Guo-Hua Zhong

List of Publications by Year
in descending order

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144 papers	3,472 citations	185998 28 h-index	161609 54 g-index
148 all docs	148 docs citations	148 times ranked	4396 citing authors

#	Article	IF	Citations
1	Solids, liquids, and gases under high pressure. Reviews of Modern Physics, 2018, 90, .	16.4	337
2	Aluminumâ€Doped Cesium Lead Bromide Perovskite Nanocrystals with Stable Blue Photoluminescence Used for Display Backlight. Advanced Science, 2017, 4, 1700335.	5.6	303
3	Pressure-Induced Metallization of Molybdenum Disulfide. Physical Review Letters, 2014, 113, 036802.	2.9	239
4	Pressure-induced metallization of silane. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 20-23.	3.3	156
5	Superconducting Behavior in Compressed Solid<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>SiH</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:math>with a Layered Structure. Physical Review Letters, 2008, 101, 077002.	2.9	110
6	Touchpoint-Tailored Ultrasensitive Piezoresistive Pressure Sensors with a Broad Dynamic Response Range and Low Detection Limit. ACS Applied Materials & Interfaces, 2019, 11, 2551-2558.	4.0	108
7	Enhancement of superconductivity by pressure-driven competition in electronic order. Nature, 2010, 466, 950-953.	13.7	102
8	Hydrogen sulfide at high pressure: Change in stoichiometry. Physical Review B, 2016, 93, .	1.1	97
9	Structural, Electronic, and Electrochemical Properties of Cathode Materials Li₂MSiO₄ (M = Mn, Fe, and Co): Density Functional Calculations. Journal of Physical Chemistry C, 2010, 114, 3693-3700.	1.5	92
10	Pressure-induced phonon frequency shifts in transition-metal nitrides. Physical Review B, 2004, 70, .	1.1	72
11	High pressure chemistry in the H ₂ -SiH ₄ system. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 14763-14767.	3.3	64
12	Crystal structure of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="normal">Si</mml:mi><mml:msub><mml:mi mathvariant="normal">H</mml:mi><mml:mn>4</mml:mn></mml:msub></mml:mrow></mml:math>at high pressure. Physical Review B, 2007, 76, .	1.1	63
13	Superconductivity in La and Y hydrides: Remaining questions to experiment and theory. Matter and Radiation at Extremes, 2020, 5, .	1.5	61
14	Structural, Electronic, Dynamical, and Superconducting Properties in Dense GeH₄(H₂)₂. Journal of Physical Chemistry C, 2012, 116, 5225-5234.	1.5	55
15	Improved performance of all-solid-state lithium batteries using LiPON electrolyte prepared with Li-rich sputtering target. Solid State Ionics, 2018, 324, 202-206.	1.3	48
16	Thermal conductivity of materials under pressure. Nature Reviews Physics, 2022, 4, 319-335.	11.9	46
17	Induced effects by the substitution of Zn in Cu2ZnSnX4 (X= S and Se). Thin Solid Films, 2016, 603, 224-229.	0.8	42
18	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi><mml:mtext mathvariant="normal">â^'</mml:mtext><mml:mi>tin</mml:mi><mml:mo>â†'</mml:mo><mml:mi>I</mml:mi><mml:mi>m</mml:mi><m Transitions of Germanium. Physical Review Letters, 2011, 106, 135502.	2.9	38

