

# Bin Wen

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2320902/publications.pdf>

Version: 2024-02-01

148  
papers

6,945  
citations

87843

38  
h-index

64755

79  
g-index

150  
all docs

150  
docs citations

150  
times ranked

6739  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Promising New Class of High-Temperature Alloys: Eutectic High-Entropy Alloys. Scientific Reports, 2014, 4, 6200.	1.6	998
2	Ultrahard nanotwinned cubic boron nitride. Nature, 2013, 493, 385-388.	13.7	662
3	Nanotwinned diamond with unprecedented hardness and stability. Nature, 2014, 510, 250-253.	13.7	611
4	Novel Superhard Carbon: C-Centered Orthorhombic $C_8$ . Physical Review Letters, 2011, 107, 215502.	2.9	225
5	Novel Bimorphological Anisotropic Bulk Nanocomposite Materials with High Energy Products. Advanced Materials, 2017, 29, 1606430.	11.1	189
6	Controllably Manipulating Three-Dimensional Hybrid Nanostructures for Bulk Nanocomposites with Large Energy Products. Nano Letters, 2017, 17, 2985-2993.	4.5	176
7	Comparative Study of Hydrogen Adsorption on Carbon and BN Nanotubes. Journal of Physical Chemistry B, 2006, 110, 13363-13369.	1.2	157
8	Relative importance of grain boundaries and size effects in thermal conductivity of nanocrystalline materials. Scientific Reports, 2014, 4, 7037.	1.6	147
9	First-principles studies of Al-Ni intermetallic compounds. Journal of Solid State Chemistry, 2009, 182, 2664-2669.	1.4	146
10	All-in-one improvement toward Li6PS5Br-Based solid electrolytes triggered by compositional tune. Journal of Power Sources, 2019, 410-411, 162-170.	4.0	134
11	Potential high- $T_c$ superconductivity in $CaYH_{12}$ Topological Dirac nodal net fermions in $AIB_2TiB_2$ and $ZrB_2$	1.1	109
12	Temperature dependent elastic constants and ultimate strength of graphene and graphyne. Journal of Chemical Physics, 2012, 137, 194901.	0.9	103
13	Engineering Bulk, Layered, Multicomponent Nanostructures with High Energy Density. Small, 2018, 14, e1800619.	5.2	91
15	Synthesis of cubic Na3SbS4 solid electrolyte with enhanced ion transport for all-solid-state sodium-ion batteries. Electrochimica Acta, 2018, 259, 100-109.	2.6	88
16	Ternary BIVO4/NiS/Au nanocomposites with efficient charge separations for enhanced visible light photocatalytic performance. Chemical Engineering Journal, 2019, 375, 122093.	6.6	82
17	Compressed carbon nanotubes: A family of new multifunctional carbon allotropes. Scientific Reports, 2013, 3, 1331.	1.6	80
18	Body-centered tetragonal B2N2: a novel sp3 bonding boron nitride polymorph. Physical Chemistry Chemical Physics, 2011, 13, 14565.	1.3	77

