

Zheng Gai

List of Publications by Year in descending order

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142
papers

4,696
citations

94433

37
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118850

62
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148
all docs

148
docs citations

148
times ranked

7710
citing authors

#	ARTICLE	IF	CITATIONS
1	Understanding Heterogeneities in Quantum Materials. <i>Advanced Materials</i> , 2023, 35, e2106909.	21.0	8
2	Designing Magnetism in High Entropy Oxides. <i>Advanced Science</i> , 2022, 9, e2200391.	11.2	28
3	Magnetic and dielectric property control in the multivalent nanoscale perovskite $\text{Eu}_{0.5}\text{Ba}_{0.5}\text{TiO}_3$. <i>Nanoscale</i> , 2021, 13, 10365-10384.	5.6	5
4	Magnetic Texture in Insulating Single Crystal High Entropy Oxide Spinel Films. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 17971-17977.	8.0	24
5	Nanoscale Superconducting States in the Fe-Based Filamentary Superconductor of Pr-Doped CaFe_2As_2 . <i>Nanomaterials</i> , 2021, 11, 1019.	4.1	3
6	Revealing the Chemical Bonding in Adatom Arrays via Machine Learning of Hyperspectral Scanning Tunneling Spectroscopy Data. <i>ACS Nano</i> , 2021, 15, 11806-11816.	14.6	13
7	Bayesian Learning of Adatom Interactions from Atomically Resolved Imaging Data. <i>ACS Nano</i> , 2021, 15, 9649-9657.	14.6	8
8	Crystal Symmetry Engineering in Epitaxial Perovskite Superlattices. <i>Advanced Functional Materials</i> , 2021, 31, 2106466.	14.9	7
9	Charge doping effects on magnetic properties of single-crystal $\langle \text{mml:math} \rangle$		

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19	Atomically thin half-van der Waals metals enabled by confinement heteroepitaxy. Nature Materials, 2020, 19, 637-643. Magnetic anisotropy in single-crystal high-entropy perovskite oxide $\langle \text{mml:math}$	27.5	114

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#	ARTICLE	IF	CITATIONS
37	Highly insulating ferromagnetic cobaltite heterostructures. Current Applied Physics, 2017, 17, 722-726.	2.4	7
38	Paramagnetic Properties of Metal-Free Boron-Doped Graphene Quantum Dots and Their Application for Safe Magnetic Resonance Imaging. Advanced Materials, 2017, 29, 1605416.	21.0	112
39	Competing antiferromagnetism in a quasi-2D itinerant ferromagnet: Fe ₃ GeTe ₂ . 2D Materials, 2017, 4, 011005.	4.4	123
40	Magnetic ground state of the Ising-like antiferromagnet DyScO ₃ . Physical Review B, 2017, 96, .	3.2	17
41	Improving superconductivity in BaFe ₂ As ₂ -based crystals by cobalt clustering and electronic uniformity. Scientific Reports, 2017, 7, 949.	3.3	13
42	Dimensionality Effects in FeGe ₂ Nanowires: Enhanced Anisotropic Magnetization and Anomalous Electrical Transport. Scientific Reports, 2017, 7, 7126.	3.3	9
43	Epitaxial Growth of Intermetallic MnPt Films on Oxides and Large Exchange Bias. Advanced Materials, 2016, 28, 118-123.	21.0	24
44	Size- and Shape-Controlled Synthesis and Properties of Magnetic "Plasmonic Core" Shell Nanoparticles. Journal of Physical Chemistry C, 2016, 120, 10530-10546.	3.1	86
45	Electronic structure of the dilute helimagnet and transition metal dichalcogenide Cr ₂ Te ₃ . Physical Review B, 2016, 94, 040401.	3.2	39
46	Full Electroresistance Modulation in a Mixed-Phase Metallic Alloy. Physical Review Letters, 2016, 116, 097203.	7.8	88
47	Ultrathin nanosheets of CrSiTe ₃ : a semiconducting two-dimensional ferromagnetic material. Journal of Materials Chemistry C, 2016, 4, 315-322.	5.5	235
48	Implications of Room Temperature Oxidation on Crystal Structure and Exchange Bias Effect in Co/CoO Nanoparticles. Journal of Physical Chemistry C, 2015, 119, 26219-26228.	3.1	14
49	Direct in situ measurement of coupled magnetostructural evolution in a ferromagnetic shape memory alloy and its theoretical modeling. Physical Review B, 2015, 92, .	3.2	8
50	Strain Doping: Reversible Single-Axis Control of a Complex Oxide Lattice via Helium Implantation. Physical Review Letters, 2015, 114, 256801.	7.8	84
51	Exchange bias effect in Au-Fe ₃ O ₄ dumbbell nanoparticles induced by the charge transfer from gold. Physical Review B, 2015, 92, .	3.2	21
52	Electronic and magnetic properties of epitaxial perovskite SrCrO ₃ (0%O ₁). Journal of Physics Condensed Matter, 2015, 27, 245605.	1.8	11
53	Nanopatterning of magnetic domains: Fe coverage of self-assembled alumina nanostructure. Applied Physics Express, 2015, 8, 093002.	2.4	0
54	A Facile Solvothermal Synthesis of Octahedral Fe ₃ O ₄ Nanoparticles. Small, 2015, 11, 2649-2653.	10.0	45