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19	Large-scale synthesis of single-crystalline self-standing SnSe₂ nanoplate arrays for wearable gas sensors. Nanotechnology, 2018, 29, 455501.	1.3	37
20	Vibrational dynamics, intermolecular interactions, and compound formation in GeH4â€“H2 under pressure. Journal of Chemical Physics, 2010, 133, 164512.	1.2	36
21	Constraint on the potassium content for the superconductivity of potassium-intercalated phenanthrene. Journal of Chemical Physics, 2014, 140, 114301.	1.2	36
22	Structural and Bonding Characteristics of Potassium-Doped p-Terphenyl Superconductors. Journal of Physical Chemistry C, 2018, 122, 3801-3808.	1.5	36
23	Phase transformations and vibrational properties of coronene under pressure. Journal of Chemical Physics, 2013, 139, 144308.	1.2	35
24	Pressure-induced superconductivity in H2-containing hydride PbH4(H2)2. Scientific Reports, 2015, 5, 16475.	1.6	35
25	Superconductivity and Phase Stability of Potassium-Intercalated p-Quaterphenyl. Journal of Physical Chemistry Letters, 2019, 10, 40-47.	2.1	35
26	Lattice Dynamics and Thermal Stability of Cubic-Phase CsPbI₃ Quantum Dots. Journal of Physical Chemistry Letters, 2018, 9, 4915-4920.	2.1	33
27	Giant room-temperature barocaloric effect at the electronic phase transition in Ni_{1â^'x}Fe_xS. Materials Horizons, 2020, 7, 2690-2695.	6.4	33
28	Lower critical field and SNS-Andreev spectroscopy of 122-arsenides: Evidence of nodeless superconducting gap. Physical Review B, 2014, 90, .	1.1	31
29	Superconductivity and phase stability of potassium-doped biphenyl. Physical Chemistry Chemical Physics, 2018, 20, 25217-25223.	1.3	31
30	Superconductivity and phase stability of potassium-doped p-quinquephenyl. Carbon, 2019, 143, 837-843.	5.4	28
31	Phonon anharmonicity in thermoelectric palladium sulfide by Raman spectroscopy. Applied Physics Letters, 2018, 113, .	1.5	27
32	Flexible and High Performance Piezoresistive Pressure Sensors Based on Hierarchical Flower-Shaped SnSe₂ Nanoplates. ACS Applied Energy Materials, 2019, 2, 2803-2809.	2.5	25
33	Chemical bonding, electronic, and magnetic properties ofR3Co4Sn13intermetallics (R=La, Ce, Sm, Gd,) Tj ETQq1 1 0.784314 rgBT /Ov	1.1	24
34	Structural and vibrational properties of phenanthrene under pressure. Journal of Chemical Physics, 2013, 139, 104302.	1.2	24
35	Realization of insulating state and superconductivity in the Rashba semiconductor BiTeCl. Physical Review B, 2016, 93, .	1.1	23
36	Cage Structure and Near Room-Temperature Superconductivity in TbH_n (n =) Tj ETQq0 0 0 rgBT /Overlock 10	1.5	23

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37	Yb3CoSn6 and Yb4Mn2Sn5: New polar intermetallics with 3D open-framework structures. Journal of Solid State Chemistry, 2008, 181, 2448-2455.	1.4	22
38	Superconductivity in Hydrogen-rich Material: GeH4. Journal of Superconductivity and Novel Magnetism, 2010, 23, 717-719.	0.8	22
39	Structural transitions of solid germane under pressure. Europhysics Letters, 2010, 90, 66006.	0.7	22
40	The structural, elastic and electronic properties of BiI3: First-principles calculations. Physica B: Condensed Matter, 2012, 407, 735-739.	1.3	22
41	Chemical Trend of Pressure-Induced Metallization in Alkaline Earth Hydrides. Journal of Physical Chemistry C, 2010, 114, 14614-14617.	1.5	20
42	The doping effects in Î´â€Bi₂O₃ oxide ionic conductor. Physica Status Solidi (B): Basic Research, 2008, 245, 2737-2742.	0.7	19
43	Oxygen vacancy configuration of Î´â€Bi₂O₃: an ab initio study. Physica Status Solidi (B): Basic Research, 2009, 246, 97-101.	0.7	19
44	Raman Characterization on Two-Dimensional Materials-Based Thermoelectricity. Molecules, 2019, 24, 88.	1.7	19
45	Metallization and superconductivity in methane doped by beryllium at low pressure. Physical Chemistry Chemical Physics, 2020, 22, 1069-1077.	1.3	19
46	Structural and electronic properties of potassium-doped 1,2;8,9-dibenzopentacene superconductor: comparing with doped [7]phenacenes. Molecular Physics, 2017, 115, 472-483.	0.8	18
47	Anisotropic properties of TaS ₂. Chinese Physics B, 2007, 16, 3809-3814.	1.3	17
48	Ionic transport properties in doped Î´-Bi2O3. Journal of Physics: Conference Series, 2006, 29, 106-109.	0.3	16
49	Strongly Correlated Effect in TiS 2. Chinese Physics Letters, 2007, 24, 1050-1053.	1.3	16
50	Antiferromagnetism in Potassium-Doped Polycyclic Aromatic Hydrocarbons. IEEE Transactions on Magnetics, 2014, 50, 1-3.	1.2	16
51	Transition metals doped CuAlSe₂for promising intermediate band materials. Materials Research Express, 2016, 3, 045905.	0.8	16
52	Superconductivity at 3.5 K and/or 7.2 K in potassium-doped triphenylbismuth. Journal of Chemical Physics, 2018, 149, 144502.	1.2	16
53	Phonon scattering processes in molybdenum disulfide. Applied Physics Letters, 2019, 114, .	1.5	16
54	Ga vacancy induced ferromagnetism enhancement and electronic structures of RE-doped GaN. Physica B: Condensed Matter, 2012, 407, 3818-3827.	1.3	15

