

Huairuo Zhang

List of Publications by Year in descending order

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80
papers

4,838
citations

117625

34
h-index

91884

69
g-index

82
all docs

82
docs citations

82
times ranked

7286
citing authors

#	ARTICLE	IF	CITATIONS
1	A family of oxide ion conductors based on the ferroelectric perovskite Na _{0.5} Bi _{0.5} TiO ₃ . Nature Materials, 2014, 13, 31-35.	27.5	715
2	Controlled synthesis of CeO ₂ nanorods by a solvothermal method. Nanotechnology, 2005, 16, 1454-1463.	2.6	315
3	Electric-field induced structural transition in vertical MoTe ₂ - and Mo _{1-x} W _x Te ₂ -based resistive memories. Nature Materials, 2019, 18, 55-61.	27.5	300
4	Mesoscale Organization of Nearly Monodisperse Flowerlike Ceria Microspheres. Journal of Physical Chemistry B, 2006, 110, 13445-13452.	2.6	244
5	Highly Ordered Self-Assembly with Large Area of Fe ₃ O ₄ Nanoparticles and the Magnetic Properties. Journal of Physical Chemistry B, 2005, 109, 23233-23236.	2.6	225
6	Dramatic Influence of A-Site Nonstoichiometry on the Electrical Conductivity and Conduction Mechanisms in the Perovskite Oxide Na _{0.5} Bi _{0.5} TiO ₃ . Chemistry of Materials, 2015, 27, 629-634.	6.7	210
7	High-Figure-of-Merit Thermoelectric La-Doped A-Site-Deficient SrTiO ₃ Ceramics. Chemistry of Materials, 2016, 28, 925-935.	6.7	172
8	On-the-fly closed-loop materials discovery via Bayesian active learning. Nature Communications, 2020, 11, 5966.	12.8	167
9	Ultrahigh thermal isolation across heterogeneously layered two-dimensional materials. Science Advances, 2019, 5, eaax1325.	10.3	149
10	Strong photoluminescence of nanostructured crystalline tungsten oxide thin films. Applied Physics Letters, 2005, 86, 141901.	3.3	148
11	Monodispersed hard carbon spherules as a catalyst support for the electrooxidation of methanol. Carbon, 2005, 43, 11-16.	10.3	132
12	Transmission-Electron-Microscopy Study on Fivefold Twinned Silver Nanorods. Journal of Physical Chemistry B, 2004, 108, 12038-12043.	2.6	115
13	Complementary Black Phosphorus Tunneling Field-Effect Transistors. ACS Nano, 2019, 13, 377-385.	14.6	103
14	Facile route to bulk ultrafine-grain steels for high strength and ductility. Nature, 2021, 590, 262-267.	27.8	98
15	Miscibility and Alignment Effects of Mixed Monolayer Cyanobiphenyl Liquid-Crystal-Capped Gold Nanoparticles in Nematic Cyanobiphenyl Liquid Crystal Hosts. ChemPhysChem, 2009, 10, 1211-1218.	2.1	84
16	Well-aligned zinc oxide nanorods and nanowires prepared without catalyst. Journal of Crystal Growth, 2005, 274, 126-131.	1.5	81
17	Novel Nanopyramid Arrays of Magnetite. Advanced Materials, 2005, 17, 1893-1897.	21.0	78
18	Controlling mixed conductivity in Na _{1/2} Bi _{1/2} TiO ₃ using A-site non-stoichiometry and Nb-donor doping. Journal of Materials Chemistry C, 2016, 4, 5779-5786.	5.5	77

