Wenge Yang

List of Publications by Year
in descending order

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69 papers	3,275 citations	159358 30 h-index	149479 56 g-index
74 all docs	74 docs citations	74 times ranked	4343 citing authors

#	Article	IF	Citations
1	Folded network and structural transition in molten tin. Nature Communications, 2022, 13, 126.	5.8	6
2	Polarization-Enhanced Photovoltaic Effects in a High-Temperature Molecular Ferroelectric [C₆N₂H₁₈][SbI₅]-Based Solar Device. ACS Applied Energy Materials, 2022, 5, 2738-2746.	2.5	4
3	Bridge-bond formation in aluminum and its alloys under high pressure. Physical Review Materials, 2022, 6, .	0.9	3
4	Pressure-stimulus-responsive behaviors of coreâ€“shell InP/ZnSe nanocrystals: remarkable piezochromic luminescence and structural assembly. Nanoscale, 2022, 14, 7530-7537.	2.8	2
5	Pressureâ€Induced Superconductivity in HgTe Singleâ€Crystal Film. Advanced Science, 2022, 9, e2200590.	5.6	6
6	Pressure-Enhanced Photocurrent in One-Dimensional SbSI via Lone-Pair Electron Reconfiguration. Materials, 2022, 15, 3845.	1.3	6
7	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>T</mml:mi><mml:mi>c</mml:mi></mml:msub></mml:ma up to 23.6ÂK and robust superconductivity in the transition metal <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î´</mml:mi><mml:mtext>âˆ’</mml:mtext><mml:mi>Ti</mml:mi></mml phase at megabar pressure. Physical Review B, 2022, 105, .	1.1	13
8	Machine learning the metastable phase diagram of covalently bonded carbon. Nature Communications, 2022, 13, .	5.8	9
9	Regulating off-centering distortion maximizes photoluminescence in halide perovskites. National Science Review, 2021, 8, nwaa288.	4.6	70
10	Suppressed Lattice Disorder for Large Emission Enhancement and Structural Robustness in Hybrid Lead Iodide Perovskite Discovered by Highâ€Pressure Isotope Effect. Advanced Functional Materials, 2021, 31, 2009131.	7.8	20
11	Enhanced Photocurrent of All-Inorganic Two-Dimensional Perovskite Cs₂PbI₂Cl₂ via Pressure-Regulated Excitonic Features. Journal of the American Chemical Society, 2021, 143, 2545-2551.	6.6	79
12	Probing the Electronic Band Gap of Solid Hydrogen by Inelastic X-Ray Scattering up to 90ÂGPa. Physical Review Letters, 2021, 126, 036402.	2.9	6
13	Regulating Excitonâ€“Phonon Coupling to Achieve a Nearâ€Unity Photoluminescence Quantum Yield in Oneâ€Dimensional Hybrid Metal Halides. Advanced Science, 2021, 8, e2100786.	5.6	61
14	A large enhancement of ionic conductivity in SrCoO2.5 controlled by isostructural phase transition and negative linear compressibility. Applied Physics Letters, 2021, 119, .	1.5	2
15	Pressure-tuning structural and electronic transitions in semimetal CoSb. Physical Review B, 2021, 104, .	1.1	4
16	Superconducting Phase Induced by a Local Structure Transition in Amorphous <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>Sb</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mn under High Pressure. Physical Review Letters, 2021, 127, 127002.	2.9	13
17	Pressure-induced robust emission in a zero-dimensional hybrid metal halide (C9NH20)6Pb3Br12. Matter and Radiation at Extremes, 2021, 6, .	1.5	13
18	2020â€"Transformative science in the pressure dimension. Matter and Radiation at Extremes, 2021, 6, .	1.5	8