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55	First-principles investigations on the magnetic property in tripotassium doped picene. Journal of Applied Physics, 2013, 113, 17E131.	1.1	14
56	First-principles prediction on geometrical and electronic properties of K-doped chrysene. Journal of Physics and Chemistry of Solids, 2017, 104, 56-61.	1.9	14
57	A combined experiment and first-principles study on lattice dynamics of thermoelectric CuInTe2. Journal of Alloys and Compounds, 2020, 822, 153610.	2.8	14
58	[n]Phenacenes: Promising Organic Anodes for Potassium-Ion Batteries. Journal of Physical Chemistry C, 2020, 124, 6964-6970.	1.5	13
59	Spin-Polarized Transport in Carbon Nanowires Inside Semiconducting Carbon Nanotubes. Journal of Physical Chemistry C, 2007, 111, 10130-10134.	1.5	12
60	Eu3Co2In15 and KM2In9 (M = Co, Ni): 3D Frameworks Based on Transition Metal Centered In9 Clusters. Inorganic Chemistry, 2009, 48, 2526-2533.	1.9	12
61	Structural, electronic, and dynamical properties of methane under high pressure. Journal of Chemical Physics, 2011, 134, 064515.	1.2	12
62	Combined experimental and computational study of high-pressure behavior of triphenylene. Scientific Reports, 2016, 6, 25600.	1.6	12
63	Mode GrÃ¼neisen parameters of an efficient thermoelectric half-Heusler. Journal of Applied Physics, 2018, 124, .	1.1	12
64	Phonon Anharmonicity of Tungsten Disulfide. Journal of Physical Chemistry C, 2019, 123, 25509-25514.	1.5	12
65	Electronic and magnetic structures of 4f in Ga_{1â^'x}Gd_xN. Journal of Physics Condensed Matter, 2008, 20, 295221.	0.7	11
66	All-electron study of ultra-incompressible superhard material ReB 2 : structural and electronic properties. Chinese Physics B, 2009, 18, 4437-4442.	0.7	11
67	Superconductivity in GeH4(H2)2 above 220GPa high-pressure. Physica B: Condensed Matter, 2013, 410, 90-92.	1.3	11
68	The atomic structures and electronic properties of potassium-doped phenanthrene from a first-principles study. Journal of Materials Chemistry C, 2016, 4, 11566-11571.	2.7	11
69	Metallization and superconductivity in potassium-doped methane. International Journal of Modern Physics C, 2019, 30, 1950061.	0.8	11
70	Alkaliâ€Metalâ€Intercalated Percolation Network Regulates Selfâ€Assembled Electronic Aromatic Molecules. Advanced Materials, 2019, 31, e1807178.	11.1	11
71	Lattice dynamics of thermoelectric palladium sulfide. Journal of Alloys and Compounds, 2019, 798, 484-492.	2.8	11
72	Superconductivity and Its Enhancement in Polycyclic Aromatic Hydrocarbons. Frontiers in Physics, 2019, 7, .	1.0	11

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73	Surface interface formation and Co-induced<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mrow><mml:mo>(</mml:mo><mml:mrow><mml:msqrt><mml:mn>7</mml:mn></mml:msqrt><mml:m on a GaN(0001) pseudo-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"		

