

Bingbing Liu

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129
papers

2,436
citations

26
h-index

43
g-index

137
ext. papers

3,129
ext. citations

5.5
avg, IF

4.86
L-index

#	Paper	IF	Citations
129	Pressure-induced metallization of dense (HS)H ₂ with high-T _c superconductivity. <i>Scientific Reports</i> , 2014 , 4, 6968	4.9	502
128	Lowest enthalpy polymorph of cold-compressed graphite phase. <i>Physical Chemistry Chemical Physics</i> , 2012 , 14, 4347-50	3.6	77
127	Ab initio study revealing a layered structure in hydrogen-rich KH ₆ under high pressure. <i>Physical Review B</i> , 2012 , 86,	3.3	63
126	Improved Lithium-Ion and Sodium-Ion Storage Properties from Few-Layered WS Nanosheets Embedded in a Mesoporous CMK-3 Matrix. <i>Chemistry - A European Journal</i> , 2017 , 23, 7074-7080	4.8	61
125	Pressure-Induced Amorphization and Polyamorphism in One-Dimensional Single-Crystal TiO ₂ Nanomaterials. <i>Journal of Physical Chemistry Letters</i> , 2010 , 1, 309-314	6.4	59
124	Mechanical and metallic properties of tantalum nitrides from first-principles calculations. <i>RSC Advances</i> , 2014 , 4, 10133	3.7	52
123	Superconducting praseodymium superhydrides. <i>Science Advances</i> , 2020 , 6, eaax6849	14.3	49
122	Pressure-induced phase transition in hydrogen-bonded supramolecular adduct formed by cyanuric acid and melamine. <i>Journal of Physical Chemistry B</i> , 2009 , 113, 14719-24	3.4	49
121	Hydrothermal synthesis of MnOOH nanorods and their conversion to MnO ₂ , Mn ₂ O ₃ , and Mn ₃ O ₄ nanorods. <i>Journal of Alloys and Compounds</i> , 2015 , 644, 430-437	5.7	48
120	Structural stability of polymeric nitrogen: A first-principles investigation. <i>Journal of Chemical Physics</i> , 2010 , 132, 024502	3.9	48
119	Nitrogen concentration driving the hardness of rhenium nitrides. <i>Scientific Reports</i> , 2014 , 4, 4797	4.9	47
118	Polyhydride CeH with an atomic-like hydrogen clathrate structure. <i>Nature Communications</i> , 2019 , 10, 3461	17.4	44
117	Alkaline-earth metal (Mg) polynitrides at high pressure as possible high-energy materials. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 9246-9252	3.6	43
116	Plasmonic-induced SERS enhancement of shell-dependent Ag@Cu ₂ O core-shell nanoparticles. <i>RSC Advances</i> , 2017 , 7, 16553-16560	3.7	39
115	A Novel Polymerization of Nitrogen in Beryllium Tetranitride at High Pressure. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 9766-9772	3.8	38
114	Cubic C ₉₆ : a novel carbon allotrope with a porous nanocube network. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 10448-10452	13	38
113	Morphology-Tuned Phase Transitions of Anatase TiO ₂ Nanowires under High Pressure. <i>Journal of Physical Chemistry C</i> , 2013 , 117, 8516-8521	3.8	38

