Bingbing Liu

List of Publications by Year
in descending order

137 papers	3,844 citations	126907 33 h-index	149698 56 g-index
137 all docs	137 docs citations	137 times ranked	3211 citing authors

#	Article	IF	Citations
1	Spin-dependent magnetism and superparamagnetic contribution to the magnetocaloric effect of non-stoichiometric manganite nanoparticles. Applied Materials Today, 2022, 26, 101340.	4.3	11
2	An investigation of the effect of high-pressure on charge transfer in dye-sensitized solar cells based on surface-enhanced Raman spectroscopy. Nanoscale, 2022, 14, 373-381.	5.6	2
3	Pressure-stabilized polymerization of nitrogen in manganese nitrides at ambient and high pressures. Physical Chemistry Chemical Physics, 2022, 24, 5738-5747.	2.8	8
4	Size and Shapeâ€™s Effects on the High-Pressure Behavior of WS2 Nanomaterials. Materials, 2022, 15, 2838.	2.9	5
5	Evolution of self-trapped exciton emission tuned by high pressure in 2D all-inorganic cesium lead halide nanosheets. Journal of Materials Chemistry C, 2022, 10, 8711-8718.	5.5	5
6	High-Pressure Synthesis and Stability Enhancement of Lithium Pentazolate. Inorganic Chemistry, 2022, 61, 9012-9018.	4.0	2
7	The New High-Pressure Phases of Nitrogen-Rich Agâ€“N Compounds. Materials, 2022, 15, 4986.	2.9	5
8	Magnetoactive elastomer based on superparamagnetic nanoparticles with Curie point close to room temperature. Materials and Design, 2021, 197, 109281.	7.0	14
9	Anomalous phonon softening of G-band in compressed graphitic carbon nitride due to strong electrostatic repulsion. Applied Physics Letters, 2021, 118, .	3.3	2
10	New Cadmiumâ€“Nitrogen Compounds at High Pressures. Inorganic Chemistry, 2021, 60, 6772-6781.	4.0	31
11	Enhanced Photoluminescence and Photoresponsiveness of Eu³⁺ Ionsâ€Doped CsPbCl₃ Perovskite Quantum Dots under High Pressure. Advanced Functional Materials, 2021, 31, 2100930.	14.9	71
12	SERS Selective Enhancement on Monolayer MoS₂ Enabled by a Pressure-Induced Shift from Resonance to Charge Transfer. ACS Applied Materials & Interfaces, 2021, 13, 26551-26560.	8.0	23
13	Evolution of hydrogen dissolution and superconductivity in Re-based solid solutions under pressure studied by ab initio calculations. Physical Review B, 2021, 103, .	3.2	5
14	Molecular insertion regulates the donor-acceptor interactions in cocrystals for the design of piezochromic luminescent materials. Nature Communications, 2021, 12, 4084.	12.8	41
15	High Pressure and High Temperature Induced Polymerization of C₆₀ Solvates: The Effect of Intercalated Aromatic Solvents. Journal of Physical Chemistry C, 2021, 125, 17155-17163.	3.1	3
16	Pressure Engineering for Extending Spectral Response Range and Enhancing Photoelectric Properties of Iodine. Advanced Optical Materials, 2021, 9, 2101163.	7.3	16
17	Cobaltâ€“Nitrogen Compounds at High Pressure. Inorganic Chemistry, 2021, 60, 14022-14030.	4.0	13
18	Pressure-Induced Variation of the Crystal Stacking Order in the Hydrogen-Bonded Quasi-Two-Dimensional Layered Material Cu(OH)Cl. Materials, 2021, 14, 5019.	2.9	0

#	Article	IF	Citations
19	Novel ultrahard carbon structures by cold-compressing tubes. CrystEngComm, 2021, 23, 2091-2098.	2.6	4
20	Ultrahard bulk amorphous carbon from collapsed fullerene. Nature, 2021, 599, 599-604.	27.8	99