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19	Temperature- and Rate-Dependent Pathways in Formation of Metastable Silicon Phases under Rapid Decompression. Physical Review Letters, 2020, 125, 155702.	2.9	18
20	Reaching 90% Photoluminescence Quantum Yield in One-Dimensional Metal Halide C₄N₂H₁₄PbBr₄ by Pressure-Suppressed Nonradiative Loss. Journal of the American Chemical Society, 2020, 142, 16001-16006.	6.6	109
21	Site-Specific Pressure-Driven Spin-Crossover in Lu_{1â€“x}Sc_xFeO₃. Journal of Physical Chemistry Letters, 2020, 11, 8549-8553.	2.1	5
22	Perspective on the pressure-driven evolution of the lattice and electronic structure in perovskite and double perovskite. Applied Physics Letters, 2020, 117, .	1.5	4
23	Photoluminescence Enhancement from Site Symmetry Breakdown in Pyrochlore <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mrow><mml:mi>Ho</mml:mi></mml:mrow><mml:mrow><mml:mn>3</mml:mn><mml:mo>+</mml:mo></mml:mrow></mml:msup></mml:math> Physical Review Letters, 2020, 125, 245701.	2.9	8
24	Pressure-Regulated Dynamic Stereochemical Role of Lone-Pair Electrons in Layered Bi₂O₂S. Journal of Physical Chemistry Letters, 2020, 11, 9702-9707.	2.1	37
25	Pressure-driven chemical lock-in structure and optical properties in Sillen compounds PbBiO₂X (X = Cl, Br, and I). Journal of Materials Chemistry A, 2020, 8, 13610-13618.	5.2	12
26	Pressure-induced superconductivity and topological phase transitions in the topological nodal-line semimetal SrAs3. Npj Quantum Materials, 2020, 5, .	1.8	27
27	Laser-shocked calcium difluoride (CaF2) as a warm dense matter. Physics of Plasmas, 2020, 27, .	0.7	4
28	Highly tunable properties in pressure-treated two-dimensional Dionâ€“Jacobson perovskites. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 16121-16126.	3.3	35
29	Pressureâ€Suppressed Carrier Trapping Leads to Enhanced Emission in Twoâ€Dimensional Perovskite (HA)₂(GA)Pb₂I₇. Angewandte Chemie - International Edition, 2020, 59, 17533-17539.	7.2	71
30	Tuning to more compressible phase in TiZrHfNb high entropy alloy by pressure. Applied Physics Letters, 2020, 116, 031901.	1.5	5
31	Multiple phase transitions in Sc doped Sb2Te3 amorphous nanocomposites under high pressure. Applied Physics Letters, 2020, 116, .	1.5	4
32	Pressure responses of halide perovskites with various compositions, dimensionalities, and morphologies. Matter and Radiation at Extremes, 2020, 5, .	1.5	58
33	Crystallography of low Z material at ultrahigh pressure: Case study on solid hydrogen. Matter and Radiation at Extremes, 2020, 5, .	1.5	15
34	Structural Phase Transition, Optical and Electrical Property Evolutions of Thiospinel AgIn₅S₈ under High Pressure. Inorganic Chemistry, 2019, 58, 12628-12634.	1.9	12
35	Giant enhancements in electronic transport and photoelectric properties of bismuth oxysulfide by pressure-driven 2Dâ€“3D structural reconstruction. Journal of Materials Chemistry A, 2019, 7, 4019-4025.	5.2	35
36	Pressure-enhanced interplay between lattice, spin, and charge in the mixed perovskite La2FeMnO6. Physical Review B, 2019, 99, .	1.1	9