112	Hexagonal-structured ENbN : ultra-incompressibility, high shear rigidity, and a possible hard superconducting material. <i>Scientific Reports</i> , 2015 , 5, 10811	4.9	37
111	Two-dimensional Penta-BP Sheets: High-stability, Strain-tunable Electronic Structure and Excellent Mechanical Properties. <i>Scientific Reports</i> , 2017 , 7, 2404	4.9	36
110	Divergent synthesis routes and superconductivity of ternary hydride MgSiH_6 at high pressure. <i>Physical Review B</i> , 2017 , 96,	3.3	32
109	High-temperature superconductivity in sulfur hydride evidenced by alternating-current magnetic susceptibility. <i>National Science Review</i> , 2019 , 6, 713-718	10.8	32
108	Effect of Grain Size on Pressure-Induced Structural Transition in Mn_3O_4 . <i>Journal of Physical Chemistry C</i> , 2012 , 116, 2165-2171	3.8	31
107	High-Pressure Studies on CeO_2 Nano-Octahedrons with a (111)-Terminated Surface. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 4546-4551	3.8	29
106	Modulated T carbon-like carbon allotropes: an ab initio study. <i>RSC Advances</i> , 2014 , 4, 17364	3.7	28
105	High pressure structures and superconductivity of $\text{AlH}_3(\text{H}_2)$ predicted by first principles. <i>RSC Advances</i> , 2015 , 5, 5096-5101	3.7	26
104	Facile SERS-active chip ($\text{PS@Ag/SiO}_2/\text{Ag}$) for the determination of HCC biomarker. <i>Sensors and Actuators B: Chemical</i> , 2018 , 272, 34-42	8.5	26
103	Discovery of Superconductivity in Hard Hexagonal ENbN . <i>Scientific Reports</i> , 2016 , 6, 22330	4.9	25
102	Pressure-induced SERS enhancement in a $\text{MoS}/\text{Au}/\text{R6G}$ system by a two-step charge transfer process. <i>Nanoscale</i> , 2019 , 11, 21493-21501	7.7	25
101	Pressure-Induced Structures and Properties in Indium Hydrides. <i>Inorganic Chemistry</i> , 2015 , 54, 9924-8	5.1	23
100	Stability of Sulfur Nitrides: A First-Principles Study. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 1515-1520	3.8	22
99	Thermal equation of state of Molybdenum determined from in situ synchrotron X-ray diffraction with laser-heated diamond anvil cells. <i>Scientific Reports</i> , 2016 , 6, 19923	4.9	22
98	Ultrahard bulk amorphous carbon from collapsed fullerene. <i>Nature</i> , 2021 , 599, 599-604	50.4	21
97	The Study of Structural Transition of ZnS Nanorods under High Pressure. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 357-361	3.8	20
96	Miscibility and ordered structures of MgO-ZnO alloys under high pressure. <i>Scientific Reports</i> , 2014 , 4, 5759	4.9	19
95	High-Pressure Formation of Cobalt Polyhydrides: A First-Principle Study. <i>Inorganic Chemistry</i> , 2018 , 57, 181-186	5.1	19

94	High Energetic Polymeric Nitrogen Stabilized in the Confinement of Boron Nitride Nanotube at Ambient Conditions. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 16412-16417	3.8	19
93	First-principles study on the structural and electronic properties of metallic HfH ₂ under pressure. <i>Scientific Reports</i> , 2015 , 5, 11381	4.9	18
92	High-temperature superconductivity in compressed solid silane. <i>Scientific Reports</i> , 2015 , 5, 8845	4.9	18
91	Decompression-Induced Diamond Formation from Graphite Sheared under Pressure. <i>Physical Review Letters</i> , 2020 , 124, 065701	7.4	17
90	Pressure-induced superconducting ternary hydride H ₃ SXe: A theoretical investigation. <i>Frontiers of Physics</i> , 2018 , 13, 1	3.7	16
89	Pressure induced phase transition in MH ₂ (M = V, Nb). <i>Journal of Chemical Physics</i> , 2014 , 140, 114703	3.9	16
88	New Ordered Structure of Amorphous Carbon Clusters Induced by Fullerene-Cubane Reactions. <i>Advanced Materials</i> , 2018 , 30, e1706916	24	14
87	Crossover from metal to insulator in dense lithium-rich compound CLi ₄ . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 2366-9	11.5	14
86	Predicted Formation of H ₃ (+) in Solid Halogen Polyhydrides at High Pressures. <i>Journal of Physical Chemistry A</i> , 2015 , 119, 11059-65	2.8	14
85	New High Pressure Phases of the Zn ₂ System. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 4044-4049	3.8	13
84	Ternary superconducting cophosphorus hydrides stabilized via lithium. <i>Npj Computational Materials</i> , 2019 , 5,	10.9	13
83	Iron layer-dependent surface-enhanced raman scattering of hierarchical nanocap arrays. <i>Applied Surface Science</i> , 2017 , 423, 1124-1133	6.7	13
82	Effects of magnetic ordering and electron correlations on the stability of FeN. <i>RSC Advances</i> , 2015 , 5, 31270-31274	3.7	13
81	Enhancement of T(c) in the atomic phase of iodine-doped hydrogen at high pressures. <i>Physical Chemistry Chemical Physics</i> , 2015 , 17, 32335-40	3.6	13
80	Predicted novel metallic metastable phases of polymeric nitrogen at high pressures. <i>New Journal of Physics</i> , 2013 , 15, 013010	2.9	13
79	Unique Phase Diagram and Superconductivity of Calcium Hydrides at High Pressures. <i>Inorganic Chemistry</i> , 2019 , 58, 2558-2564	5.1	12
78	Ab initio study of germanium-hydride compounds under high pressure. <i>RSC Advances</i> , 2015 , 5, 19432-19438	3.8	12
77	Self-Organized Back Surface Field to Improve the Performance of CuZnSn(S,Se) Solar Cells by Applying P-Type MoSe:Nb to the Back Electrode Interface. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 31851-31859	9.5	12