21	Strain-engineering enables reversible semiconductorâ€“metal transition of skutterudite IrAs3. Inorganic Chemistry Frontiers, 2020, 7, 1108-1114.	6.0	1
22	Modulation of Field-Effect Passivation at the Back Electrode Interface Enabling Efficient Kesterite-Type Cu₂ZnSn(S,Se)₄ Thin-Film Solar Cells. ACS Applied Materials & Interfaces, 2020, 12, 38163-38174.	8.0	18
23	Smart magnetic nanopowder based on the manganite perovskite for local hyperthermia. RSC Advances, 2020, 10, 30907-30916.	3.6	19
24	Enhancing the light emission of GaAs nanowires by pressure-modulated charge transfer. Nanoscale Advances, 2020, 2, 2558-2563.	4.6	1
25	Lasing Behavior of a Single ZnO Nanowire Resonating in Fabryâ€“Perot Mode under Pressure. Journal of Physical Chemistry C, 2020, 124, 7523-7530.	3.1	3
26	Pressure tuned photoluminescence and band gap in two-dimensional layered g-C₃N₄: the effect of interlayer interactions. Nanoscale, 2020, 12, 12300-12307.	5.6	25
27	Superconducting praseodymium superhydrides. Science Advances, 2020, 6, eaax6849.	10.3	99
28	Decompression-Induced Diamond Formation from Graphite Sheared under Pressure. Physical Review Letters, 2020, 124, 065701.	7.8	41
29	New High Pressure Phases of the Znâ€“N System. Journal of Physical Chemistry C, 2020, 124, 4044-4049.	3.1	36
30	Negative Volume Compressibility in Sc₃N@C₈₀â€“Cubane Cocrystal with Charge Transfer. Journal of the American Chemical Society, 2020, 142, 7584-7590.	13.7	20
31	Pressureâ€induced insertion and transformation of N₂ in the cavities of zeolitic imidazolate frameworkâ€8: A Raman study. Journal of Raman Spectroscopy, 2020, 51, 1230-1239.	2.5	2
32	Size and morphology effects on the high pressure behaviors of Mn₃O₄ nanorods. Nanoscale Advances, 2020, 2, 5841-5847.	4.6	9
33	Polyhydride CeH9 with an atomic-like hydrogen clathrate structure. Nature Communications, 2019, 10, 3461.	12.8	81
34	Self-Organized Back Surface Field to Improve the Performance of Cu₂ZnSn(S,Se)₄ Solar Cells by Applying P-Type MoSe₂:Nb to the Back Electrode Interface. ACS Applied Materials & Interfaces, 2019, 11, 31851-31859.	8.0	24
35	Semiconductorâ€“metal transition in GaAs nanowires under high pressure. Chinese Physics B, 2019, 28, 076401.	1.4	2
36	Metallization: New Metallic Ordered Phase of Perovskite CsPbI3 under Pressure (Adv. Sci. 14/2019). Advanced Science, 2019, 6, 1970083.	11.2	3

#	Article	IF	Citations
37	Temperature-Dependent Lasing of CsPbI₃ Triangular Pyramid. Journal of Physical Chemistry Letters, 2019, 10, 7056-7061.	4.6	9
38	Ternary superconducting cophosphorus hydrides stabilized via lithium. Npj Computational Materials, 2019, 5, .	8.7	38
39	Vibrational Properties and Polymerization of Corannulene under Pressure, Probed by Raman and Infrared Spectroscopies. Journal of Physical Chemistry C, 2019, 123, 23674-23681.	3.1	7
40	Unexpected calcium polyhydride CaH4: A possible route to dissociation of hydrogen molecules. Journal of Chemical Physics, 2019, 150, 044507.	3.0	17
41	High-temperature superconductivity in sulfur hydride evidenced by alternating-current magnetic susceptibility. National Science Review, 2019, 6, 713-718.	9.5	63
42	Structural, Electronic, and Optical Properties of ZnO_{1â€‰â€“â€‰x}Te_x Alloys. Physica Status Solidi - Rapid Research Letters, 2019, 13, 1900155.	2.4	3
43	Ab initio studies of copper hydrides under high pressure. Frontiers of Physics, 2019, 14, 1.	5.0	9
