Bin Wen

List of Publications by Year in Descending Order

146 papers	5,162 citations	34 h-index	67 g-index
150 ext. papers	6,018 ext. citations	5.7 avg, IF	5.62 L-index

#	Paper	IF	Citations
146	Is hardness constant in covalent materials?. *Journal of Materials Science and Technology*, **2022**, 114, 215-221	9.1	0
145	Discovery of carbon-based strongest and hardest amorphous material.. *National Science Review*, **2022**, 9, nwab140	10.8	16
144	Temperature-dependent hardness of zinc-blende structured covalent materials. *Science China Materials*, **2021**, 64, 2280-2288	7.1	3
143	Plastic Deformation and Strengthening Mechanisms of Nanopolycrystalline Diamond. *ACS Nano*, **2021**, 15, 8283-8294	16.7	2
142	In situ synthesis of 2D ultrathin cobalt doped g-C3N4 nanosheets enhances photocatalytic performance by accelerating charge transfer. *Journal of Alloys and Compounds*, **2021**, 859, 157754	5.7	21
141	Photo-induced ultrafast phase transition in twisted bilayer graphene. *Microscopy and Microanalysis*, **2021**, 27, 2954-2956	0.5	
140	Co4N/Co2C@rGO with Abundant Co□ and N□ Bonds as Highly Efficient Electrocatalyst for N2 Reduction. *ACS Sustainable Chemistry and Engineering*, **2021**, 9, 1373-1382	8.3	4
139	Influence of High-pressure Quenching on the Microstructure, Martensite Transformation, and Mechanical Properties of 0.2 Mass% C Steel. *ISIJ International*, **2021**, 61, 2292-2298	1.7	2
138	Temperature-dependent elastic and plastic properties of □-Ti3Al. *Intermetallics*, **2021**, 139, 107368	3.5	1
137	Structural property-induced different phonon-twin-boundary scattering in diamond. *Physical Chemistry Chemical Physics*, **2021**, 23, 3874-3882	3.6	1
136	Ultrafast formation of a transient two-dimensional diamondlike structure in twisted bilayer graphene. *Physical Review B*, **2020**, 102,	3.3	5
135	Fabrication of alveolate g-C3N4 with nitrogen vacancies via cobalt introduction for efficient photocatalytic hydrogen evolution. *International Journal of Hydrogen Energy*, **2020**, 45, 24792-24806	6.7	5
134	Intersectional nanotwinned diamond-the hardest polycrystalline diamond by design. *Npj Computational Materials*, **2020**, 6,	10.9	8
133	Epitaxial growth of dual-color-emitting organic heterostructures via binary solvent synergism driven sequential crystallization. *Nanoscale*, **2019**, 11, 7111-7116	7.7	20
132	High bond difference parameter-induced low thermal transmission in carbon allotropes with sp and sp hybridization. *Physical Chemistry Chemical Physics*, **2019**, 21, 12611-12619	3.6	3
131	Potential high-Tc superconductivity in CaYH12 under pressure. *Physical Review B*, **2019**, 99,	3.3	53
130	Small onion-like BN leads to ultrafine-twinned cubic BN. *Science China Materials*, **2019**, 62, 1169-1176	7.1	9