76	Pressure-Induced Diversity of π -Stacking Motifs and Amorphous Polymerization in Pyrrole. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 12420-12427	3.8	12
75	Prediction of stoichiometric PoHn compounds: crystal structures and properties. <i>RSC Advances</i> , 2015 , 5, 103445-103450	3.7	12
74	Ab initio structure determination of n-diamond. <i>Scientific Reports</i> , 2015 , 5, 13447	4.9	12
73	Investigation of charge-transfer between a 4-mercaptobenzoic acid monolayer and TiO nanoparticles under high pressure using surface-enhanced Raman scattering. <i>Chemical Communications</i> , 2018 , 54, 6280-6283	5.8	12
72	Negative Volume Compressibility in ScN@C-Cubane Cocrystal with Charge Transfer. <i>Journal of the American Chemical Society</i> , 2020 , 142, 7584-7590	16.4	11
71	Haladaptatus pallidirubidus sp. nov., a halophilic archaeon isolated from saline soil samples in Yunnan and Xinjiang, China. <i>Antonie Van Leeuwenhoek</i> , 2014 , 106, 901-10	2.1	11
70	Structural stability and compressive behavior of ZrH ₂ under hydrostatic pressure and nonhydrostatic pressure. <i>RSC Advances</i> , 2014 , 4, 46780-46786	3.7	11
69	Ab initio investigation of CaO-ZnO alloys under high pressure. <i>Scientific Reports</i> , 2015 , 5, 11003	4.9	11
68	A Novel High-Density Phase and Amorphization of Nitrogen-Rich 1H-Tetrazole (CHN) under High Pressure. <i>Scientific Reports</i> , 2017 , 7, 39249	4.9	10
67	Unexpected calcium polyhydride CaH: A possible route to dissociation of hydrogen molecules. <i>Journal of Chemical Physics</i> , 2019 , 150, 044507	3.9	10
66	Structural, mechanical, and electronic properties of Rh ₂ B and RhB ₂ : first-principles calculations. <i>Scientific Reports</i> , 2015 , 5, 10500	4.9	10
65	Morphology-Tuned Phase Transitions of Horseshoe Shaped BaTiO ₃ Nanomaterials under High Pressure. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 5188-5194	3.8	10
64	Experimental verification of the high pressure crystal structures in NH ₃ BH ₃ . <i>Journal of Chemical Physics</i> , 2014 , 140, 244507	3.9	10
63	The crystal structure of IrB ₂ : a first-principle calculation. <i>RSC Advances</i> , 2014 , 4, 63442-63446	3.7	10
62	Enhanced Photoluminescence and Photoresponsiveness of Eu ³⁺ Ions-Doped CsPbCl ₃ Perovskite Quantum Dots under High Pressure. <i>Advanced Functional Materials</i> , 2021 , 31, 2100930	15.6	10
61	Ultrathin stimuli-responsive polymer film-based optical sensor for fast and visual detection of hazardous organic solvents. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 10861-10869	7.1	10
60	The structural transition behavior of CdSe/ZnS core/shell quantum dots under high pressure. <i>Physica Status Solidi (B): Basic Research</i> , 2011 , 248, 1149-1153	1.3	9
59	High energetic polymeric nitrogen sheet confined in a graphene matrix.. <i>RSC Advances</i> , 2018 , 8, 30912-30918	3.9	9