44	Unique Phase Diagram and Superconductivity of Calcium Hydrides at High Pressures. Inorganic Chemistry, 2019, 58, 2558-2564.	4.0	33
45	Pressure-induced SERS enhancement in a MoS₂/Au/R6G system by a two-step charge transfer process. Nanoscale, 2019, 11, 21493-21501.	5.6	48
46	Armchair shaped polymeric nitrogen N8 chains confined in h-BN matrix at ambient conditions: stability and vibration analysis. RSC Advances, 2019, 9, 29987-29992.	3.6	3
47	Morphology-Tuned Phase Transitions of Horseshoe Shaped BaTiO₃ Nanomaterials under High Pressure. Journal of Physical Chemistry C, 2018, 122, 5188-5194.	3.1	14
48	High pressure structural stability of the Na-Te system. AIP Advances, 2018, 8, 035123.	1.3	0
49	New Ordered Structure of Amorphous Carbon Clusters Induced by Fullereneâ€“Cubane Reactions. Advanced Materials, 2018, 30, e1706916.	21.0	18
50	Unravelling decomposition products of phosphine under high pressure. Journal of Raman Spectroscopy, 2018, 49, 721-727.	2.5	10
51	Surface-enhanced Raman scattering from metal and transition metal nano-caped arrays. Superlattices and Microstructures, 2018, 115, 59-66.	3.1	4
52	High-Pressure Formation of Cobalt Polyhydrides: A First-Principle Study. Inorganic Chemistry, 2018, 57, 181-186.	4.0	22
53	A high pressure Raman study on confined individual iodine molecules as molecular probes of structural collapse in the AlPO₄-5 framework. Physical Chemistry Chemical Physics, 2018, 20, 26117-26125.	2.8	7
54	Ultrathin stimuli-responsive polymer film-based optical sensor for fast and visual detection of hazardous organic solvents. Journal of Materials Chemistry C, 2018, 6, 10861-10869.	5.5	11

#	Article	IF	Citations
55	Elastic properties of single crystal hydrogen sulfide: A Brillouin scattering study under high pressure-temperature. Journal of Applied Physics, 2018, 124, 125901.	2.5	2
56	High energetic polymeric nitrogen sheet confined in a graphene matrix. RSC Advances, 2018, 8, 30912-30918.	3.6	14
57	Investigation of charge-transfer between a 4-mercaptobenzoic acid monolayer and TiO₂nanoparticles under high pressure using surface-enhanced Raman scattering. Chemical Communications, 2018, 54, 6280-6283.	4.1	27
58	Facile SERS-active chip (PS@Ag/SiO2/Ag) for the determination of HCC biomarker. Sensors and Actuators B: Chemical, 2018, 272, 34-42.	7.8	37
59	Ordered Amorphous Carbon: New Ordered Structure of Amorphous Carbon Clusters Induced by Fullerene-Cubane Reactions (Adv. Mater. 22/2018). Advanced Materials, 2018, 30, 1870156.	21.0	0
60	Graphdiyne under pressure: A Raman study. Applied Physics Letters, 2018, 113, .	3.3	10
61	Insights into Antibonding Induced Energy Density Enhancement and Exotic Electronic Properties for Germanium Nitrides at Modest Pressures. Inorganic Chemistry, 2018, 57, 10416-10423.	4.0	4
62	Pressure-induced superconducting ternary hydride H3SXe: A theoretical investigation. Frontiers of Physics, 2018, 13, 1.	5.0	29
63	New Phase of Ca(BH₄)₂ at Near Ambient Conditions. Journal of Physical Chemistry C, 2018, 122, 14272-14276.	3.1	5
64	A Novel High-Density Phase and Amorphization of Nitrogen-Rich 1H-Tetrazole (CH2N4) under High Pressure. Scientific Reports, 2017, 7, 39249.	3.3	12
65	Alkaline-earth metal (Mg) polynitrides at high pressure as possible high-energy materials. Physical Chemistry Chemical Physics, 2017, 19, 9246-9252.	2.8	77
