.	14.6	14
22	Hydrogen-Bonding Interactions in Hybrid Aqueous/Nonaqueous Electrolytes Enable Low-Cost and Long-Lifespan Sodium-Ion Storage. ACS Applied Materials & Interfaces, 2020, 12, 22862-22872.	8.0	32
23	Operandostructural and chemical evolutions of TiS₂in Na-ion batteries. Journal of Materials Chemistry A, 2020, 8, 12339-12350.	10.3	23
24	Multi-Modal Synchrotron Characterization: Modern Techniques and Data Analysis. , 2020, , 39-64.		4
25	Enhanced Formation of Solvent-Shared Ion Pairs in Aqueous Calcium Perchlorate Solution toward Saturated Concentration or Deep Supercooling Temperature and Its Effects on the Water Structure. Journal of Physical Chemistry B, 2019, 123, 9654-9667.	2.6	8
26	Cooling Induced Surface Reconstruction during Synthesis of Highâ€Ni Layered Oxides. Advanced Energy Materials, 2019, 9, 1901915.	19.5	34
27	Insights into Li/Ni ordering and surface reconstruction during synthesis of Ni-rich layered oxides. Journal of Materials Chemistry A, 2019, 7, 513-519.	10.3	92
28	Atomic-scale structural and chemical evolution of Li3V2(PO4)3 cathode cycled at high voltage window. Nano Research, 2019, 12, 1675-1681.	10.4	8
29	A New Intermetallic NiSn₅ Phase: Induced Synthesis, Crystal Structure Resolution, and Investigation of Its Mechanism. Journal of Physical Chemistry Letters, 2019, 10, 2561-2566.	4.6	3
30	Intrinsic Role of Cationic Substitution in Tuning Li/Ni Mixing in High-Ni Layered Oxides. Chemistry of Materials, 2019, 31, 2731-2740.	6.7	85
31	1.3â€V superwide potential window sponsored by Na-Mn-O plates as cathodes towards aqueous rechargeable sodium-ion batteries. Chemical Engineering Journal, 2019, 370, 742-748.	12.7	32
32	Lithium-Doping Stabilized High-Performance P2â€“Na_{0.66}Li_{0.18}Fe_{0.12}Mn_{0.7}O₂ Cathode for Sodium Ion Batteries. Journal of the American Chemical Society, 2019, 141, 6680-6689.	13.7	187
33	The Effect of Silver Ion Occupancy on Hollandite Lattice Structure. MRS Advances, 2018, 3, 547-552.	0.9	6
34	TiS2 as a high performance potassium ion battery cathode in ether-based electrolyte. Energy Storage Materials, 2018, 12, 216-222.	18.0	129
35	Localized concentration reversal of lithium during intercalation into nanoparticles. Science Advances, 2018, 4, eaao2608.	10.3	50
36	Crossover of thermal expansion from positive to negative by removing the excess fluorines in cubic ReO₃-type TiZrF_{7â^'x}. Journal of Materials Chemistry C, 2018, 6, 5148-5152.	5.5	17

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37	Rate-dependent Reversal of Lithium Concentration During Intercalation into LixFePO4 Nanoparticles. Microscopy and Microanalysis, 2018, 24, 1482-1483.	0.4	0
38	Guiding Synthesis of Polymorphs of Materials Using Nanometric Phase Diagrams. Journal of the American Chemical Society, 2018, 140, 17290-17296.	13.7	15
39	Improvement of Li-S battery electrochemical performance with 2D TiS2 additive. Electrochimica Acta, 2018, 292, 779-788.	5.2	29
40	Isotropic Low Thermal Expansion over a Wide Temperature Range in Ti1â€“xZrxF3+x (0.1 â‰¤ x â‰¤ 0.5) Solid Solutions. Inorganic Chemistry, 2018, 57, 14396-14400.	4.0	11
41	Cationic Ordering Coupled to Reconstruction of Basic Building Units during Synthesis of High-Ni Layered Oxides. Journal of the American Chemical Society, 2018, 140, 12484-12492.	13.7	113
42	Combined computational and experimental investigation of the La ₂ CuO _{4â€“ x} S _x (0 â‰¤ x â‰¤ 4) quaternary system. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 7890-7895.	7.1	8
43	High energy-density and reversibility of iron fluoride cathode enabled via an intercalation-extrusion reaction. Nature Communications, 2018, 9, 2324.	12.8	136
44	NaAlTi3O8, A Novel Anode Material for Sodium Ion Battery. Scientific Reports, 2017, 7, 162.	3.3	16
45	In Situ Neutron Diffraction Studies of the Ion Exchange Synthesis Mechanism of Li₂Mg₂P₃O₉N: Evidence for a Hidden Phase Transition. Journal of the American Chemical Society, 2017, 139, 9192-9202.	13.7	19