58	Structural stability and electronic property in K2S under pressure. <i>RSC Advances</i> , 2017 , 7, 7424-7430	3.7	8
57	The hydrogen-bond effect on the high pressure behavior of hydrazinium monochloride. <i>Journal of Raman Spectroscopy</i> , 2015 , 46, 266-272	2.3	8
56	Pressure tuned photoluminescence and band gap in two-dimensional layered g-CN: the effect of interlayer interactions. <i>Nanoscale</i> , 2020 , 12, 12300-12307	7.7	8
55	Graphdiyne under pressure: A Raman study. <i>Applied Physics Letters</i> , 2018 , 113, 021901	3.4	8
54	Temperature-Dependent Lasing of CsPbI Triangular Pyramid. <i>Journal of Physical Chemistry Letters</i> , 2019 , 10, 7056-7061	6.4	8
53	How to get superhard MnB2: a first-principles study. <i>Journal of Materials Chemistry</i> , 2012 , 22, 17630		8
52	Molecular insertion regulates the donor-acceptor interactions in cocrystals for the design of piezochromic luminescent materials. <i>Nature Communications</i> , 2021 , 12, 4084	17.4	8
51	In situ synchrotron X-ray diffraction with laser-heated diamond anvil cells study of Pt up to 95 GPa and 3150 K. <i>RSC Advances</i> , 2015 , 5, 14603-14609	3.7	7
50	Structural properties of ammonium iodide under high pressure. <i>RSC Advances</i> , 2015 , 5, 40336-40340	3.7	7
49	The stability of B6 octahedron in BaB6 under high pressure. <i>RSC Advances</i> , 2016 , 6, 18077-18081	3.7	7
48	Increasing local field by interfacial coupling in nanobowl arrays. <i>RSC Advances</i> , 2017 , 7, 43671-43680	3.7	7
47	Modulation of Field-Effect Passivation at the Back Electrode Interface Enabling Efficient Kesterite-Type CuZnSn(S,Se) Thin-Film Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 38163-38174	9.5	7
46	Smart magnetic nanopowder based on the manganite perovskite for local hyperthermia.. <i>RSC Advances</i> , 2020 , 10, 30907-30916	3.7	7
45	Ab initio studies of copper hydrides under high pressure. <i>Frontiers of Physics</i> , 2019 , 14, 1	3.7	6
44	Unravelling decomposition products of phosphine under high pressure. <i>Journal of Raman Spectroscopy</i> , 2018 , 49, 721-727	2.3	6
43	Pressure-induced phase transition of SnH4: a new layered structure. <i>RSC Advances</i> , 2016 , 6, 10456-10461	3.7	6
42	Crystal structures and properties of the CH4H2 compound under high pressure. <i>RSC Advances</i> , 2014 , 4, 37569	3.7	6
41	A novel stable hydrogen-rich SnH8 under high pressure. <i>RSC Advances</i> , 2015 , 5, 107637-107641	3.7	6

40	Pressure Engineering for Extending Spectral Response Range and Enhancing Photoelectric Properties of Iodine. <i>Advanced Optical Materials</i> , 2101163	8.1	6
39	Ab initio molecular dynamic study of solid-state transitions of ammonium nitrate. <i>Scientific Reports</i> , 2016 , 6, 18918	4.9	5
38	New Cadmium-Nitrogen Compounds at High Pressures. <i>Inorganic Chemistry</i> , 2021 , 60, 6772-6781	5.1	5
37	SERS Selective Enhancement on Monolayer MoS Enabled by a Pressure-Induced Shift from Resonance to Charge Transfer. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 26551-26560	9.5	5
36	Vibrational Properties and Polymerization of Corannulene under Pressure, Probed by Raman and Infrared Spectroscopies. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 23674-23681	3.8	4
35	Pressure-Induced Amorphization and Recrystallization of SnI ₂ . <i>Journal of Physical Chemistry C</i> , 2015 , 119, 19312-19317	3.8	4
34	High-pressure phase transition of MH(M: Er, Ho). <i>Journal of Chemical Physics</i> , 2014 , 141, 054703	3.9	4
33	Pressure-induced structural transformation of CaC ₂ . <i>Journal of Chemical Physics</i> , 2016 , 144, 194506	3.9	4
32	A high pressure Raman study on confined individual iodine molecules as molecular probes of structural collapse in the AlPO-5 framework. <i>Physical Chemistry Chemical Physics</i> , 2018 , 20, 26117-26125	3.6	4
31	Surface-enhanced Raman scattering from metal and transition metal nano-capped arrays. <i>Superlattices and Microstructures</i> , 2018 , 115, 59-66	2.8	3
30	New Phase of Ca(BH ₄) ₂ at Near Ambient Conditions. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 14272-14276	3.7	3
29	High pressure superconducting phase of Bi3: an ab initio study. <i>RSC Advances</i> , 2014 , 4, 32068-32074	3.7	3
28	EPR and Raman study of silicon layers obtained by gas detonation spraying. <i>Materials Science in Semiconductor Processing</i> , 2017 , 71, 232-239	4.3	3
27	High-pressure polymorphism as a step towards high density structures of LiAlH ₄ . <i>Applied Physics Letters</i> , 2015 , 107, 041906	3.4	3
26	Magnetoactive elastomer based on superparamagnetic nanoparticles with Curie point close to room temperature. <i>Materials and Design</i> , 2021 , 197, 109281	8.1	3
25	Structural, Electronic, and Optical Properties of ZnO _{1-x} Te _x Alloys. <i>Physica Status Solidi - Rapid Research Letters</i> , 2019 , 13, 1900155	2.5	2
24	Insights into Antibonding Induced Energy Density Enhancement and Exotic Electronic Properties for Germanium Nitrides at Modest Pressures. <i>Inorganic Chemistry</i> , 2018 , 57, 10416-10423	5.1	2
23	Metallization: New Metallic Ordered Phase of Perovskite CsPbI ₃ under Pressure (Adv. Sci. 14/2019). <i>Advanced Science</i> , 2019 , 6, 1970083	13.6	2