129	Preparing LaMnO3 nanocrystals on surface graphitized micro-diamond for efficient oxygen reduction. *Journal of Alloys and Compounds*, **2019**, 807, 151684	5.7	2
128	Ternary BiVO4/NiS/Au nanocomposites with efficient charge separations for enhanced visible light photocatalytic performance. *Chemical Engineering Journal*, **2019**, 375, 122093	14.7	59
127	One-pot hydrothermal synthesis of TiO2/RCN heterojunction photocatalyst for production of hydrogen and rhodamine B degradation. *Applied Surface Science*, **2019**, 493, 202-211	6.7	8
126	Regulating Polymerization in Graphitic Carbon Nitride To Improve Photocatalytic Activity. *Chemistry of Materials*, **2019**, 31, 9188-9199	9.6	28
125	Rice Husk-Based 3D Porous Silicon/Carbon Nanocomposites as Anode for Lithium-Ion Batteries. *Energy Technology*, **2019**, 7, 1800787	3.5	9
124	Structure and Stability of the Stoichiometric Al3Fe Phase. *Metals*, **2019**, 9, 1322	2.3	4
123	Continuous strengthening in nanotwinned diamond. *Npj Computational Materials*, **2019**, 5,	10.9	17
122	Strengthening-softening transition in yield strength of nanotwinned Cu. *Scripta Materialia*, **2019**, 162, 372-376	5.6	12
121	All-in-one improvement toward Li6PS5Br-Based solid electrolytes triggered by compositional tune. *Journal of Power Sources*, **2019**, 410-411, 162-170	8.9	76
120	Homoleptic cyclometalated iridium(III) complex nanowires electrogenerated chemiluminescence sensors for high-performance discrimination of proline enantiomers based on the difference of electron-transfer capability. *Talanta*, **2019**, 194, 98-104	6.2	13
119	Topological Dirac Nodal-Line Structure in Orthorhombic-Ti3N2. *Advanced Theory and Simulations*, **2018**, 1, 1700018	3.5	
118	Engineering Bulk, Layered, Multicomponent Nanostructures with High Energy Density. *Small*, **2018**, 14, e1800619	11	64
117	A promising new class of plasticine: Metallic plasticine. *Journal of Materials Science and Technology*, **2018**, 34, 344-348	9.1	7
116	Synthesis of cubic Na3SbS4 solid electrolyte with enhanced ion transport for all-solid-state sodium-ion batteries. *Electrochimica Acta*, **2018**, 259, 100-109	6.7	42
115	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	3.7	2
114	Hierarchical self-assembly flower-like ammonium nickel phosphate as high-rate performance electrode material for asymmetric supercapacitors with enhanced energy density. *Nanotechnology*, **2018**, 29, 425401	3.4	11
113	Homogeneous and heterogeneous dislocation nucleation in diamond. *Diamond and Related Materials*, **2018**, 88, 110-117	3.5	7
112	Solvent engineering for high conversion yields of layered raw materials into large-scale freestanding hybrid perovskite nanowires. *Nanoscale*, **2018**, 10, 17722-17729	7.7	23

111	Topological Dirac nodal-net fermions in AlB2-type TiB2 and ZrB2. *Physical Review Materials*, **2018**, 2,	3.2	74
110	Monoclinic C16: sp-sp hybridized nodal-line semimetal protected by PT-symmetry. *Carbon*, **2018**, 127, 527-532	10.4	28
109	Dislocation behaviors in nanotwinned diamond. *Science Advances*, **2018**, 4, eaat8195	14.3	24
108	Order in metallic glass: Maximum uniformity distribution of cluster electrochemical potential. *Materials Chemistry and Physics*, **2018**, 215, 305-309	4.4	
107	Body-Centered Tetragonal C : A Novel Topological Node-Line Semimetallic Carbon Composed of Tetrarings. *Small*, **2017**, 13, 1602894	11	49
106	Role of plastic deformation in tailoring ultrafine microstructure in nanotwinned diamond for enhanced hardness. *Science China Materials*, **2017**, 60, 178-185	7.1	18
105	Polymorph-Dependent Electrogenerated Chemiluminescence of Low-Dimensional Organic Semiconductor Structures for Sensing. *ACS Applied Materials & Interfaces*, **2017**, 9, 8891-8899	9.5	29
104	Composition-structure-property correlations of complex metallic alloys described by the cluster-plus-glue-atom model. *Applied Materials Today*, **2017**, 7, 13-46	6.6	24
103	Novel Bimorphological Anisotropic Bulk Nanocomposite Materials with High Energy Products. *Advanced Materials*, **2017**, 29, 1606430	24	141
102	Controllably Manipulating Three-Dimensional Hybrid Nanostructures for Bulk Nanocomposites with Large Energy Products. *Nano Letters*, **2017**, 17, 2985-2993	11.5	126
101	Ultrahigh hardness on a face-centered cubic metal. *Applied Surface Science*, **2017**, 416, 891-900	6.7	38
100	Low thermal conductivity in Si/Ge hetero-twinned superlattices. *RSC Advances*, **2017**, 7, 29959-29965	3.7	8
99	Synthesis, Thermal Properties and Application of Nanodiamond **2017**, 85-112		2
98	Thermal Conductivity of Diamond/SiC Nano-Polycrystalline Composites and Phonon Scattering at Interfaces. *ACS Omega*, **2017**, 2, 2344-2350	3.9	8
97	Electrogenerated chemiluminescence logic gate operations based on molecule-responsive organic microwires. *Nanoscale*, **2017**, 9, 10397-10403	7.7	14
96	Electrochemical Potential Derived from Atomic Cluster Structures. *Journal of Physical Chemistry Letters*, **2016**, 7, 567-71	6.4	9
95	Three Dimensional Metallic Carbon from Distorting sp3-Bond. *Crystal Growth and Design*, **2016**, 16, 1360-1365	3.9	28
94	Novel three dimensional topological nodal line semimetallic carbon. *Carbon*, **2016**, 98, 468-473	10.4	29