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55	Dimensionality Controlled Octahedral Symmetry-Mismatch and Functionalities in Epitaxial LaCoO ₃ /SrTiO ₃ Heterostructures. Nano Letters, 2015, 15, 4677-4684.	9.1	71
56	Heptacopper(II) and dicopper(II)-adenine complexes: synthesis, structural characterization, and magnetic properties. Journal of Coordination Chemistry, 2015, 68, 2770-2787.	2.2	14
57	Ferromagnetism and Nonmetallic Transport of Thin-Film FeSi A Stabilized Metastable Material. Physical Review Letters, 2015, 114, 147202.	7.8	26
58	Magnetic/NIR-responsive drug carrier, multicolor cell imaging, and enhanced photothermal therapy of gold capped magnetite-fluorescent carbon hybrid nanoparticles. Nanoscale, 2015, 7, 7885-7895.	5.6	56
59	Chemically induced Jahn-Teller ordering on manganite surfaces. Nature Communications, 2014, 5, 4528.	12.8	28
60	Strain driven anisotropic magnetoresistance in antiferromagnetic La _{0.4} Sr _{0.6} MnO ₃ . Applied Physics Letters, 2014, 105, .	3.3	20
61	spin-orbit insulating state close to the cubic limit in $\text{CaMn}_4\text{IrO}_{10}$. Physical Review B, 2014, 89, .	3.2	27
62	Growth of skyrmionic MnSi nanowires on Si: Critical importance of the SiO ₂ layer. Nano Research, 2014, 7, 1788-1796.	10.4	11
63	Interrelation between Structure and Magnetic Properties in La _{0.5} Sr _{0.5} CoO ₃ . Advanced Materials Interfaces, 2014, 1, 1400203.	3.7	20
64	Magnetic iron oxide-fluorescent carbon dots integrated nanoparticles for dual-modal imaging, near-infrared light-responsive drug carrier and photothermal therapy. Biomaterials Science, 2014, 2, 915-923.	5.4	134
65	Kinetics of Magnetoelastic Twin-Boundary Motion in Ferromagnetic Shape-Memory Alloys. Physical Review Letters, 2014, 112, .	7.8	13
66	Multifunctional 1D Magnetic and Fluorescent Nanoparticle Chains for Enhanced MRI, fluorescent Cell Imaging, And Combined Photothermal/Chemotherapy. ACS Applied Materials & Interfaces, 2014, 6, 15309-15317.	8.0	51
67	Active control of magnetoresistance of organic spin valves using ferroelectricity. Nature Communications, 2014, 5, 4396.	12.8	51
68	Nanostructured Metal/Carbon Composites from Heterobimetallic Block Copolymers with Controlled Magnetic Properties. Chemistry of Materials, 2014, 26, 3185-3190.	6.7	32
69	Oxygen Control of Atomic Structure and Physical Properties of SrRuO ₃ Surfaces. ACS Nano, 2013, 7, 4403-4413.	14.6	19
70	A persistent metal-insulator transition at the surface of an oxygen-deficient, epitaxial manganite film. Nanoscale, 2013, 5, 9659.	5.6	4
71	Magnetic and electronic structure of $\text{LaZn}_2\text{IrO}_6$ and $\text{LaZn}_6\text{IrO}_{12}$.	3.2	80
72	Local crystallography analysis for atomically resolved scanning tunneling microscopy images. Nanotechnology, 2013, 24, 415707.	2.6	18