#	ARTICLE	IF	CITATIONS
19	High-pressure synthesis of phonon-glass electron-crystal featured thermoelectric $\text{Li}_x\text{Co}_4\text{Sb}_{12}$ . <i>Acta Materialia</i> , 2012, 60, 1246-1251.	3.8	73
20	Body-Centered Tetragonal $\text{C}_{16}$ : A Novel Topological Node-Line Semimetallic Carbon Composed of Tetrarings. <i>Small</i> , 2017, 13, 1602894.	5.2	65
21	Phase stability, elastic and electronic properties of Cu-Zr binary system intermetallic compounds: A first-principles study. <i>Journal of Alloys and Compounds</i> , 2014, 588, 96-102.	2.8	64
22	First-principles studies on structural, mechanical, thermodynamic and electronic properties of Ni-Zr intermetallic compounds. <i>Intermetallics</i> , 2014, 54, 110-119.	1.8	64
23	First-principles studies of diamond polytypes. <i>Diamond and Related Materials</i> , 2008, 17, 356-364.	1.8	61
24	First-principle studies of $\text{Ca-X}$ ( $X=\text{Si,Ge,Sn,Pb}$ ) intermetallic compounds. <i>Journal of Solid State Chemistry</i> , 2010, 183, 136-143.	1.4	60
25	Nanoarchitected materials composed of fullerene-like spheroids and disordered graphene layers with tunable mechanical properties. <i>Nature Communications</i> , 2015, 6, 6212.	5.8	57
26	Regulating Polymerization in Graphitic Carbon Nitride To Improve Photocatalytic Activity. <i>Chemistry of Materials</i> , 2019, 31, 9188-9199.	3.2	57
27	Stability and dissolution of helium-vacancy complexes in vanadium solid. <i>Journal of Nuclear Materials</i> , 2011, 419, 1-8.	1.3	51
28	An analytical model for stress-induced grain growth in the presence of both second-phase particles and solute segregation at grain boundaries. <i>Acta Materialia</i> , 2015, 82, 304-315.	3.8	50
29	Discovery of carbon-based strongest and hardest amorphous material. <i>National Science Review</i> , 2022, 9, nwab140.	4.6	49
30	In situ synthesis of 2D ultrathin cobalt doped g-C <sub>3</sub> N <sub>4</sub> nanosheets enhances photocatalytic performance by accelerating charge transfer. <i>Journal of Alloys and Compounds</i> , 2021, 859, 157754.	2.8	48
31	Temperature dependent elastic constants for crystals with arbitrary symmetry: Combined first principles and continuum elasticity theory. <i>Journal of Applied Physics</i> , 2012, 111, .	1.1	46
32	<i>Ab initio</i> molecular dynamics simulation of binary $\text{Cu}_{64}\text{Zr}_{36}$ bulk metallic glass: Validation of the cluster-plus-glue-atom model. <i>Journal of Applied Physics</i> , 2011, 109, .	1.1	43
33	First principles molecular dynamics study of CdS nanostructure temperature-dependent phase stability. <i>Applied Physics Letters</i> , 2008, 92, 261911.	1.5	42
34	First-principle study of the structural, electronic, and magnetic properties of amorphous Fe-B alloys. <i>Physica B: Condensed Matter</i> , 2012, 407, 250-257.	1.3	42
35	First-principle studies of Al-Ru intermetallic compounds. <i>Intermetallics</i> , 2008, 16, 333-339.	1.8	41
36	Two-photon fluorescent microporous bithiophene polymer via Suzuki cross-coupling. <i>Chemical Communications</i> , 2012, 48, 9519.	2.2	40