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19	Controlled self-assembled nanoaeroplanes, nanocombs, and tetrapod-like networks of zinc oxide. <i>Nanotechnology</i> , 2004, 15, 949-952.	2.6	76
20	Local thickness measurement through scattering contrast and electron energy-loss spectroscopy. <i>Micron</i> , 2012, 43, 8-15.	2.2	75
21	MoTe ₂ Lateral Homojunction Field-Effect Transistors Fabricated using Flux-Controlled Phase Engineering. <i>ACS Nano</i> , 2019, 13, 8035-8046.	14.6	75
22	Influence of a Single Grain Boundary on Domain Wall Motion in Ferroelectrics. <i>Advanced Functional Materials</i> , 2014, 24, 1409-1417.	14.9	66
23	Morphologies and microstructures of nano-sized Cu ₂ O particles using a cetyltrimethylammonium template. <i>Nanotechnology</i> , 2005, 16, 267-272.	2.6	63
24	Nanosize boride particles in heat-treated nickel base superalloys. <i>Scripta Materialia</i> , 2008, 58, 167-170.	5.2	63
25	High Ionic Conductivity with Low Degradation in A-Site Strontium-Doped Nonstoichiometric Sodium Bismuth Titanate Perovskite. <i>Chemistry of Materials</i> , 2016, 28, 5269-5273.	6.7	61
26	Wet chemical synthesis of gold nanoparticles using silver seeds: a shape control from nanorods to hollow spherical nanoparticles. <i>Nanotechnology</i> , 2007, 18, 115608.	2.6	54
27	Improvement in Laser Weldability of INCONEL 738 Superalloy through Microstructural Modification. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2009, 40, 2694-2704.	2.2	53
28	Structures and defects of WO ₃ x nanorods grown by in-situ heating tungsten filament. <i>Chemical Physics Letters</i> , 2004, 389, 337-341.	2.6	46
29	Domain Wall Motion Across Various Grain Boundaries in Ferroelectric Thin Films. <i>Journal of the American Ceramic Society</i> , 2015, 98, 1848-1857.	3.8	42
30	Cr-rich nanosize precipitates in a standard heat-treated Inconel 738 superalloy. <i>Philosophical Magazine</i> , 2010, 90, 765-782.	1.6	38
31	Phase-separation-enhanced plasticity in a Cu _{47.2} Zr _{46.5} Al _{5.5} Nb _{0.8} bulk metallic glass. <i>Scripta Materialia</i> , 2014, 72-73, 47-50.	5.2	38
32	Tuning the hysteresis of a metal-insulator transition via lattice compatibility. <i>Nature Communications</i> , 2020, 11, 3539.	12.8	38
33	Structural properties of silver nanorods with fivefold symmetry. <i>Micron</i> , 2004, 35, 469-474.	2.2	36
34	Protocols for the Fabrication, Characterization, and Optimization of n-Type Thermoelectric Ceramic Oxides. <i>Chemistry of Materials</i> , 2017, 29, 265-280.	6.7	35
35	Magnetic two-dimensional electron gas at the manganite-buffered LaAlO ₃ /SrTiO ₃ interface. <i>Physical Review B</i> , 2017, 96, 041405.	12.1	35
36	Anomalous magnetism in strained La _{1-x} Sr _x CoO ₃ epitaxial films (0 ≤ x ≤ 0.5). <i>Scientific Reports</i> , 2014, 4, 6206.	3.3	33

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37	Electric-Field Induced Reversible Switching of the Magnetic Easy Axis in Co/BiFeO ₃ on SrTiO ₃ . Nano Letters, 2017, 17, 2825-2832.	9.1	33
38	Domain pinning near a single-grain boundary in tetragonal and rhombohedral lead zirconate titanate films. Physical Review B, 2015, 91, .	3.2	31
39	TEM analysis of Cr-Mo-W-B phase in a DS nickel based superalloy. Journal of Materials Science, 2008, 43, 6024-6028.	3.7	26
40	Analytical Electron Microscopy Study of Boron-Rich Grain Boundary Microconstituent in Directionally Solidified RENE 80 Superalloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2008, 39, 2799-2803.	2.2	26
41	Martensitic transformation of Ni ₂ FeGa ferromagnetic shape-memory alloy studied via transmission electron microscopy and electron energy-loss spectroscopy. Physical Review B, 2008, 77, .	3.2	24
42	Insight into the Structure and Functional Application of the Sr _{0.95} Ce _{0.05} CoO ₃ Cathode for Solid Oxide Fuel Cells. Inorganic Chemistry, 2015, 54, 3477-3484.	4.0	24
43	Atomic-size effect on the microstructural properties of Ni ₂ FeGa. Acta Materialia, 2011, 59, 1249-1258.	7.9	17
44	Thermal Stability of Titanium Contacts to MoS ₂ . ACS Applied Materials & Interfaces, 2019, 11, 35389-35393.	8.0	17
45	High-Quality All-Inorganic Perovskite CsPbBr ₃ Microsheet Crystals as Low-Loss Subwavelength Exciton-Polariton Waveguides. Nano Letters, 2021, 21, 1822-1830.	9.1	17
46	Visible and infrared emissions from c-axis oriented AlN:Er films grown by magnetron sputtering. Journal of Applied Physics, 2006, 99, 053515.	2.5	16
47	Structural and physical properties of the Na _x CoO ₂ ·yH ₂ O superconducting system. Superconductor Science and Technology, 2004, 17, 42-46.	3.5	15
48	A new route to single crystalline vanadium dioxide nanoflakes via thermal reduction. Journal of Materials Research, 2007, 22, 1921-1926.	2.6	15
49	Are 2D Interfaces Really Flat?. ACS Nano, 2022, 16, 5316-5324.	14.6	15
50	Microstructure Evolution of <i>In Situ</i> Pulsed-Laser Crystallized Pb(Zr _{0.52} Ti _{0.48})O ₃ Thin Films. Journal of the American Ceramic Society, 2016, 99, 43-50.	3.8	14
51	Tuning the magnetism of epitaxial cobalt oxide thin films by electron beam irradiation. Physical Review Materials, 2017, 1, .	2.4	14
52	Pt Nanoparticles Loaded on W ₁₈ O ₄₉ Nanocables/rGO Nanocomposite as a Highly Active and Durable Catalyst for Methanol Electro-Oxidation. ACS Omega, 2018, 3, 16850-16857.	3.5	13
53	From aqueous to organic: A step-by-step strategy for shape evolution of gold nanoparticles. Chemical Physics Letters, 2005, 415, 342-345.	2.6	11
54	Interface of epitaxial SrTiO ₃ on silicon characterized by transmission electron microscopy, electron energy loss spectroscopy, and electron holography. Physical Review B, 2006, 73, .	3.2	11