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91	Zero-Point Effects on Phase Transitions of Thorium Dihydride under High Pressure. Journal of Physical Chemistry C, 2015, 119, 13465-13471.	1.5	7
92	Theoretical study on structural and electronic properties of solid anthracene under high pressure by density functional theory. Molecular Physics, 2016, 114, 283-289.	0.8	7
93	Temperature effect on vibrational properties of crystalline p-quaterphenyl. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2019, 213, 199-203.	2.0	7
94	Superconductivity of lightâ€metal hydrides. Journal of the Chinese Chemical Society, 2019, 66, 1246-1256.	0.8	7
95	Superconductivity in Sodium Potassium Alloy Doped 2,2â€²-Bipyridine from Near-Room-Temperature Synthesis. Journal of Physical Chemistry C, 2020, 124, 906-912.	1.5	7
96	Improving Tc in sodalite-like boron-nitrogen compound M2(BN)6. Materials Today Physics, 2022, 25, 100699.	2.9	7
97	Induced effects by the substitution of Mg in MgCNi3. Journal of Applied Physics, 2007, 101, 09G520.	1.1	6
98	Controlling adsorption and spin configurations of Co atoms on<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Si</mml:mi><mml:mo>(</mml:mo><mml:mn>111</mml:mn></mml: Physical Review B, 2015, 91, .	1.1	6
99	Poly-p-phenylenes as Novel Bulk-type Anode Materials for Potassium-Ion Batteries: A First-Principles Study. Journal of Physical Chemistry C, 2020, 124, 23045-23051.	1.5	6
100	Strongly Correlated Molecular Magnet with Curie Temperature above 60 K. Matter, 2020, 2, 1639-1650.	5.0	6
101	Preparation of Cu2ZnSn(SxSe1â^'x)4 solar cells with two step sulfurization. Solar Energy, 2020, 197, 73-77.	2.9	6
102	Phonon-Mediated Low-Pressure Superconductivity in Ternary Hydride Baâ€“CH4. ACS Applied Electronic Materials, 2021, 3, 4172-4179.	2.0	6
103	Effect of low-frequency optical phonons on the thermal conductivity of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>2</mml:mn><mml:mi>H</mml:mi></mml:mrow></mml: molybdenum disulfide. Physical Review B, 2022, 105, .	1.1	6
104	Yb5Ni4Sn10 and Yb7Ni4Sn13: New polar intermetallics with 3D framework structures. Journal of Solid State Chemistry, 2010, 183, 920-926.	1.4	5
105	Structural and electronic properties of solid naphthalene under pressure: density functional calculations. European Physical Journal B, 2016, 89, 1.	0.6	5
106	Superconductivity in solid benzene molecular crystal. Journal of Physics Condensed Matter, 2018, 30, 245703.	0.7	5
107	Effect of the Inherent Structure of Rh Nanocrystals on the Hydriding Behavior under Pressure. Journal of Physical Chemistry Letters, 2019, 10, 774-779.	2.1	5
108	High-pressure study of isoviolanthrone by Raman spectroscopy. Journal of Chemical Physics, 2014, 140, 244314.	1.2	4

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109	Structure, charge transfer, and superconductivity of M-doped phenanthrene (M = Al, Ga, and In): A comparative study of K-doped cases. Science China: Physics, Mechanics and Astronomy, 2019, 62, 1.	2.0	4
110	Strongly Correlated Aromatic Molecular Conductor. Small, 2019, 15, e1900299.	5.2	4
111	Magnetoelectric Radical Hydrocarbons. Advanced Materials, 2019, 31, e1806263.	11.1	4
112	Nitrogen containing organics: A promising high capacity anode for potassium ion batteries. Journal of Physics and Chemistry of Solids, 2022, 161, 110415.	1.9	4
113	Selenium Vacancies and Synergistic Effect of Near- and Far-Field-Enabled Ultrasensitive Surface-Enhanced Raman-Scattering-Active Substrates for Malaria Detection. Journal of Physical Chemistry Letters, 2022, 13, 1453-1463.	2.1	4
114	Hybridization-driven strong anharmonicity in Yb-filled skutterudites. Physical Review B, 2022, 105, .	1.1	4
115	Ground state properties of perovskite and post-perovskite CaRuO3: Ferromagnetism reduction. Solid State Sciences, 2010, 12, 2003-2009.	1.5	3
116	Pressure-induced ferromagnetic half-metallicity in cobaltocene. Europhysics Letters, 2016, 113, 27005.	0.7	3
117	The first-principles investigations on magnetic ground-state in Sm-doped phenanthrene. AIP Advances, 2017, 7, 055704.	0.6	3
118	Magnetic Transitions in K-Doped Biphenyl and ${p}$ -Terphenyl. IEEE Transactions on Magnetics, 2018, 54, 1-5.	1.2	3
119	Role of Optical Phonons in Bulk Molybdenum Diselenide Thermal Properties Probed by Advanced Raman Spectroscopy. Physica Status Solidi (B): Basic Research, 2020, 257, 2000251.	0.7	3
120	Structural and Magnetic Properties of Potassium-Doped 2,3-DiMethylnaphthalene. Crystals, 2021, 11, 608.	1.0	3
121	High-performance x-ray source based on graphene oxide-coated Cu2S nanowires grown on copper film. Nanotechnology, 2020, 31, 485202.	1.3	3
122	Kinetic Processes and Surfactant Design of Group I Elements on the CZTS (1Ì…1Ì…2Ì…) Surface. Journal of Physical Chemistry C, 2021, 125, 376-384.	1.5	3
123	The effect of electronic orbital interactions on p-type doping tendency in ZnO series: First-principles calculations. Chinese Physics B, 2007, 16, 3815-3819.	1.3	2
124	High-pressure and substitution induced effects in SrRuO3: First-principles insights. Journal of Applied Physics, 2011, 109, .	1.1	2
125	Thermodynamic and mechanical properties of actinium and lanthanum dihydride. Journal of Alloys and Compounds, 2014, 616, 42-46.	2.8	2
126	Mapping potential energy landscape of a probing atom in a complex surface environment. Physical Review B, 2015, 92, .	1.1	2