#	ARTICLE	IF	CITATIONS
55	Preparation and electrochemical properties of nitrogen-doped multi-walled carbon nanotubes. <i>Materials Letters</i> , 2011, 65, 49-52.	1.3	31
56	A novel approach to fabricating a nanotwinned surface on a ternary nickel alloy. <i>Materials and Design</i> , 2016, 106, 313-320.	3.3	31
57	Hierarchical self-assembly flower-like ammonium nickel phosphate as high-rate performance electrode material for asymmetric supercapacitors with enhanced energy density. <i>Nanotechnology</i> , 2018, 29, 425401.	1.3	31
58	Temperature-dependent mechanical properties of alpha-/beta-Nb <sub>5</sub> Si <sub>3</sub> phases from first-principles calculations. <i>Intermetallics</i> , 2014, 46, 72-79.	1.8	30
59	Cluster characteristics and physical properties of binary Al–Zr intermetallic compounds from first principles studies. <i>Computational Materials Science</i> , 2015, 103, 170-178.	1.4	30
60	Solvent engineering for high conversion yields of layered raw materials into large-scale freestanding hybrid perovskite nanowires. <i>Nanoscale</i> , 2018, 10, 17722-17729.	2.8	27
61	n-diamond: an intermediate state between rhombohedral graphite and diamond?. <i>New Journal of Physics</i> , 2006, 8, 62-62.	1.2	25
62	Electromagnetic wave absorption properties of carbon powder from catalysed carbon black in X and Ku bands. <i>Journal Physics D: Applied Physics</i> , 2006, 39, 1960-1962.	1.3	24
63	Ab initio molecular dynamics simulation of binary Ni <sub>62.5</sub> Nb <sub>37.5</sub> bulk metallic glass: validation of the cluster-plus-glue-atom model. <i>Journal of Materials Science</i> , 2012, 47, 7628-7634.	1.7	24
64	Epitaxial growth of dual-color-emitting organic heterostructures via binary solvent synergism driven sequential crystallization. <i>Nanoscale</i> , 2019, 11, 7111-7116.	2.8	24
65	Strengthening-softening transition in yield strength of nanotwinned Cu. <i>Scripta Materialia</i> , 2019, 162, 372-376.	2.6	24
66	Relative stability of nanosized wurtzite and graphitic ZnO from density functional theory. <i>Chemical Physics Letters</i> , 2008, 466, 84-87.	1.2	23
67	Theoretical exploration of laser-parameter effects on the generation of an isolated attosecond pulse from two-color high-order harmonic generation. <i>Physical Review A</i> , 2010, 82, .	1.0	23
68	Temperature and pressure dependent geometry optimization and elastic constant calculations for arbitrary symmetry crystals: Applications to MgSiO <sub>3</sub> perovskites. <i>Journal of Applied Physics</i> , 2013, 113, .	1.1	23
69	Weak phonon scattering effect of twin boundaries on thermal transmission. <i>Scientific Reports</i> , 2016, 6, 19575.	1.6	23
70	First-principles study of hydrogen behavior in V–Cr–Ti alloys. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2011, 269, 1735-1739.	0.6	22
71	Homoleptic cyclometalated iridium(III) complex nanowires electrogenerated chemiluminescence sensors for high-performance discrimination of proline enantiomers based on the difference of electron-transfer capability. <i>Talanta</i> , 2019, 194, 98-104.	2.9	22
72	Relative stability of hydrogenated nanodiamond and nanographite from density function theory. <i>Chemical Physics Letters</i> , 2007, 441, 318-321.	1.2	21

#	ARTICLE	IF	CITATIONS
73	Phase transformation of cadmium sulfide under high temperature and high pressure conditions. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 14899.	1.3	21
74	Stress-Induced Grain Growth in an Ultra-Fine Grained Al Alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014, 45, 2673-2688.	1.1	21
75	Role of plastic deformation in tailoring ultrafine microstructure in nanotwinned diamond for enhanced hardness. <i>Science China Materials</i> , 2017, 60, 178-185.	3.5	21
76	Intersectional nanotwinned diamond-the hardest polycrystalline diamond by design. <i>Npj Computational Materials</i> , 2020, 6, .	3.5	20
77	Mechanical and electronic properties of ultrathin nanodiamonds under uniaxial compressions. <i>Diamond and Related Materials</i> , 2010, 19, 21-25.	1.8	19
78	Vacancy trapping mechanism for multiple hydrogen and helium in beryllium: a first-principles study. <i>Journal of Physics Condensed Matter</i> , 2012, 24, 095004.	0.7	19
79	Electrogenerated chemiluminescence logic gate operations based on molecule-responsive organic microwires. <i>Nanoscale</i> , 2017, 9, 10397-10403.	2.8	19
80	Preparation of diamond nanocrystals from catalysed carbon black in a high magnetic field. <i>Journal of Physics Condensed Matter</i> , 2003, 15, 8049-8054.	0.7	18
81	Synthesis and photocatalytic activity of N-doped TiO <sub>2</sub> produced in a solid phase reaction. <i>Journal of Physics and Chemistry of Solids</i> , 2013, 74, 286-290.	1.9	18
82	One-pot hydrothermal synthesis of TiO <sub>2</sub> /RCN heterojunction photocatalyst for production of hydrogen and rhodamine B degradation. <i>Applied Surface Science</i> , 2019, 493, 202-211.	3.1	18
83	Fabrication of alveolate g-C <sub>3</sub> N <sub>4</sub> with nitrogen vacancies via cobalt introduction for efficient photocatalytic hydrogen evolution. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 24792-24806.	3.8	18
84	Lowest-energy endohedral fullerene structure of Si <sub>60</sub> from a genetic algorithm and density-functional theory. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 226208.	0.7	17
85	First principles studies on the structural, elastic, electronic properties and heats of formation of Mg <sup>2+</sup> -AE (AE=Ca, Sr, Ba) intermetallics. <i>Intermetallics</i> , 2013, 32, 156-161.	1.8	16
86	Stress-Induced Grain Growth in an Ultra-Fine Grained Al Alloy. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2014, 45, 795-810.	1.0	16
87	Temperature-dependent hardness of zinc-blende structured covalent materials. <i>Science China Materials</i> , 2021, 64, 2280-2288.	3.5	16
88	Geometry dependent current-voltage characteristics of ZnO nanostructures: A combined nonequilibrium Green's function and density functional theory study. <i>Applied Physics Letters</i> , 2009, 95, .	1.5	15
89	Synergetic effect of H and He with vacancy in vanadium solid from first-principles simulations. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2013, 303, 75-80.	0.6	15
90	{111}-specific twinning structures in nonstoichiometric ZrC <sub>0.6</sub> with ordered carbon vacancies. <i>Journal of Applied Crystallography</i> , 2013, 46, 43-47.	1.9	15

