

# Xiao Dong

## List of Publications by Year in descending order

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63  
papers

2,233  
citations

304743

22  
h-index

223800

46  
g-index

63  
all docs

63  
docs citations

63  
times ranked

2857  
citing authors

#	ARTICLE	IF	CITATIONS
1	Semimetallic Two-Dimensional Boron Allotrope with Massless Dirac Fermions. Physical Review Letters, 2014, 112, .	7.8	497
2	A stable compound of helium and sodium at high pressure. Nature Chemistry, 2017, 9, 440-445.	13.6	276
3	Novel Two-Dimensional Silicon Dioxide with in-Plane Negative Poisson's Ratio. Nano Letters, 2017, 17, 772-777.	9.1	184
4	Tetragonal Allotrope of Group 14 Elements. Journal of the American Chemical Society, 2012, 134, 12362-12365.	13.7	170
5	<i>Ab initio</i> study of the formation of transparent carbon under pressure. Physical Review B, 2010, 82, .	3.2	119
6	Variable cell nudged elastic band method for studying solid's solid structural phase transitions. Computer Physics Communications, 2013, 184, 2111-2118.	7.5	71
7	Raman spectroscopy and x-ray diffraction of $\text{CaC}_3\text{O}$ at lower mantle pressures. Physical Review B, 2017, 96, .	3.2	54
8	Superconducting high-pressure phase of platinum hydride from first principles. Physical Review B, 2011, 84, .	3.2	47
9	Novel superhard $\text{B}_6\text{C}$ phases predicted from first principles. Physical Chemistry Chemical Physics, 2016, 18, 1859-1863.	2.8	44
10	Superhard F-carbon predicted by <i>ab initio</i> particle-swarm optimization methodology. Journal of Physics Condensed Matter, 2012, 24, 165504.	1.8	42
11	Novel Hydrogen Hydrate Structures under Pressure. Scientific Reports, 2014, 4, 5606.	3.3	41
12	Pressure-induced Diels-Alder Reactions in $\text{C}_6\text{H}_6$ - $\text{C}_6\text{F}_6$ Cocrystal towards Graphane Structure. Angewandte Chemie - International Edition, 2019, 58, 1468-1473.	13.8	36
13	Novel high-pressure calcium carbonates. Physical Review B, 2018, 98, .	3.2	32
14	Pressure-induced Polymerization of Acetylene: Structure-Directed Stereoselectivity and a Possible Route to Graphane. Angewandte Chemie - International Edition, 2017, 56, 6553-6557.	13.8	31
15	Genome adaptive evolution of Lactobacillus casei under long-term antibiotic selection pressures. BMC Genomics, 2017, 18, 320.	2.8	29
16	Unusual compression behavior of $\text{TiO}_2$ from first principles. Physical Review B, 2010, 82, .	3.2	28
17	Efficiently suppressing lithium dendrites on atomic level by ultrafiltration membrane of graphdiyne. Materials Today Energy, 2018, 10, 191-199.	4.7	28
18	Polymerization of Acetonitrile via a Hydrogen Transfer Reaction from $\text{CH}_3$ to CN under Extreme Conditions. Angewandte Chemie - International Edition, 2016, 55, 12040-12044.	13.8	26

#	ARTICLE	IF	CITATIONS
19	Predicting the ground-state structure of sodium boride. <i>Physical Review B</i> , 2018, 97, .	3.2	26
20	Magnetic borophenes from an evolutionary search. <i>Physical Review B</i> , 2019, 99, .	3.2	25
21	Electronegativity and chemical hardness of elements under pressure. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2117416119.	7.1	25
22	A new phase from compression of carbon nanotubes with anisotropic Dirac fermions. <i>Scientific Reports</i> , 2015, 5, 10713.	3.3	23
23	Distance-Selected Topochemical Dehydro-Diels-Alder Reaction of 1,4-Diphenylbutadiyne toward Crystalline Graphitic Nanoribbons. <i>Journal of the American Chemical Society</i> , 2020, 142, 17662-17669.	13.7	23
24	An <i>ab initio</i> study on the transition paths from graphite to diamond under pressure. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 145402.	1.8	22
25	Predicting three-dimensional icosahedron-based boron $B_{60}$ . <i>Physical Review B</i> , 2019, 99, .	3.2	21
26	Unraveling the anomalous mechanoluminescence intensity change and pressure-induced red-shift for manganese-doped zinc sulfide. <i>Nano Energy</i> , 2021, 85, 106005.	16.0	19
27	Prediction of new thermodynamically stable aluminum oxides. <i>Scientific Reports</i> , 2015, 5, 9518.	3.3	18
28	Pressure induced polymerization of acetylide anions in $CaC_2$ and $10^7$ fold enhancement of electrical conductivity. <i>Chemical Science</i> , 2016, 8, 298-304.	7.4	17
29	Drastic photoluminescence modulation of an organic molecular crystal with high pressure. <i>Materials Chemistry Frontiers</i> , 2019, 3, 1510-1517.	5.9	17
30	Helium-nitrogen mixtures at high pressure. <i>Physical Review B</i> , 2021, 103, .	3.2	16
31	Ultrahigh-Pressure Magnesium Hydrosilicates as Reservoirs of Water in Early Earth. <i>Physical Review Letters</i> , 2022, 128, 035703.	7.8	16
32	High-temperature superconductivity in the Ti-H system at high pressures. <i>Physical Review B</i> , 2020, 101, .	3.2	15
33	Formation of copper boride on Cu(111). <i>Fundamental Research</i> , 2021, 1, 482-487.	3.3	15
34	Pressure-Induced Polymerization and Disproportionation of $Li_2C_2$ Accompanied with Irreversible Conductivity Enhancement. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 4241-4245.	4.6	14
35	Pressure-Induced Polymerization of Monosodium Acetylide: A Radical Reaction Initiated Topochemically. <i>Journal of Physical Chemistry C</i> , 2019, 123, 30746-30753.	3.1	13
36	Crystalline $C_3N_3H_3$ tube (3,0) nanothreads. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2201165119.	7.1	13