46	Operando Multi-modal Synchrotron Investigation for Structural and Chemical Evolution of Cupric Sulfide (CuS) Additive in Li-S battery. Scientific Reports, 2017, 7, 12976.	3.3	18
47	Synthetic Control of Kinetic Reaction Pathway and Cationic Ordering in Highâ€Ni Layered Oxide Cathodes. Advanced Materials, 2017, 29, 1606715.	21.0	127
48	In Situ Tracking Kinetic Pathways of Li⁺/Na⁺ Substitution during Ion-Exchange Synthesis of Li_xNa_{1.5â€“x}VOPO₄F_{0.5}. Journal of the American Chemical Society, 2017, 139, 12504-12516.	13.7	28
49	High-temperature oxidation of advanced FeCrNi alloy in steam environments. Applied Surface Science, 2017, 426, 562-571.	6.1	21
50	In Situ Probing and Synthetic Control of Cationic Ordering in Niâ€Rich Layered Oxide Cathodes. Advanced Energy Materials, 2017, 7, 1601266.	19.5	200
51	Thermal behavior of polyhalite: a high-temperature synchrotron XRD study. Physics and Chemistry of Minerals, 2017, 44, 125-135.	0.8	26
52	Explore the Effects of Microstructural Defects on Voltage Fade of Li- and Mn-Rich Cathodes. Nano Letters, 2016, 16, 5999-6007.	9.1	64
53	Highâ€Rate Charging Induced Intermediate Phases and Structural Changes of Layerâ€Structured Cathode for Lithiumâ€Ion Batteries. Advanced Energy Materials, 2016, 6, 1600597.	19.5	110
54	Quantification of Honeycomb Number-Type Stacking Faults: Application to Na₃Ni₂BiO₆ Cathodes for Na-Ion Batteries. Inorganic Chemistry, 2016, 55, 8478-8492.	4.0	51

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55	Electrochemical Behavior of Electrolytic Manganese Dioxide in Aqueous KOH and LiOH Solutions: A Comparative Study. Journal of the Electrochemical Society, 2016, 163, A356-A363.	2.9	28
56	Visible Light-Driven H₂ Production over Highly Dispersed Ruthenia on Rutile TiO₂ Nanorods. ACS Catalysis, 2016, 6, 407-417.	11.2	71
57	Elucidation of the surface characteristics and electrochemistry of high-performance LiNiO₂. Chemical Communications, 2016, 52, 4239-4242.	4.1	62
58	Ambient synthesis, characterization, and electrochemical activity of LiFePO4 nanomaterials derived from iron phosphate intermediates. Nano Research, 2015, 8, 2573-2594.	10.4	10
59	In Situ Diffraction Study of the Highâ€Temperature Decomposition of tâ€²â€Zirconia. Journal of the American Ceramic Society, 2015, 98, 247-254.	3.8	42
60	Solvothermal Synthesis of LiMn_{1â€“x}Fe_xPO₄Cathode Materials: A Study of Reaction Mechanisms by Time-Resolved in Situ Synchrotron X-ray Diffraction. Journal of Physical Chemistry C, 2015, 119, 2266-2276.	3.1	29
61	Structure Tracking Aided Design and Synthesis of Li₃V₂(PO₄)₃ Nanocrystals as High-Power Cathodes for Lithium Ion Batteries. Chemistry of Materials, 2015, 27, 5712-5718.	6.7	50
62	A lithiation/delithiation mechanism of monodispersed MSn₅ (M = Fe, Co and FeCo) nanospheres. Journal of Materials Chemistry A, 2015, 3, 7170-7178.	10.3	47
63	Direct visualization of the Jahnâ€“Teller effect coupled to Na ordering in Na5/8MnO2. Nature Materials, 2014, 13, 586-592.	27.5	237
64	Ionic Conduction in Cubic Na₃TiP₃O₉N, a Secondary Na-Ion Battery Cathode with Extremely Low Volume Change. Chemistry of Materials, 2014, 26, 3295-3305.	6.7	68
65	Synthesis and Structure of Perovskite ScMnO₃. Inorganic Chemistry, 2013, 52, 9692-9697.	4.0	27
66	A zero-strain layered metal oxide as the negative electrode for long-life sodium-ion batteries. Nature Communications, 2013, 4, 2365.	12.8	515
67	On the origin of enhanced thermoelectricity in Fe doped Ca3Co4O9. Journal of Materials Chemistry C, 2013, 1, 4114.	5.5	39
68	A Size-Dependent Sodium Storage Mechanism in Li₄Ti₅O₁₂ Investigated by a Novel Characterization Technique Combining in Situ X-ray Diffraction and Chemical Sodiation. Nano Letters, 2013, 13, 4721-4727.	9.1	212