#	ARTICLE	IF	CITATIONS
91	Small onion-like BN leads to ultrafine-twinned cubic BN. <i>Science China Materials</i> , 2019, 62, 1169-1176.	3.5	15
92	Mechanism of hydrogen production via water splitting on 3C-SiC's different surfaces: A first-principles study. <i>Computational Materials Science</i> , 2014, 95, 451-455.	1.4	14
93	Mechanical and thermal properties of $\beta$ -Mg <sub>2</sub> SiO <sub>4</sub> under high temperature and high pressure conditions such as in mantle: A first principles study. <i>Journal of Chemical Physics</i> , 2015, 143, 104503.	1.2	14
94	Thermal Conductivity of Diamond/SiC Nano-Polycrystalline Composites and Phonon Scattering at Interfaces. <i>ACS Omega</i> , 2017, 2, 2344-2350.	1.6	14
95	Study of the stability of n-diamond. <i>Journal of Physics Condensed Matter</i> , 2004, 16, 2991-2994.	0.7	13
96	A promising new class of plasticine: Metallic plasticine. <i>Journal of Materials Science and Technology</i> , 2018, 34, 344-348.	5.6	13
97	Rice Husk-Based 3D Porous Silicon/Carbon Nanocomposites as Anode for Lithium-Ion Batteries. <i>Energy Technology</i> , 2019, 7, 1800787.	1.8	13
98	n-diamond from catalysed carbon nanotubes: synthesis and crystal structure. <i>Journal of Physics Condensed Matter</i> , 2005, 17, L513-L519.	0.7	12
99	Hydrogen-doped cubic diamond and the crystal structure of n-diamond. <i>Chemical Physics Letters</i> , 2011, 516, 230-232.	1.2	12
100	Structural, elastic, electronic properties and heats of formation of Ca-Zn intermetallics from first principles calculations. <i>Journal of Alloys and Compounds</i> , 2012, 524, 53-58.	2.8	12
101	Homogeneous and heterogeneous dislocation nucleation in diamond. <i>Diamond and Related Materials</i> , 2018, 88, 110-117.	1.8	12
102	Formation mechanism of diamond nanocrystal from catalysed carbon black. <i>Journal of Physics Condensed Matter</i> , 2004, 16, 6891-6895.	0.7	11
103	Numerical simulation of the combined effects of plasma heating and neutron heating loads on the ITER first wall. <i>Fusion Engineering and Design</i> , 2011, 86, 45-50.	1.0	11
104	Influence of growth temperature on the structure, composition and bonding character of nitrogen-doped multiwalled carbon nanotubes. <i>Journal of Materials Research</i> , 2011, 26, 443-448.	1.2	10
105	A first-principle study of the structural and electronic properties of amorphous Cu-Zr alloys. <i>Science China: Physics, Mechanics and Astronomy</i> , 2011, 54, 249-255.	2.0	10
106	Tian et al. reply. <i>Nature</i> , 2013, 502, E2-E3.	13.7	10
107	Organic nanoparticle of 9,10-bis(phenylethynyl)anthracene: a novel electrochemiluminescence emitter for sensory detection of amines. <i>New Journal of Chemistry</i> , 2014, 38, 902.	1.4	10
108	Hidden electronic rule in the "cluster-plus-glue-atom" model. <i>Scientific Reports</i> , 2016, 6, 33672.	1.6	10