66	A Novel Polymerization of Nitrogen in Beryllium Tetranitride at High Pressure. Journal of Physical Chemistry C, 2017, 121, 9766-9772.	3.1	67
67	Improved Lithiumâ€Ion and Sodiumâ€Ion Storage Properties from Fewâ€Layered WS₂ Nanosheets Embedded in a Mesoporous CMKâ€3 Matrix. Chemistry - A European Journal, 2017, 23, 7074-7080.	3.3	75
68	Plasmonic-induced SERS enhancement of shell-dependent Ag@Cu₂O coreâ€“shell nanoparticles. RSC Advances, 2017, 7, 16553-16560.	3.6	55
69	Stability of Sulfur Nitrides: A First-Principles Study. Journal of Physical Chemistry C, 2017, 121, 1515-1520.	3.1	30
70	Divergent synthesis routes and superconductivity of ternary hydride<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MgSiH</mml:mi><mml:mn>6</mml:mn></mml:msub></r high pressure. Physical Review B, 2017, 96, .	3.2	67
71	Structural stability and electronic property in K₂S under pressure. RSC Advances, 2017, 7, 7424-7430.	3.6	13
72	Increasing local field by interfacial coupling in nanobowl arrays. RSC Advances, 2017, 7, 43671-43680.	3.6	10

#	Article	IF	Citations
73	Unexpected stable stoichiometries and superconductivity of potassium-rich sulfides. RSC Advances, 2017, 7, 44884-44889.	3.6	5
74	EPR and Raman study of silicon layers obtained by gas detonation spraying. Materials Science in Semiconductor Processing, 2017, 71, 232-239.	4.0	3
75	Iron layer-dependent surface-enhanced raman scattering of hierarchical nanocap arrays. Applied Surface Science, 2017, 423, 1124-1133.	6.1	15
76	Two-dimensional Penta-BP5 Sheets: High-stability, Strain-tunable Electronic Structure and Excellent Mechanical Properties. Scientific Reports, 2017, 7, 2404.	3.3	52
77	Pressure-induced structural transformation of CaC2. Journal of Chemical Physics, 2016, 144, 194506.	3.0	5
78	Ab initio molecular dynamic study of solid-state transitions of ammonium nitrate. Scientific Reports, 2016, 6, 18918.	3.3	5
79	High Energetic Polymeric Nitrogen Stabilized in the Confinement of Boron Nitride Nanotube at Ambient Conditions. Journal of Physical Chemistry C, 2016, 120, 16412-16417.	3.1	21
80	Thermal equation of state of Molybdenum determined from in situ synchrotron X-ray diffraction with laser-heated diamond anvil cells. Scientific Reports, 2016, 6, 19923.	3.3	31
81	Discovery of Superconductivity in Hard Hexagonal Îµ-NbN. Scientific Reports, 2016, 6, 22330.	3.3	36
82	The stability of B₆ octahedron in BaB₆ under high pressure. RSC Advances, 2016, 6, 18077-18081.	3.6	12
83	Pressure-induced phase transition of SnH₄: a new layered structure. RSC Advances, 2016, 6, 10456-10461.	3.6	10
84	Crossover from metal to insulator in dense lithium-rich compound CLi ₄. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 2366-2369.	7.1	21
85	Prediction of stoichiometric PoHn compounds: crystal structures and properties. RSC Advances, 2015, 5, 103445-103450.	3.6	15
86	Ab initio investigation of CaO-ZnO alloys under high pressure. Scientific Reports, 2015, 5, 11003.	3.3	13
87	Ab initio structure determination of n-diamond. Scientific Reports, 2015, 5, 13447.	3.3	13
88	High-pressure polymorphism as a step towards high density structures of LiAlH4. Applied Physics Letters, 2015, 107, 041906.	3.3	4
89	Pressure-induced structural changes in NH₄Br. Journal of Chemical Physics, 2015, 143, 064505.	3.0	2
90	High-temperature Superconductivity in compressed Solid Silane. Scientific Reports, 2015, 5, 8845.	3.3	25