69	Phase transition behavior of NaCrO2 during sodium extraction studied by synchrotron-based X-ray diffraction and absorption spectroscopy. Journal of Materials Chemistry A, 2013, 1, 11130.	10.3	84
70	Interplay between two-phase and solid solution reactions in high voltage spinel cathode material for lithium ion batteries. Journal of Power Sources, 2013, 242, 736-741.	7.8	24
71	A structural change in Ca₃Co₄O₉associated with enhanced thermoelectric properties. Journal of Physics Condensed Matter, 2012, 24, 455602.	1.8	26
72	Electrochemical decomposition of Li2CO3 in NiOâ€“Li2CO3 nanocomposite thin film and powder electrodes. Journal of Power Sources, 2012, 218, 113-118.	7.8	93

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73	Direct extraction of quantitative structural information from x-ray fluorescence holograms using spherical-harmonic analysis. Physical Review B, 2012, 85, .	3.2	1
74	Anomalous Pseudocapacitive Behavior of a Nanostructured, Mixed-Valent Manganese Oxide Film for Electrical Energy Storage. Nano Letters, 2012, 12, 3483-3490.	9.1	234
75	CoSn5 Phase: Crystal Structure Resolving and Stable High Capacity as Anodes for Li Ion Batteries. Journal of Physical Chemistry Letters, 2012, 3, 1488-1492.	4.6	31
76	Investigation of the structural changes in Li1â^'xFePO4 upon charging by synchrotron radiation techniques. Journal of Materials Chemistry, 2011, 21, 11406.	6.7	64
77	Promotion of water-mediated carbon removal by nanostructured barium oxide/nickel interfaces in solid oxide fuel cells. Nature Communications, 2011, 2, 357.	12.8	280
78	In Situ Hydrothermal Synthesis of LiFePO₄ Studied by Synchrotron X-ray Diffraction. Journal of Physical Chemistry Letters, 2011, 2, 1874-1878.	4.6	60
79	Nanospheres of a New Intermetallic FeSn₅ Phase: Synthesis, Magnetic Properties and Anode Performance in Li-ion Batteries. Journal of the American Chemical Society, 2011, 133, 11213-11219.	13.7	88
80	Characterization of the Fe-Doped Mixed-Valent Tunnel Structure Manganese Oxide KOMS-2. Journal of Physical Chemistry C, 2011, 115, 21610-21619.	3.1	38
81	A new in situ synchrotron X-ray diffraction technique to study the chemical delithiation of LiFePO4. Chemical Communications, 2011, 47, 7170.	4.1	36
82	Amorphous Hierarchical Porous GeO_x as High-Capacity Anodes for Li Ion Batteries with Very Long Cycling Life. Journal of the American Chemical Society, 2011, 133, 20692-20695.	13.7	288
83	Investigation of structural and electronic properties of graphene oxide. Applied Physics Letters, 2011, 99, .	3.3	252
84	In-situ dehydration studies of fully K-, Rb-, and Cs-exchanged natrolites. American Mineralogist, 2011, 96, 393-401.	1.9	20
85	Structural studies of NH4-exchanged natrolites at ambient conditions and high temperature. American Mineralogist, 2011, 96, 1308-1315.	1.9	7
86	Residual stress characterization of Al/SiC nanoscale multilayers using X-ray synchrotron radiation. Thin Solid Films, 2010, 519, 759-765.	1.8	23
87	Observation of anomalous phonons in orthorhombic rare-earth manganites. Applied Physics Letters, 2010, 97, 262905.	3.3	3
88	Chemical and Hydrostatic Pressure in Natrolites: Pressure-Induced Hydration of an Aluminogermanate Natrolite. Journal of Physical Chemistry C, 2010, 114, 18805-18811.	3.1	4
89	In Situ XRD Studies of ZnO/GaN Mixtures at High Pressure and High Temperature: Synthesis of Zn-Rich (Ga_{1â^'x}Zn_x)(N_{1â^'x}O_x) Photocatalysts. Journal of Physical Chemistry C, 2010, 114, 1809-1814.	3.1	71
90	Overpotential-Dependent Phase Transformation Pathways in Lithium Iron Phosphate Battery Electrodes. Chemistry of Materials, 2010, 22, 5845-5855.	6.7	109

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91	Depth-dependent critical behavior in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mtext>V</mml:mtext><mml:mn>2</mml:mn></mml:msub><mml:mtext>H</mml:mtext></mml:mrow></mml:math> Physical Review B, 2009, 79, .		