93	Weak phonon scattering effect of twin boundaries on thermal transmission. *Scientific Reports*, **2016**, 6, 19575	4.9	20
92	Hidden electronic rule in the "cluster-plus-glue-atom" model. *Scientific Reports*, **2016**, 6, 33672	4.9	9
91	A novel approach to fabricating a nanotwinned surface on a ternary nickel alloy. *Materials and Design*, **2016**, 106, 313-320	8.1	29
90	Cluster characteristics and physical properties of binary Al□r intermetallic compounds from first principles studies. *Computational Materials Science*, **2015**, 103, 170-178	3.2	19
89	Mechanical and thermal properties of □Mg2SiO4 under high temperature and high pressure conditions such as in mantle: A first principles study. *Journal of Chemical Physics*, **2015**, 143, 104503	3.9	12
88	An analytical model for stress-induced grain growth in the presence of both second-phase particles and solute segregation at grain boundaries. *Acta Materialia*, **2015**, 82, 304-315	8.4	40
87	Nanoarchitectured materials composed of fullerene-like spheroids and disordered graphene layers with tunable mechanical properties. *Nature Communications*, **2015**, 6, 6212	17.4	43
86	Relative importance of grain boundaries and size effects in thermal conductivity of nanocrystalline materials. *Scientific Reports*, **2014**, 4, 7037	4.9	109
85	A promising new class of high-temperature alloys: eutectic high-entropy alloys. *Scientific Reports*, **2014**, 4, 6200	4.9	604
84	Temperature-dependent mechanical properties of alpha-/beta-Nb5Si3 phases from first-principles calculations. *Intermetallics*, **2014**, 46, 72-79	3.5	26
83	Organic nanoparticle of 9,10-bis(phenylethynyl)anthracene: a novel electrochemiluminescence emitter for sensory detection of amines. *New Journal of Chemistry*, **2014**, 38, 902	3.6	7
82	Phase stability, elastic and electronic properties of Cu□r binary system intermetallic compounds: A first-principles study. *Journal of Alloys and Compounds*, **2014**, 588, 96-102	5.7	55
81	Phase transformation of cadmium sulfide under high temperature and high pressure conditions. *Physical Chemistry Chemical Physics*, **2014**, 16, 14899-904	3.6	17
80	Stress-Induced Grain Growth in an Ultra-Fine Grained Al Alloy. *Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science*, **2014**, 45, 795-810	2.5	15
79	First-principles studies on structural, mechanical, thermodynamic and electronic properties of Ni□r intermetallic compounds. *Intermetallics*, **2014**, 54, 110-119	3.5	55
78	Can twins enhance the elastic stiffness of face-centered-cubic metals?. *Computational Materials Science*, **2014**, 89, 24-29	3.2	2
77	Enhancement of photocatalysis for H2 evolution on annealed Nano-Titania. *Materials Science in Semiconductor Processing*, **2014**, 25, 153-158	4.3	2
76	Nanotwinned diamond with unprecedented hardness and stability. *Nature*, **2014**, 510, 250-3	50.4	440