#	Article	IF	Citations
91	Effects of magnetic ordering and electron correlations on the stability of FeN. RSC Advances, 2015, 5, 31270-31274.	3.6	13
92	Enhancement of Tc in the atomic phase of iodine-doped hydrogen at high pressures. Physical Chemistry Chemical Physics, 2015, 17, 32335-32340.	2.8	15
93	Crystal structures and properties of nitrogen oxides under high pressure. RSC Advances, 2015, 5, 103373-103379.	3.6	3
94	Predicted Formation of H₃⁺ in Solid Halogen Polyhydrides at High Pressures. Journal of Physical Chemistry A, 2015, 119, 11059-11065.	2.5	19
95	A novel stable hydrogen-rich SnH8 under high pressure. RSC Advances, 2015, 5, 107637-107641.	3.6	9
96	Ab initio study on the stability of N-doped ZnO under high pressure. RSC Advances, 2015, 5, 16774-16779.	3.6	3
97	High pressure structures and superconductivity of AlH₃(H₂) predicted by first principles. RSC Advances, 2015, 5, 5096-5101.	3.6	33
98	In situ synchrotron X-ray diffraction with laser-heated diamond anvil cells study of Pt up to 95 GPa and 3150 K. RSC Advances, 2015, 5, 14603-14609.	3.6	7
99	Pressure-Induced Amorphization and Recrystallization of SnI₂. Journal of Physical Chemistry C, 2015, 119, 19312-19317.	3.1	5
100	Structural, mechanical and electronic properties of Rh2B and RhB2: first-principles calculations. Scientific Reports, 2015, 5, 10500.	3.3	14
101	Hexagonal-structured Îµ-NbN: ultra-incompressibility, high shear rigidity and a possible hard superconducting material. Scientific Reports, 2015, 5, 10811.	3.3	46
102	First-principles study on the structural and electronic properties of metallic HfH2 under pressure. Scientific Reports, 2015, 5, 11381.	3.3	26
103	Ab initio study of germanium-hydride compounds under high pressure. RSC Advances, 2015, 5, 19432-19438.	3.6	13
104	Hydrothermal synthesis of Î³-MnOOH nanorods and their conversion to MnO2, Mn2O3, and Mn3O4 nanorods. Journal of Alloys and Compounds, 2015, 644, 430-437.	5.5	62
105	Structural properties of ammonium iodide under high pressure. RSC Advances, 2015, 5, 40336-40340.	3.6	8
106	Cubic C₉₆: a novel carbon allotrope with a porous nanocube network. Journal of Materials Chemistry A, 2015, 3, 10448-10452.	10.3	47
107	Pressure-Induced Structures and Properties in Indium Hydrides. Inorganic Chemistry, 2015, 54, 9924-9928.	4.0	34
108	The hydrogenâ€bond effect on the high pressure behavior of hydrazinium monochloride. Journal of Raman Spectroscopy, 2015, 46, 266-272.	2.5	8

#	Article	IF	Citations
109	High-pressure phase transition of MH3 (M: Er, Ho). Journal of Chemical Physics, 2014, 141, 054703.	3.0	6
110	Pressure induced phase transition in MH2 (M = V, Nb). Journal of Chemical Physics, 2014, 140, 114703.	3.0	18
111	The crystal structure of IrB₂: a first-principle calculation. RSC Advances, 2014, 4, 63442-63446.	3.6	10
112	Crystal structure prediction and hydrogen-bond symmetrization of solid hydrazine under high pressure: a first-principles study. Acta Crystallographica Section C, Structural Chemistry, 2014, 70, 112-117.	0.5	2
113	A theoretical investigation on phase transition and dissociation of ammonium bromide under high pressure. Science Bulletin, 2014, 59, 5272-5277.	1.7	2
114	Experimental verification of the high pressure crystal structures in NH3BH3. Journal of Chemical Physics, 2014, 140, 244507.	3.0	11