22	A theoretical investigation on phase transition and dissociation of ammonium bromide under high pressure. <i>Science Bulletin</i> , 2014 , 59, 5272-5277		2
21	Crystal structures and properties of nitrogen oxides under high pressure. <i>RSC Advances</i> , 2015 , 5, 103373-103379		2
20	Ab initio study on the stability of N-doped ZnO under high pressure. <i>RSC Advances</i> , 2015 , 5, 16774-16779	3.7	2
19	Crystal structure prediction and hydrogen-bond symmetrization of solid hydrazine under high pressure: a first-principles study. <i>Acta Crystallographica Section C, Structural Chemistry</i> , 2014 , 70, 112-7	0.8	2
18	Melting curve of the c16 sodium at high pressure from ab initio calculations. <i>Physica Status Solidi (B): Basic Research</i> , 2011 , 248, 1143-1148	1.3	2
17	Spin-dependent magnetism and superparamagnetic contribution to the magnetocaloric effect of non-stoichiometric manganite nanoparticles. <i>Applied Materials Today</i> , 2022 , 26, 101340	6.6	2
16	Armchair shaped polymeric nitrogen N chains confined in h-BN matrix at ambient conditions: stability and vibration analysis.. <i>RSC Advances</i> , 2019 , 9, 29987-29992	3.7	2
15	Elastic properties of single crystal hydrogen sulfide: A Brillouin scattering study under high pressure-temperature. <i>Journal of Applied Physics</i> , 2018 , 124, 125901	2.5	2
14	Lasing Behavior of a Single ZnO Nanowire Resonating in Fabry-Pérot Mode under Pressure. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 7523-7530	3.8	1
13	Semiconductor-metal transition in GaAs nanowires under high pressure. <i>Chinese Physics B</i> , 2019 , 28, 076401	1.2	1
12	Unexpected stable stoichiometries and superconductivity of potassium-rich sulfides. <i>RSC Advances</i> , 2017 , 7, 44884-44889	3.7	1
11	Pressure-induced structural changes in NH ₄ Br. <i>Journal of Chemical Physics</i> , 2015 , 143, 064505	3.9	1
10	Size and morphology effects on the high pressure behaviors of Mn ₃ O ₄ nanorods. <i>Nanoscale Advances</i> , 2020 , 2, 5841-5847	5.1	1
9	Strain-engineering enables reversible semiconductor-metal transition of skutterudite IrAs ₃ . <i>Inorganic Chemistry Frontiers</i> , 2020 , 7, 1108-1114	6.8	1
8	High Pressure and High Temperature Induced Polymerization of C ₆₀ Solvates: The Effect of Intercalated Aromatic Solvents. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 17155-17163	3.8	1
7	Pressure-induced insertion and transformation of N ₂ in the cavities of zeolitic imidazolate framework-8: A Raman study. <i>Journal of Raman Spectroscopy</i> , 2020 , 51, 1230-1239	2.3	0
6	Anomalous phonon softening of G-band in compressed graphitic carbon nitride due to strong electrostatic repulsion. <i>Applied Physics Letters</i> , 2021 , 118, 023103	3.4	0
5	Cobalt-Nitrogen Compounds at High Pressure. <i>Inorganic Chemistry</i> , 2021 , 60, 14022-14030	5.1	0

- 4 Novel ultrahard carbon structures by cold-compressing tubes. *CrystEngComm*, **2021**, 23, 2091-2098 3.3 0
- 3 Enhancing the light emission of GaAs nanowires by pressure-modulated charge transfer. *Nanoscale Advances*, **2020**, 2, 2558-2563 5.1
- 2 High pressure structural stability of the Na-Te system. *AIP Advances*, **2018**, 8, 035123 1.5
- 1 Ordered Amorphous Carbon: New Ordered Structure of Amorphous Carbon Clusters Induced by Fullerene-Tubane Reactions (Adv. Mater. 22/2018). *Advanced Materials*, **2018**, 30, 1870156 24