75	Stress-Induced Grain Growth in an Ultra-Fine Grained Al Alloy. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2014**, 45, 2673-2688	2.3	19
74	Determining characteristic principal clusters in the cluster-plus-glue-atom model. *Acta Materialia*, **2014**, 75, 113-121	8.4	28
73	Phase stability limit of c-BN under hydrostatic and non-hydrostatic pressure conditions. *Journal of Chemical Physics*, **2014**, 140, 164704	3.9	7
72	Mechanism of hydrogen production via water splitting on 3C-SiC different surfaces: A first-principles study. *Computational Materials Science*, **2014**, 95, 451-455	3.2	13
71	Compressed carbon nanotubes: a family of new multifunctional carbon allotropes. *Scientific Reports* , **2013**, 3, 1331	4.9	73
70	First principles studies on the structural, elastic, electronic properties and heats of formation of MgAE (AE = Ca, Sr, Ba) intermetallics. *Intermetallics*, **2013**, 32, 156-161	3.5	14
69	Synthesis and photocatalytic activity of N-doped TiO2 produced in a solid phase reaction. *Journal of Physics and Chemistry of Solids*, **2013**, 74, 286-290	3.9	16
68	Ultrahard nanotwinned cubic boron nitride. *Nature*, **2013**, 493, 385-8	50.4	519
67	Synergetic effect of H and He with vacancy in vanadium solid from first-principles simulations. *Nuclear Instruments & Methods in Physics Research B*, **2013**, 303, 75-80	1.2	11
66	{111}-specific twinning structures in nonstoichiometric ZrC0.6with ordered carbon vacancies. *Journal of Applied Crystallography*, **2013**, 46, 43-47	3.8	12
65	Temperature and pressure dependent geometry optimization and elastic constant calculations for arbitrary symmetry crystals: Applications to MgSiO3 perovskites. *Journal of Applied Physics*, **2013**, 113, 103501	2.5	17
64	Tian et al. reply. *Nature*, **2013**, 502, E2-3	50.4	10
63	Carrier envelope phase retrieval of a multi-cycle pulse by heterodyne mixing of a pulse containing a few cycles. *Laser Physics*, **2013**, 23, 025301	1.2	1
62	Retention and diffusion of H, He, O, C impurities in Be. *Journal of Nuclear Materials*, **2012**, 423, 164-169	3.3	26
61	Trapping of multiple hydrogen atoms in a vanadium monovacancy: A first-principles study. *Journal of Nuclear Materials*, **2012**, 429, 216-220	3.3	32
60	First-principles studies of Ni a intermetallic compounds. *Journal of Solid State Chemistry*, **2012**, 187, 211-218	3.3	23
59	First-principle study of the structural, electronic, and magnetic properties of amorphous FeB alloys. *Physica B: Condensed Matter*, **2012**, 407, 250-257	2.8	31
58	Ab initio molecular dynamics simulation of binary Ni62.5Nb37.5 bulk metallic glass: validation of the cluster-plus-glue-atom model. *Journal of Materials Science*, **2012**, 47, 7628-7634	4.3	22