#	ARTICLE	IF	CITATIONS
109	Low thermal conductivity in Si/Ge hetero-twinned superlattices. RSC Advances, 2017, 7, 29959-29965.	1.7	10
110	Effect of a coupling agent on the electromagnetic and mechanical properties of carbon black/acrylonitrile- <i>butadiene</i> -styrene composites. Journal of Applied Polymer Science, 2006, 102, 1839-1843.	1.3	9
111	Instabilities in cubic diamond under non-hydrostatic compressive stress. Diamond and Related Materials, 2008, 17, 1353-1355.	1.8	9
112	Phase stability limit of c-BN under hydrostatic and non-hydrostatic pressure conditions. Journal of Chemical Physics, 2014, 140, 164704.	1.2	9
113	Electrochemical Potential Derived from Atomic Cluster Structures. Journal of Physical Chemistry Letters, 2016, 7, 567-571.	2.1	9
114	Is hardness constant in covalent materials?. Journal of Materials Science and Technology, 2022, 114, 215-221.	5.6	9
115	Numerical simulation of the temperature field in laser-driven flyer plates by high power nanosecond laser-material interactions. Journal Physics D: Applied Physics, 2009, 42, 225302.	1.3	8
116	Infrared spectra of hydrogenated nanodiamonds by first-principles simulations. Physica E: Low-Dimensional Systems and Nanostructures, 2009, 41, 1427-1432.	1.3	8
117	First-principles study of the binary Ni <sub>60</sub> Ta <sub>40</sub> metallic glass: The atomic structure and elastic properties. Journal of Non-Crystalline Solids, 2012, 358, 1730-1734.	1.5	8
118	Structure and Stability of the Stoichiometric Al <sub>3</sub> Fe Phase. Metals, 2019, 9, 1322.	1.0	8
119	Ultrafast formation of a transient two-dimensional diamondlike structure in twisted bilayer graphene. Physical Review B, 2020, 102, .	1.1	8
120	Pressure dependent phase stability transformations of GaS: A first principles study. Materials Science in Semiconductor Processing, 2010, 13, 295-297.	1.9	7
121	Relative stability of nanosized $\beta$ -C <sub>3</sub> N <sub>4</sub> and graphitic C <sub>3</sub> N <sub>4</sub> from first principles calculations. Physica E: Low-Dimensional Systems and Nanostructures, 2012, 45, 190-193.	1.3	7
122	Carbon-doped K <sub>4</sub> nitrogen: A novel high energy density material. Chemical Physics Letters, 2011, 506, 175-178.	1.2	6
123	Pressure-dependent mechanical stability of simple cubic carbon. Physica B: Condensed Matter, 2011, 406, 2654-2657.	1.3	6
124	Transformation Mechanism from Carbon Nanotubes to n-diamond. Journal of Materials Research, 2005, 20, 1485-1489.	1.2	5
125	Electron back-scattering diffraction preliminary analysis of heterogeneous nuclei in magnesium alloy during solidification process under GPa high pressure. Journal of Rare Earths, 2018, 36, 184-189.	2.5	5
126	Co <sub>4</sub> N/Co <sub>2</sub> C@rGO with Abundant Co-C and N-C Bonds as Highly Efficient Electrocatalyst for N <sub>2</sub> Reduction. ACS Sustainable Chemistry and Engineering, 2021, 9, 1373-1382.	3.2	5