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55	Non-equilibrium liquid phase dissolution of γ' phase precipitates in a nickel-based superalloy. Philosophical Magazine Letters, 2009, 89, 787-794.	1.2	11
56	Microwave properties and structure of La-Ti-Si-B-O glass-ceramics for applications in GHz electronics. Journal of the European Ceramic Society, 2017, 37, 2137-2142.	5.7	11
57	Phase separation, effects of magnetic field and high pressure on charge ordering in $\hat{\Gamma}^3$ -Na _{0.5} CoO ₂ . Materials Chemistry and Physics, 2005, 94, 119-124.	4.0	10
58	Electron irradiation damage and color centers of MgO nanocube. Nuclear Instruments & Methods in Physics Research B, 2013, 316, 137-143.	1.4	10
59	Single pass laser joining of Inconel 718 superalloy with filler. Materials Science and Technology, 2011, 27, 268-274.	1.6	9
60	Stabilisation of Fe ₂ O ₃ -rich Perovskite Nanophase in Epitaxial Rare-earth Doped BiFeO ₃ Films. Scientific Reports, 2015, 5, 13066.	3.3	9
61	The effect of substrate clamping on the paraelectric to antiferroelectric phase transition in Nd-doped BiFeO ₃ thin films. Thin Solid Films, 2016, 616, 767-772.	1.8	9
62	Fabrication of carbon nanotube bundles and measurement of field electron emission properties. Applied Physics A: Materials Science and Processing, 2005, 80, 195-199.	2.3	8
63	Correlations among superconductivity, structural instability, and band filling in Nb _{1-x} B ₂ at the critical point $x \approx 0.2$. Physical Review B, 2006, 73, .	3.2	8
64	Electronic structure and electron energy-loss spectra of Sr _{0.35} CoO ₂ . Solid State Communications, 2005, 135, 687-691.	1.9	7
65	First-principles study of quasi-one-dimensional $\hat{\Gamma}^2$ -Na _{0.33} V ₂ O ₅ . Solid State Communications, 2006, 138, 563-566.	1.9	7
66	TEM analysis of diffusion brazement microstructure in a Ni ₃ Al-based intermetallic alloy. Journal of Materials Science, 2011, 46, 429-437.	3.7	7
67	Evidence for lattice-polarization-enhanced field effects at the SrTiO ₃ -based heterointerface. Scientific Reports, 2016, 6, 22418.	3.3	7
68	Electron energy loss spectra of Na _{0.33} CoO ₂ \cdot γ H ₂ O ($\gamma=0, 0.6, \text{ and } 1.3$). Physical Review B, 2005, 72, .	3.2	6
69	Local Thickness Measurement in TEM. Microscopy and Microanalysis, 2010, 16, 344-345.	0.4	6
70	Negative thermal expansion and magnetocaloric effect in Mn-Co-Ge-In thin films. Applied Physics Letters, 2018, 112, .	3.3	6
71	Towards superconductivity in p-type delta-doped Si/Al/Si heterostructures. AIP Advances, 2018, 8, 075329.	1.3	5
72	Magnetic properties and microstructure of the dual-phase nanocomposite magnet Sm ₃ (Fe,Ti) ₂₉ Nx/1 \pm -Fe. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 433, 90-93.	5.6	4

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73	Structural properties and charge ordered states in RMnO ₃ (R=La, Pr, Nd, Ca, Sr) and (La, Sr) ₂ NiO ₄ . Micron, 2004, 35, 419-424.	2.2	3
74	Piezoelectrics: Influence of a Single Grain Boundary on Domain Wall Motion in Ferroelectrics (Adv.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	14.9	3
75	A conductive scanning study of La _{0.67} Sr _{0.33} MnO ₃ /Nb:SrTiO ₃ hetero-junction. Applied Physics Letters, 2016, 108, .	3.3	3
76	How to extract reliable core-volume fractions from core-shell polycrystalline microstructures using cross sectional TEM micrographs. Journal of the European Ceramic Society, 2017, 37, 2795-2801.	5.7	3
77	EELS Investigation of the Formulas for Inelastic Mean Free Path. Microscopy and Microanalysis, 2011, 17, 1466-1467.	0.4	2
78	Coherent Growth of $\text{Fe}_{2}\text{O}_{3}$ in Ti and Nd Co-doped BiFeO_{3} Thin Films. Materials Research Letters, 2016, 4, 168-173.	8.7	2
79	A new electron diffraction approach for structure refinement applied to $\text{Ca}_{3}\text{Mn}_{2}\text{O}_{7}$. Acta Crystallographica Section A: Foundations and Advances, 2021, 77, 196-207.	0.1	2
80	Electron Irradiation Damage of MgO Nanocube. Microscopy and Microanalysis, 2010, 16, 1794-1795.	0.4	1