57	Isoglitter. *Journal of Mathematical Chemistry*, **2012**, 50, 2281-2290	2.1	3
56	High-pressure synthesis of phonon-glass electron-crystal featured thermoelectric LixCo4Sb12. *Acta Materialia*, **2012**, 60, 1246-1251	8.4	61
55	Mechanical stabilities of K4 carbon and K4-like NaC2. *Journal of Physics and Chemistry of Solids*, **2012**, 73, 1264-1267	3.9	3
54	Two-photon fluorescent microporous bithiophene polymer via Suzuki cross-coupling. *Chemical Communications*, **2012**, 48, 9519-21	5.8	38
53	Vacancy trapping mechanism for multiple hydrogen and helium in beryllium: a first-principles study. *Journal of Physics Condensed Matter*, **2012**, 24, 095004	1.8	12
52	Relative stability of nanosized □C3N4 and graphitic C3N4 from first principles calculations. *Physica E: Low-Dimensional Systems and Nanostructures*, **2012**, 45, 190-193	3	7
51	Structural, elastic, electronic properties and heats of formation of Ca□n intermetallics from first principles calculations. *Journal of Alloys and Compounds*, **2012**, 524, 53-58	5.7	8
50	First-principles study of the binary Ni60Ta40 metallic glass: The atomic structure and elastic properties. *Journal of Non-Crystalline Solids*, **2012**, 358, 1730-1734	3.9	8
49	Temperature dependent elastic constants for crystals with arbitrary symmetry: Combined first principles and continuum elasticity theory. *Journal of Applied Physics*, **2012**, 111, 083525	2.5	37
48	Temperature dependent elastic constants and ultimate strength of graphene and graphyne. *Journal of Chemical Physics*, **2012**, 137, 194901	3.9	76
47	Molecular Dynamics Study on ZnO Nanowires Mechanical Properties: Strain Rate, Temperature and Size Dependent Effects. *Journal of Computational and Theoretical Nanoscience*, **2012**, 9, 2138-2143	0.3	3
46	Body-centered tetragonal B2N2: a novel sp3 bonding boron nitride polymorph. *Physical Chemistry Chemical Physics*, **2011**, 13, 14565-70	3.6	65
45	Novel superhard carbon: C-centered orthorhombic C8. *Physical Review Letters*, **2011**, 107, 215502	7.4	198
44	Influence of growth temperature on the structure, composition and bonding character of nitrogen-doped multiwalled carbon nanotubes. *Journal of Materials Research*, **2011**, 26, 443-448	2.5	7
43	Stability and dissolution of helium□vacancy complexes in vanadium solid. *Journal of Nuclear Materials*, **2011**, 419, 1-8	3.3	45
42	Preparation and electrochemical properties of nitrogen-doped multi-walled carbon nanotubes. *Materials Letters*, **2011**, 65, 49-52	3.3	28
41	Hydrogen-doped cubic diamond and the crystal structure of n-diamond. *Chemical Physics Letters*, **2011**, 516, 230-232	2.5	11
40	A first-principle study of the structural and electronic properties of amorphous Cu-Zr alloys. *Science China: Physics, Mechanics and Astronomy*, **2011**, 54, 249-255	3.6	10

39	Molecular dynamics study on diamond nanowires mechanical properties: Strain rate, temperature and size dependent effects. *Diamond and Related Materials*, **2011**, 20, 551-555	3.5	29
38	Carbon-doped K4 nitrogen: A novel high energy density material. *Chemical Physics Letters*, **2011**, 506, 175-178	2.5	6
37	Pressure-dependent mechanical stability of simple cubic carbon. *Physica B: Condensed Matter*, **2011**, 406, 2654-2657	2.8	6
36	Numerical simulation of the combined effects of plasma heating and neutron heating loads on the ITER first wall. *Fusion Engineering and Design*, **2011**, 86, 45-50	1.7	11
35	First-principles study of hydrogen behavior in V□Cr□Ti alloys. *Nuclear Instruments & Methods in Physics Research B*, **2011**, 269, 1735-1739	1.2	21
34	Stability and migration property of helium and self defects in vanadium and V□Cr□Ti alloy by first-principles. *Journal of Nuclear Materials*, **2011**, 413, 90-94	3.3	34
33	Ab initio molecular dynamics simulation of binary Cu64Zr36 bulk metallic glass: Validation of the cluster-plus-glue-atom model. *Journal of Applied Physics*, **2011**, 109, 123520	2.5	37
32	Strain Effects and Temperature-Dependent Phase Stability of II-VI Semiconductor Nanostructures **2010**,		2
31	Theoretical exploration of laser-parameter effects on the generation of an isolated attosecond pulse from two-color high-order harmonic generation. *Physical Review A*, **2010**, 82,	2.6	23
30	Mechanical and electronic properties of ultrathin nanodiamonds under uniaxial compressions. *Diamond and Related Materials*, **2010**, 19, 21-25	3.5	15
29	First-principle studies of Ca□X (X=Si,Ge,Sn,Pb) intermetallic compounds. *Journal of Solid State Chemistry*, **2010**, 183, 136-143	3.3	47
28	Trigohexagonite. *Journal of Mathematical Chemistry*, **2010**, 48, 816-826	2.1	2
27	Geometry and temperature dependent thermal conductivity of diamond nanowires: A non-equilibrium molecular dynamics study. *Physica E: Low-Dimensional Systems and Nanostructures*, **2010**, 43, 155-160	3	34
26	Pressure dependent phase stability transformations of GaS: A first principles study. *Materials Science in Semiconductor Processing*, **2010**, 13, 295-297	4.3	7
25	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	3	5
24	Infrared spectra of hydrogenated nanodiamonds by first-principles simulations. *Physica E: Low-Dimensional Systems and Nanostructures*, **2009**, 41, 1427-1432	3	8
23	First-principles studies of Al□Ni intermetallic compounds. *Journal of Solid State Chemistry*, **2009**, 182, 2664-2669	3.3	118
22	Geometry dependent current-voltage characteristics of ZnO nanostructures: A combined nonequilibrium Green□s function and density functional theory study. *Applied Physics Letters*, **2009**, 95, 192101	3.4	15