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73	Magneto-Dielectric Effects Induced by Optically-Generated Intermolecular Charge-Transfer States in Organic Semiconducting Materials. Scientific Reports, 2013, 3, 2812. Structural and magnetic properties in the quantum	3.3	25
74	system Ba		

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91	Growth diagram and magnetic properties of hexagonal LuFe ₂ O ₃ thin films. Physical Review B, 2012, 85, .	3.2	25
92	Structural modulations and magnetic properties of off-stoichiometric Ni-Mn-Ga magnetic shape memory alloys. Physical Review B, 2012, 85, .	3.2	30
93	Tuning the Metal-Insulator Transition in Manganite Films through Surface Exchange Coupling with Magnetic Nanodots. Physical Review Letters, 2011, 106, 157207.	7.8	24
94	Multi-functional core-shell hybrid nanogels for pH-dependent magnetic manipulation, fluorescent pH-sensing, and drug delivery. Biomaterials, 2011, 32, 9876-9887.	11.4	96
95	Dynamics of a first-order electronic phase transition in manganites. Physical Review B, 2011, 83, .	3.2	32
96	Tuning the Ferromagnetic Coupling of Fe Nanodots on Cu(111) via Dimensionality Variation of the Mediating Electrons. Physical Review Letters, 2010, 104, 167202.	7.8	7
97	Giant Magnetoresistance in Organic Spin Valves. Physical Review Letters, 2010, 104, 236602.	7.8	181
98	Coverage dependence of magnetic domain structure and magnetic anisotropy in supported Fe nanoparticles on Al ₂ O ₃ /NiAl(100). Journal of Applied Physics, 2010, 108, 034312.	2.5	5
99	Nanoscale magnetic configurations of supported Fe nanoparticle assemblies studied by scanning electron microscopy with spin analysis. Physical Review B, 2009, 80, .	3.2	8
100	Tunable Metallicity of the La ₅ Ti ₈ O ₂₀ Overlock 10 Tf 50 377 Td (stretch="false")</mml:mo></mml:math>		
101	Elastically driven anisotropic percolation in electronic phase-separated manganites. Nature Physics, 2009, 5, 885-888.	16.7	157
102	Response to "Comment on "Magnetization reversal in europium sulfide nanocrystals" [Appl. Phys. Lett. 91, 026102 (2007)]. Applied Physics Letters, 2008, 92, 026103.	3.3	0
103	Direct Synthesis and Size Selection of Ferromagnetic FePt Nanoparticles. Chemistry of Materials, 2007, 19, 2483-2488.	6.7	51
104	Formation of FePt Nanoparticles Having High Coercivity. Journal of the American Chemical Society, 2006, 128, 14210-14211.	13.7	79
105	Magnetization reversal in europium sulfide nanocrystals. Applied Physics Letters, 2006, 89, 222501.	3.3	20
106	Self-assembled FePt nanodot arrays with mono-dispersion and -orientation. Applied Physics Letters, 2005, 86, 023107.	3.3	37
107	Frozen Low-Spin Interface in Ultrathin Fe Films on Cu(111). Physical Review Letters, 2005, 95, 027201.	7.8	7
108	Ferromagnetic Stability in Fe Nanodot Assemblies on Cu(111) Induced by Indirect Coupling through the Substrate. Physical Review Letters, 2004, 92, 237201.	7.8	61