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37	Pressure engineering of photovoltaic perovskites. Materials Today, 2019, 27, 91-106.	8.3	79
38	Ultrahigh-pressure isostructural electronic transitions in hydrogen. Nature, 2019, 573, 558-562.	13.7	78
39	Pressure-Driven Reversible Switching between n- and p-Type Conduction in Chalcopyrite CuFeS₂. Journal of the American Chemical Society, 2019, 141, 505-510.	6.6	36
40	Diamond anvil cell behavior up to 4 Mbar. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 1713-1717.	3.3	85
41	Venture into Materials Chemistry Land: Structural Transformations of Solid <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi mathvariant="bold">H</mml:mi></mml:mrow><mml:mrow><mml:mn mathvariant="bold">2</mml:mn></mml:mrow></mml:msub><mml:mi mathvariant="normal">O</mml:mi></mml:mrow></mml:math> under Rapid Compression and Decompre	2.9	21
42	Emergent superconductivity in an iron-based honeycomb lattice initiated by pressure-driven spin-crossover. Nature Communications, 2018, 9, 1914.	5.8	119
43	Pressure Impact on the Crystal Structure, Optical, and Transport Properties in Layered Oxychalcogenides BiCuChO (Ch = S, Se). Journal of Physical Chemistry C, 2018, 122, 15929-15936.	1.5	15
44	Enhanced Ferroelectric and Visibleâ€Light Photoelectric Properties in Multiferroic KBiFe₂O₅ via Pressureâ€Induced Phase Transition. Advanced Electronic Materials, 2017, 3, 1600498.	2.6	34
45	Highâ€Pressure Bandâ€Gap Engineering in Leadâ€Free Cs₂AgBiBr₆ Double Perovskite. Angewandte Chemie, 2017, 129, 16185-16189.	1.6	28
46	Highâ€Pressure Bandâ€Gap Engineering in Leadâ€Free Cs₂AgBiBr₆ Double Perovskite. Angewandte Chemie - International Edition, 2017, 56, 15969-15973.	7.2	200
47	Pressure-induced abnormal insulating state in triangular layered cobaltite Li_xCoO₂ (x = 0.9). Journal of Materials Chemistry A, 2017, 5, 19390-19397.	5.2	9
48	Pressure-induced dramatic changes in organicâ€“inorganic halide perovskites. Chemical Science, 2017, 8, 6764-6776.	3.7	74
49	Abnormal Pressureâ€Induced Photoluminescence Enhancement and Phase Decomposition in Pyrochlore La₂Sn₂O₇. Advanced Materials, 2017, 29, 1701513.	11.1	31
50	Ultrastable Amorphous Sb₂Se₃ Film. Journal of Physical Chemistry B, 2017, 121, 8188-8194.	1.2	17
51	Pressure-enhanced Insulating State and Trigonal Distortion Relaxation in Geometrically Frustrated Pyrochlore Eu₂Sn₂O₇. Journal of Physical Chemistry C, 2016, 120, 9436-9442.	1.5	25
52	Pressure-Induced New Topological Weyl Semimetal Phase in TaAs. Physical Review Letters, 2016, 117, 146402.	2.9	66
53	Giant Pressureâ€Driven Lattice Collapse Coupled with Intermetallic Bonding and Spinâ€State Transition in Manganese Chalcogenides. Angewandte Chemie - International Edition, 2016, 55, 10350-10353.	7.2	32
54	Enhanced Structural Stability and Photo Responsiveness of CH₃NH₃SnI₃ Perovskite via Pressureâ€Induced Amorphization and Recrystallization. Advanced Materials, 2016, 28, 8663-8668.	11.1	176

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55	Simultaneous band-gap narrowing and carrier-lifetime prolongation of organicâ€“inorganic trihalide perovskites. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 8910-8915.	3.3	269
56	Phase transition induced strain in ZnO under high pressure. Scientific Reports, 2016, 6, 24958.	1.6	13
57	Pressure-Driven Cooperative Spin-Crossover, Large-Volume Collapse, and Semiconductor-to-Metal Transition in Manganese(II) Honeycomb Lattices. Journal of the American Chemical Society, 2016, 138, 15751-15757.	6.6	91
58	Strength coupling in mixed phases under high pressure. Physical Review B, 2016, 94, .	1.1	1
59	Pressure-Induced Structural and Electronic Transition in Sr₂ZnWO₆ Double Perovskite. Inorganic Chemistry, 2016, 55, 6770-6775.	1.9	17
60	Recent advances in high-pressure science and technology. Matter and Radiation at Extremes, 2016, 1, 59-75.	1.5	98
61	Pressure-induced superconductivity in a three-dimensional topological material ZrTe ₅. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 2904-2909.	3.3	124
62	Anomalous compression behavior of germanium during phase transformation. Applied Physics Letters, 2015, 106, .	1.5	16
63	Pressure-Induced Phase Transformation, Reversible Amorphization, and Anomalous Visible Light Response in Organolead Bromide Perovskite. Journal of the American Chemical Society, 2015, 137, 11144-11149.	6.6	303
64	Five-dimensional visualization of phase transition in BiNiO3 under high pressure. Applied Physics Letters, 2014, 104, 043108.	1.5	18
65	Disproportionation of (Mg,Fe)SiO ₃ perovskite in Earthâ€™s deep lower mantle. Science, 2014, 344, 877-882.	6.0	72
66	Coherent diffraction imaging of nanoscale strain evolution in a single crystal under high pressure. Nature Communications, 2013, 4, 1680.	5.8	88
67	Single-crystal structure determination of (Mg,Fe)SiO ₃ postperovskite. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 6292-6295.	3.3	34
68	Long-Range Topological Order in Metallic Glass. Science, 2011, 332, 1404-1406.	6.0	177
69	Nanoprobe measurements of materials at megabar pressures. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 6140-6145.	3.3	32