115	Haladaptatus pallidirubidus sp. nov., a halophilic archaeon isolated from saline soil samples in Yunnan and Xinjiang, China. Antonie Van Leeuwenhoek, 2014, 106, 901-910.	1.7	17
116	Mechanical and metallic properties of tantalum nitrides from first-principles calculations. RSC Advances, 2014, 4, 10133.	3.6	55
117	Structural stability and compressive behavior of ZrH₂under hydrostatic pressure and nonhydrostatic pressure. RSC Advances, 2014, 4, 46780-46786.	3.6	13
118	High pressure superconducting phase of BI3: an ab initio study. RSC Advances, 2014, 4, 32068-32074.	3.6	4
119	Modulated T carbon-like carbon allotropes: an ab initio study. RSC Advances, 2014, 4, 17364.	3.6	29
120	Crystal structures and properties of the CH4H2compound under high pressure. RSC Advances, 2014, 4, 37569.	3.6	7
121	Pressure-Induced Diversity of Ï€-Stacking Motifs and Amorphous Polymerization in Pyrrole. Journal of Physical Chemistry C, 2014, 118, 12420-12427.	3.1	13
122	Miscibility and ordered structures of MgO-ZnO alloys under high pressure. Scientific Reports, 2014, 4, 5759.	3.3	26
123	Pressure-induced metallization of dense (H2S)2H2 with high-Tc superconductivity. Scientific Reports, 2014, 4, 6968.	3.3	802
124	Nitrogen concentration driving the hardness of rhenium nitrides. Scientific Reports, 2014, 4, 4797.	3.3	61
125	Morphology-Tuned Phase Transitions of Anatase TiO₂ Nanowires under High Pressure. Journal of Physical Chemistry C, 2013, 117, 8516-8521.	3.1	45
126	Predicted novel metallic metastable phases of polymeric nitrogen at high pressures. New Journal of Physics, 2013, 15, 013010.	2.9	19

#	Article	IF	Citations
127	Ab initiostudy revealing a layered structure in hydrogen-rich KH<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>6</mml:mn></mml:msub></mml:math>under high pressure. Physical Review B, 2012, 86, .	3.2	79
128	How to get superhard MnB2: a first-principles study. Journal of Materials Chemistry, 2012, 22, 17630.	6.7	9
129	Effect of Grain Size on Pressure-Induced Structural Transition in Mn₃O₄. Journal of Physical Chemistry C, 2012, 116, 2165-2171.	3.1	41
130	Lowest enthalpy polymorph of cold-compressed graphite phase. Physical Chemistry Chemical Physics, 2012, 14, 4347.	2.8	80
131	The Study of Structural Transition of ZnS Nanorods under High Pressure. Journal of Physical Chemistry C, 2011, 115, 357-361.	3.1	28
132	High-Pressure Studies on CeO₂ Nano-Octahedrons with a (111)-Terminated Surface. Journal of Physical Chemistry C, 2011, 115, 4546-4551.	3.1	34
133	Melting curve of the cI16 sodium at high pressure from ab initio calculations. Physica Status Solidi (B): Basic Research, 2011, 248, 1143-1148.	1.5	2
134	The structural transition behavior of CdSe/ZnS core/shell quantum dots under high pressure. Physica Status Solidi (B): Basic Research, 2011, 248, 1149-1153.	1.5	14
135	Pressure-Induced Amorphization and Polyamorphism in One-Dimensional Single-Crystal TiO₂ Nanomaterials. Journal of Physical Chemistry Letters, 2010, 1, 309-314.	4.6	68
136	Structural stability of polymeric nitrogen: A first-principles investigation. Journal of Chemical Physics, 2010, 132, 024502.	3.0	60
137	Pressure-Induced Phase Transition in Hydrogen-Bonded Supramolecular Adduct Formed by Cyanuric Acid and Melamine. Journal of Physical Chemistry B, 2009, 113, 14719-14724.	2.6	52