92	In situ X-ray absorption and diffraction studies of carbon coated LiFe1/4Mn1/4Co1/4Ni1/4PO4 cathode during first charge. Electrochemistry Communications, 2009, 11, 913-916.	4.7	49
93	Residual Stress Analysis of Boronized AISI 1018 Steel by Synchrotron Radiation. Journal of Materials Engineering and Performance, 2008, 17, 730-732.	2.5	5
94	Mechanisms for species-selective oriented crystal growth at organic templates. Journal of Materials Research, 2007, 22, 2785-2790.	2.6	0
95	Influence of strain on the atomic and electronic structure of manganite films. Journal of Physics and Chemistry of Solids, 2007, 68, 458-463.	4.0	5
96	Atomic packing and short-to-medium-range order in metallic glasses. Nature, 2006, 439, 419-425.	27.8	1,758
97	X-ray characterization of atomic-layer superlattices. Journal Physics D: Applied Physics, 2005, 38, A147-A153.	2.8	0
98	Scaled Up Pulsed Deposition Technology: Carburization Resistant Ablation Coatings for Ethylene Pyrolysis Coils. Materials Research Society Symposia Proceedings, 2005, 890, 1.	0.1	0
99	Icosahedral Short-Range Order in Amorphous Alloys. Physical Review Letters, 2004, 92, 145502.	7.8	216
100	Effect of the polyurethane crystalline interphase formed at an Al surface on water-vapor absorption. Journal of Applied Polymer Science, 2003, 89, 1417-1422.	2.6	0
101	Assessment of a synchrotron X-ray method for quantitative analysis of calcium hydroxide. Cement and Concrete Research, 2003, 33, 1553-1559.	11.0	11
102	Grazing incidence X-ray diffraction studies on the structures of polyurethane films and their effects on adhesion to Al substrates. Polymer, 2003, 44, 6663-6674.	3.8	16
103	Layer Ordering and Faulting in(GaAs)n/(AlAs)nUltrashort-Period Superlattices. Physical Review Letters, 2003, 91, 106103.	7.8	15
104	Transmission of x-ray polarization through glass capillary fibers. Review of Scientific Instruments, 2003, 74, 23-27.	1.3	1
105	Atomic scattering factor for a spherical wave and near-field effects in x-ray fluorescence holography. Physical Review B, 2003, 68, .	3.2	11
106	Adhesion of a rigid polyurethane foam to zinc phosphated steel. Journal of Adhesion Science and Technology, 2003, 17, 1351-1368.	2.6	4
107	Interfacial Structures of Polyurethane Thin Films on Various Substrate Materials. Polymer Journal, 2003, 35, 929-937.	2.7	1
108	Determination of the order parameter of CuPt-Bordered GaInP2 films by x-ray diffraction. Journal of Applied Physics, 2002, 91, 9039-9042.	2.5	5

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109	Structural, magnetic, and transport studies of La0.8MnO3 films. Journal of Applied Physics, 2002, 92, 4518-4523.	2.5	5
110	Monte Carlo ray-tracing error analysis of a sagittal-focusing optical system as applied to synchrotron radiation. Review of Scientific Instruments, 2002, 73, 1499-1501.	1.3	1
111	Structural studies of annealed ultrathin La0.8MnO3 films. Applied Physics Letters, 2002, 80, 2663-2665.	3.3	5
112	Microanalysis of alkali-activated fly ashâ€“CH pastes. Cement and Concrete Research, 2002, 32, 963-972.	11.0	41
113	Microbial synthesis and the characterization of metal-substituted magnetites. Solid State Communications, 2001, 118, 529-534.	1.9	168
114	X-ray diffraction from CuPt-ordered III-V ternary semiconductor alloy films. Physical Review B, 2001, 63, .	3.2	11
115	X-ray study of antiphase boundaries in the quadruple-period ordered GaAs0.87Sb0.13 alloy. Journal of Applied Physics, 2001, 90, 644-649.	2.5	3
116	Increased performance with 12-mrad sagittal-focusing monochromator. AIP Conference Proceedings, 2000, , .	0.4	3
117	Anomalous-X-ray scattering associated with short-range order in an Al70Ni15Co15 decagonal quasicrystal. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2000, 294-296, 299-302.	5.6	11
118	Change from a bulk discontinuous phase transition in V2H to a continuous transition in a defective near-surface skin layer. Modelling and Simulation in Materials Science and Engineering, 2000, 8, 269-275.	2.0	5
119	pH-Dependent Appearance of Chiral Structure in a Langmuir Monolayer. Journal of Physical Chemistry B, 2000, 104, 5797-5802.	2.6	34
120	Effect of Headgroup Dissociation on the Structure of Langmuir Monolayers. Langmuir, 2000, 16, 1239-1242.	3.5	28
121	Backbone orientational order in fatty acid monolayers at the air-water interface. Physical Review E, 1998, 58, 7686-7690.	2.1	32
122	Two Length Scales and Crossover Behavior in the Critical Diffuse Scattering fromV2H. Physical Review Letters, 1998, 81, 2276-2279.	7.8	11
123	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