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37	High-pressure phases of NaAlH <sub>4</sub> from first principles. Applied Physics Letters, 2012, 100, 061905.	3.3	10
38	A metallic carbon consisting of helical carbon triangle chains. Journal of Physics Condensed Matter, 2014, 26, 235402.	1.8	10
39	Tailored Synthesis of the Narrowest Zigzag Graphene Nanoribbon Structure by Compressing the Lithium Acetylide under High Temperature. Journal of Physical Chemistry C, 2018, 122, 20506-20512.	3.1	10
40	Nitrogen oxides under pressure: stability, ionization, polymerization and superconductivity. Scientific Reports, 2015, 5, 16311.	3.3	9
41	Compression Rate-Dependent Crystallization of Pyridine. Journal of Physical Chemistry C, 2021, 125, 6983-6989.	3.1	9
42	Temperature-tunable optical properties and carrier relaxation of CuInP <sub>2</sub> S <sub>6</sub> crystals under ferroelectric-paraelectric phase transition. Journal of Materials Chemistry C, 2022, 10, 696-706.	5.5	9
43	First-principles prediction of two-dimensional copper borides. Physical Review Materials, 2020, 4, .	2.4	8
44	Pressure-Induced Polymerization of Acetylene: Structure-Directed Stereoselectivity and a Possible Route to Graphane. Angewandte Chemie, 2017, 129, 6653-6657.	2.0	7
45	Low-energy 3D sp <sup>2</sup> carbons with versatile properties beyond graphite and graphene. Dalton Transactions, 2018, 47, 6233-6239.	3.3	7
46	Predicted lithium oxide compounds and superconducting low-pressure LiO <sub>4</sub> . Physical Review B, 2019, 100, .	3.2	7
47	Restacked melon as highly-efficient photocatalyst. Nano Energy, 2020, 77, 105124.	16.0	7
48	Crystalline Fully Carboxylated Polyacetylene Obtained under High Pressure as a Li-Ion Battery Anode Material. Journal of Physical Chemistry Letters, 2021, 12, 12055-12061.	4.6	7
49	Scalable High-Pressure Synthesis of sp <sup>2</sup> -sp <sup>3</sup> Carbon Nanoribbon via [4 + 2] Polymerization of 1,3,5-Triethynylbenzene. Journal of Physical Chemistry Letters, 2021, 12, 7140-7145.	4.6	5
50	Phase transition of layer-stacked borophene under pressure. Physical Review B, 2022, 105, .	3.2	5
51	Polymerization of Acetonitrile via a Hydrogen Transfer Reaction from CH <sub>3</sub> to CN under Extreme Conditions. Angewandte Chemie, 2016, 128, 12219-12223.	2.0	4
52	Compact Dynamic In-Fiber Acoustically-Induced Mach-Zehnder Interferometer Based on Phase Mismatch and Its Application in a Tunable and Switchable Dual-Wavelength Laser. Journal of Lightwave Technology, 2021, 39, 3539-3545.	4.6	4
53	Theoretical study of the crystal structure, stability, and properties of phases in the V-N system. Physical Review B, 2021, 104, .	3.2	4
54	Structure and Electrical Performance of Na <sub>2</sub> C <sub>6</sub> O <sub>6</sub> under High Pressure. Journal of Physical Chemistry C, 2019, 123, 17163-17169.	3.1	3

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55	Phase transition and chemical reactivity of 1H-tetrazole under high pressure up to 100 GPa. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 19503-19510.	2.8	3
56	Pressure Gradient Squeezing Hydrogen out of MnOOH: Thermodynamics and Electrochemistry. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 10893-10898.	4.6	3
57	Can HHe <sup>+</sup> exist at high pressure: Exploration of high pressure induced HF <sup>+</sup> He compounds. <i>Geoscience Frontiers</i> , 2021, 12, 1039-1043.	8.4	2
58	All-Fiber Frequency Shifter Based on an Acousto-Optic Tunable Filter Cascaded with a Tapered Fiber-Coupled Microcavity. <i>Crystals</i> , 2021, 11, 497.	2.2	2
59	High-Pressure Synthesis of Highly Conjugated Polymers via Synergistic Polymerization of Phenylpropionic Acid. <i>ACS Applied Polymer Materials</i> , 2022, 4, 5246-5252.	4.4	2
60	Pressure-Induced Diels-Alder Reactions in C <sub>6</sub> H <sub>6</sub> -C <sub>6</sub> F <sub>6</sub> Cocrystal towards Graphane Structure. <i>Angewandte Chemie</i> , 2019, 131, 1482-1487.	2.0	1
61	Negative linear compressibility and unusual dynamic behavior of NaB <sub>3</sub> . <i>Physical Review Materials</i> , 2021, 5, .	2.4	1
62	Pressure-Induced Hydrogen Transfer in 2-Butyne via a Double CH <sub>2</sub> -Aromatic Transition State. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 4170-4175.	4.6	1
63	Robust and low cost in-fiber acousto-optic Mach-Zehnder interferometer and its application in dual-wavelength laser. <i>Applied Optics</i> , 2022, 61, 22-27.	1.8	0