#	ARTICLE	IF	CITATIONS
127	Time-evolutional X-ray diffraction of n-diamond: An intermediate state between fcc and diamond structure. <i>Diamond and Related Materials</i> , 2006, 15, 1323-1328.	1.8	4
128	Trigohexagonite. <i>Journal of Mathematical Chemistry</i> , 2010, 48, 816-826.	0.7	4
129	Influence of High-pressure Quenching on the Microstructure, Martensite Transformation, and Mechanical Properties of 0.2 Mass% C Steel. <i>ISIJ International</i> , 2021, 61, 2292-2298.	0.6	4
130	Temperature-dependent elastic and plastic properties of $\hat{1}\pm 2$ -Ti3Al. <i>Intermetallics</i> , 2021, 139, 107368.	1.8	4
131	Novel Carbon Nanotube Peapods Encapsulating Au <sub>32</sub> Golden Fullerene. <i>Journal of Computational and Theoretical Nanoscience</i> , 2006, 3, 459-462.	0.4	4
132	Molecular Dynamics Study on ZnO Nanowires Mechanical Properties: Strain Rate, Temperature and Size Dependent Effects. <i>Journal of Computational and Theoretical Nanoscience</i> , 2012, 9, 2138-2143.	0.4	3
133	Isoglitter. <i>Journal of Mathematical Chemistry</i> , 2012, 50, 2281-2290.	0.7	3
134	Mechanical stabilities of K4 carbon and K4-like NaC2. <i>Journal of Physics and Chemistry of Solids</i> , 2012, 73, 1264-1267.	1.9	3
135	Synthesis, Thermal Properties and Application of Nanodiamond. , 2017, , 85-112.		3
136	Preparing LaMnO3 nanocrystals on surface graphitized micro-diamond for efficient oxygen reduction. <i>Journal of Alloys and Compounds</i> , 2019, 807, 151684.	2.8	3
137	High bond difference parameter-induced low thermal transmission in carbon allotropes with sp2 and sp3 hybridization. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 12611-12619.	1.3	3
138	Plastic Deformation and Strengthening Mechanisms of Nanopolycrystalline Diamond. <i>ACS Nano</i> , 2021, 15, 8283-8294.	7.3	3
139	Strain Effects and Temperature-Dependent Phase Stability of II-VI Semiconductor Nanostructures. , 2010, , .		2
140	Can twins enhance the elastic stiffness of face-centered-cubic metals?. <i>Computational Materials Science</i> , 2014, 89, 24-29.	1.4	2
141	Enhancement of photocatalysis for H2 evolution on annealed Nano-Titania. <i>Materials Science in Semiconductor Processing</i> , 2014, 25, 153-158.	1.9	2
142	Structural property-induced different phonon-twin-boundary scattering in diamond. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 3874-3882.	1.3	2
143	Carrier envelope phase retrieval of a multi-cycle pulse by heterodyne mixing of a pulse containing a few cycles. <i>Laser Physics</i> , 2013, 23, 025301.	0.6	1
144	Order in metallic glass: Maximum uniformity distribution of cluster electrochemical potential. <i>Materials Chemistry and Physics</i> , 2018, 215, 305-309.	2.0	1

#	ARTICLE	IF	CITATIONS
145	Topological Dirac Nodalâ€Line Structure in Orthorhombicâ€Ti <sub>3</sub> N <sub>2</sub> . Advanced Theory and Simulations, 2018, 1, 1700018.	1.3	0
146	Photo-induced ultrafast phase transition in twisted bilayer graphene. Microscopy and Microanalysis, 2021, 27, 2954-2956.	0.2	0
147	Research on Mutation Parameters of Cloud Evolutionary Strategy. , 2015, , .		0
148	The Three-Dimensional Practice Teaching System in Software Engineering Based on CDIO. , 2015, , .		0