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109	Growth and magnetism of metallic thin films and multilayers by pulsed-laser deposition. Surface Science Reports, 2004, 52, 163-218.	7.2	136
110	Growth and Magnetism of Metallic Thin Films and Multilayers by Pulsed-Laser Deposition. ChemInform, 2004, 35, no.	0.0	0
111	High-Yield Solvothermal Formation of Magnetic CoPt Alloy Nanowires. Journal of the American Chemical Society, 2003, 125, 7528-7529.	13.7	133
112	Electronic Stability of Magnetic Fe/Co Superlattices with Monatomic Layer Alternation. Physical Review Letters, 2003, 91, 226106.	7.8	16
113	Self-Assembly of Nanometer-Scale Magnetic Dots with Narrow Size Distributions on an Insulating Substrate. Physical Review Letters, 2002, 89, 235502.	7.8	59
114	Adsorption geometry of glycine on Cu(001) determined with low-energy electron diffraction and scanning tunnelling microscopy. Chinese Physics B, 2002, 11, 839-845.	1.3	15
115	Monte Carlo simulations of interacting magnetic nanoparticles. Journal of Applied Physics, 2002, 91, 6926.	2.5	23
116	Growth of low-dimensional magnetic nanostructures on an insulator. Applied Physics Letters, 2002, 81, 742-744.	3.3	22
117	Nanofaceting of unit cells and temperature dependence of the surface reconstruction and morphology of Si and. Surface Science, 2002, 517, 98-114.	1.9	14
118	Major stable surface of silicon: Si(20 4 23). Physical Review B, 2001, 64, .	3.2	28
119	Si(313)12Å-1: Another metallic stable surface of silicon having a complex reconstructed layer. Physical Review B, 2001, 63, .	3.2	10
120	Atomic structure of the Si(112)7Å-1 surface. Physical Review B, 2000, 61, 9928-9931.	3.2	12
121	SCANNING TUNNELING MICROSCOPY INVESTIGATION OF THE Si(103)- (1 Å- 1) surface. Surface Review and Letters, 1999, 06, 405-409.	1.1	1
122	Thermal stability and structure of the equilibrium clean Si(103) surface. Physical Review B, 1999, 59, 13003-13008.	3.2	13
123	Heteroepitaxy of germanium on Si(103) and stable surfaces of germanium. Physical Review B, 1999, 59, 13009-13013.	3.2	13
124	Macroscopic and nanoscale faceting of germanium surfaces. Physical Review B, 1999, 59, 15230-15239.	3.2	30
125	Adsorption of glycine on Cu(001) and related step faceting and bunching. Surface Science, 1999, 424, L347-L351.	1.9	92
126	Faceting and nanoscale faceting of Ge(hhl) surfaces around (113). Physical Review B, 1998, 58, 4572-4578.	3.2	21

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127	Atomic Structure of the Domain Walls of the Discommensurate Phases in Ge(111)/Ga. Surface Review and Letters, 1998, 05, 175-179.	1.1	2
128	Atomic structure of the Ge(15 3 23) surface. Physical Review B, 1998, 57, R15060-R15063.	3.2	25
129	Atomic structure of the Ge(313) surface. Physical Review B, 1998, 58, R4223-R4226.	3.2	9
130	Atomic structure of the Ge(101) surface. Physical Review B, 1998, 57, R6795-R6798.	3.2	37
131	Spontaneous breaking of nanowires between a STM tip and the Pb(110) surface. Physical Review B, 1998, 58, 2185-2190.	3.2	9
132	Atomic structure of high-index Ge surfaces consisting of periodic nanoscale facets. Physical Review B, 1997, 56, 12308-12315.	3.2	13
133	Migration of subsurface self-interstitial atoms of the Ge(113) surface and the energy barrier. Physical Review B, 1997, 56, 12303-12307.	3.2	2
134	Surface reconstructions and faceting of the GaGe(113) system. Surface Science, 1997, 383, 1-12.	1.9	3
135	A comparative study of the thermal stability of the (103) surface of group-III-metal/group-IV-semiconductor systems. Surface Science, 1997, 384, 276-282.	1.9	12
136	Application of moiré fringes in investigations of subsurface imperfections – a study of dislocations and strain fields under the reconstructed surface layer of Au(001) by scanning tunneling microscopy. Surface Science, 1996, 365, 96-102.	1.9	14
137	Chemisorption of group-III metals on the (111) surface of group-IV semiconductors: In/Ge(111). Physical Review B, 1996, 53, 1539-1547.	3.2	28
138	Surface structure of the (3 $\sqrt{3}$ -1) and (3 $\sqrt{3}$ -2) reconstructions of Ge(113). Physical Review B, 1996, 54, 8593-8599.	3.2	27
139	Adatom diffusion on Ge(111) and the corresponding activation energy barrier. Physical Review B, 1996, 53, 13547-13550.	3.2	8
140	Observation of conductance quantization of ballistic metallic point contacts at room temperature. Physical Review B, 1996, 53, 1042-1045.	3.2	50
141	{310} faceting of the Ge(001) 2 $\sqrt{3}$ -1 surface induced by indium. Surface Science, 1995, 338, L851-L856.	1.9	28
142	Scanning tunneling microscopy investigation of bainite in steel. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1994, 12, 1793.	1.6	2