21	First-principles studies of diamond polytypes. *Diamond and Related Materials*, **2008**, 17, 356-364	3.5	53
20	Instabilities in cubic diamond under non-hydrostatic compressive stress. *Diamond and Related Materials*, **2008**, 17, 1353-1355	3.5	9
19	First-principle studies of AlRu intermetallic compounds. *Intermetallics*, **2008**, 16, 333-339	3.5	40
18	First principles molecular dynamics study of CdS nanostructure temperature-dependent phase stability. *Applied Physics Letters*, **2008**, 92, 261911	3.4	41
17	Relative stability of nanosized wurtzite and graphitic ZnO from density functional theory. *Chemical Physics Letters*, **2008**, 466, 84-87	2.5	22
16	Relative stability of hydrogenated nanodiamond and nanographite from density function theory. *Chemical Physics Letters*, **2007**, 441, 318-321	2.5	21
15	Effect of doping MnO2 on magnetic properties for M-type barium ferrite. *Journal of Magnetism and Magnetic Materials*, **2007**, 311, 507-511	2.8	31
14	Lowest-energy endohedral fullerene structure of Si60from a genetic algorithm and density-functional theory. *Journal of Physics Condensed Matter*, **2007**, 19, 226208	1.8	16
13	Effect of a coupling agent on the electromagnetic and mechanical properties of carbon black/acrylonitrileButadieneStyrene composites. *Journal of Applied Polymer Science*, **2006**, 102, 1839-1843	2.9	8
12	A Discrete Slab Absorber: Absorption Efficiency and Theory Analysis. *Journal of Composite Materials* , **2006**, 40, 1841-1851	2.7	30
11	Time-evolutional X-ray diffraction of n-diamond: An intermediate state between fcc and diamond structure. *Diamond and Related Materials*, **2006**, 15, 1323-1328	3.5	4
10	Electromagnetic wave absorption properties of carbon powder from catalysed carbon black in X and Ku bands. *Journal Physics D: Applied Physics*, **2006**, 39, 1960-1962	3	23
9	n-diamond: an intermediate state between rhombohedral graphite and diamond?. *New Journal of Physics*, **2006**, 8, 62-62	2.9	20
8	Comparative study of hydrogen adsorption on carbon and BN nanotubes. *Journal of Physical Chemistry B*, **2006**, 110, 13363-9	3.4	149
7	Novel Carbon Nanotube Peapods Encapsulating Au32 Golden Fullerene. *Journal of Computational and Theoretical Nanoscience*, **2006**, 3, 459-462	0.3	4
6	Transformation mechanism from carbon nanotubes to n-diamond. *Journal of Materials Research*, **2005**, 20, 1485-1489	2.5	5
5	Reduced Li diffusion barriers in composite BC3 nanotubes. *Chemical Physics Letters*, **2005**, 415, 323-326	2.5	31
4	n-diamond from catalysed carbon nanotubes: synthesis and crystal structure. *Journal of Physics Condensed Matter*, **2005**, 17, L513-L519	1.8	10

3	Formation mechanism of diamond nanocrystal from catalysed carbon black. *Journal of Physics Condensed Matter*, **2004**, 16, 6891-6895	1.8	11
2	Study of the stability of n-diamond. *Journal of Physics Condensed Matter*, **2004**, 16, 2991-2994	1.8	13
1	Preparation of diamond nanocrystals from catalysed carbon black in a high magnetic field. *Journal of Physics Condensed Matter*, **2003**, 15, 8049-8054	1.8	16