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127	High-pressure structural properties of tetramethylsilane. Chinese Physics B, 2016, 25, 026104.	0.7	2
128	Structural and antiferromagnetic properties of Sm-doped chrysene. AIP Advances, 2017, 7, 055707.	0.6	2
129	Tuning the electronic and magnetic properties of metal-doped phenanthrene by codoping method. AIP Advances, 2019, 9, .	0.6	2
130	Structures, electronic properties, and superconductivities of alkaline-earth metal-doped phenanthrene and charge transfer characteristics of metal-doped phenanthrene. Physical Chemistry Chemical Physics, 2020, 22, 23847-23855.	1.3	2
131	Hydrogenation as a source of superconductivity in two-dimensional TiB2. International Journal of Modern Physics C, 2021, 32, 2150057.	0.8	2
132	Low-pressure superconductivity in lithium-doped methane predicted by first principles. International Journal of Modern Physics C, 2021, 32, 2150032.	0.8	2
133	AlCl3 treatment: Tailoring band alignment and enhancing performance for Cu2Cd0.4Zn0.6SnS4 solar cells. Solar Energy, 2022, 241, 475-482.	2.9	2
134	Magnetic moment and spin state transition on rare monovalent iron ion in nitridoferrate Ca₆Li_{0.5}Fe_{0.5}Te₂N₃. Journal of Materials Chemistry C, 2017, 5, 733-737.	2.7	1
135	Superconductors: Alkaliâ€Metalâ€Intercalated Percolation Network Regulates Selfâ€Assembled Electronic Aromatic Molecules (Adv. Mater. 11/2019). Advanced Materials, 2019, 31, 1970079.	11.1	1
136	Crystal Structure and Magnetic Property of Potassium-Doped 9-Methylanthracene. Advances in Condensed Matter Physics, 2019, 08, 77-85.	0.1	1
137	Functional group contributions for azo derivatives as anode materials for KIBs: A first-principles study. Materials Chemistry and Physics, 2022, 289, 126430.	2.0	1
138	Half-metallicity in the ferrimagnet [MnII(enH)(H2O)][CrIII(CN)6]Â·H2O: Ab initio study. Solid State Communications, 2013, 158, 61-64.	0.9	0
139	Phase transitions in a hydrogen-rich compound: tetramethylsilane. Chinese Physics C, 2013, 37, 098001.	1.5	0
140	Absence of phase transformation of dense anthracene from Raman scattering. High Pressure Research, 2015, 35, 379-387.	0.4	0
141	Magnetoelectrics: Magnetoelectric Radical Hydrocarbons (Adv. Mater. 3/2019). Advanced Materials, 2019, 31, 1970019.	11.1	0
142	Crystal Structure and Magnetism of Potassium-Intercalated 2,7-Dimethylnaphthalene. Crystals, 2021, 11, 803.	1.0	0
143	Research Progress of Aromatic Superconductor. Advances in Condensed Matter Physics, 2016, 05, 37-44.	0.1	0
144	First-Principles Insights into Lithium-Rich Ternary Phosphide Superionic Conductors: Solid Electrolytes or Active Electrodes. ACS Applied Materials & Interfaces, 2022, 14, 18373-18382.	4.0	0