Hai-jun Zhang

List of Publications by Year
in descending order

99 papers	12,803 citations	71102 41 h-index	34986 98 g-index
99 all docs	99 docs citations	99 times ranked	14192 citing authors

#	Article	IF	Citations
1	Constructing Fe/Fe3C nanocrystals with Fe-Nx sites in Feâ€“Nâ€“C electrocatalyst to achieve high performance for solar cells. Applied Catalysis B: Environmental, 2022, 300, 120726.	20.2	29
2	Advanced high-temperature (RT-1100Â°C) resistant adhesion technique for joining dissimilar ZrO2 ceramic and TC4 superalloys based on an inorganic/organic hybrid adhesive. Ceramics International, 2022, 48, 3081-3095.	4.8	9
3	Cell membrane-coated nanoparticles as peroxidase mimetics for cancer cell targeted detection and therapy. Talanta, 2022, 238, 123071.	5.5	12
4	Experimental evidence for dissipationless transport of the chiral edge state of the high-field Chern insulator in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>MnBi</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mr nanodevices. Physical Review B, 2022, 105, .	3.2	15
5	Anisotropic Scattering Caused by Apical Oxygen Vacancies in Thin Films of Overdoped High-Temperature Cuprate Superconductors. Physical Review Letters, 2022, 128, 137001.	7.8	10
6	Coexistence of pressure-induced superconductivity and topological surface states in elementary substance Sb. Physical Review Materials, 2022, 6, .	2.4	1
7	Interface-induced sign reversal of the anomalous Hall effect in magnetic topological insulator heterostructures. Nature Communications, 2021, 12, 79.	12.8	31
8	Pressure-stabilized GdN₆ with an armchairâ€“antiarmchair structure as a high energy density material. Journal of Materials Chemistry A, 2021, 9, 16751-16758.	10.3	18
9	Evidence of topological nodal lines and surface states in the centrosymmetric superconductor <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">SnTaS</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>. Physical Review B, 2021, 103, .	3.2	15
10	Composition-dependent micro-structure and photocatalytic performance of g-C3N4 quantum dots@SnS2 heterojunction. Nano Research, 2021, 14, 4188-4196.	10.4	26
11	Magnetism-induced ideal Weyl state in bulk van der Waals crystal MnSb2Te4. Applied Physics Letters, 2021, 118, .	3.3	14
12	Electrostatic and electrochemical charging mechanisms for electric-double-layer gating media based on a crystalline LaF3 solid electrolyte. APL Materials, 2021, 9, .	5.1	2
13	Convenient synthesis of one-dimensional a-SEP@LDH via self-assembly towards simultaneously improved fire retardance, mechanical strength and thermal resistance for epoxy resin. Composites Part B: Engineering, 2021, 216, 108857.	12.0	31
14	Tunable dynamical magnetoelectric effect in antiferromagnetic topological insulator MnBi2Te4 films. Npj Computational Materials, 2021, 7, .	8.7	14
15	Coexistence of ferromagnetism and topology by charge carrier engineering in the intrinsic magnetic topological insulator <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mn</mml:mi><mml:msub><mml:mi>Bi</mml:mi><mml:mn Physical Review B, 2021, 104, .	3.2	15
16	The preparation of a composite flame retardant of layered double hydroxides and Î±-zirconium phosphate and its modification for epoxy resin. Materials Today Communications, 2021, 28, 102711.	1.9	12
17	Nonlinear level attraction of cavity axion polariton in antiferromagnetic topological insulator. Physical Review B, 2021, 104, .	3.2	9
18	Direct Observation of Global Elastic Intervalley Scattering Induced by Impurities on Graphene. Nano Letters, 2021, 21, 8258-8265.	9.1	9

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19	Theoretical and experimental insights into the effects of halogen composition on the thermal decomposition details, as well as the fire-suppressing mechanism and performance of CF₃CXi€€H₂ (X = F, Cl, Br). Physical Chemistry Chemical Physics, 2021, 23, 11411-11423.	2.8	10
20	Toward Better Halon Substitutes: Theoretical and Experimental Studies on the Pyrolysis Mechanism and Fire-Suppressing Performance of C₅F₁₀O (Perfluoro-3-methyl-2-butanone). ACS Sustainable Chemistry and Engineering, 2021, 9, 1272-1285.	6.7	9
21	Direct Visualization and Manipulation of Tunable Quantum Well State in Semiconducting Nb₂SiTe₄. ACS Nano, 2021, 15, 15850-15857.	14.6	2
22	Composites of Layered Double Hydroxide Nanosheets, Hydroxy-Functionalized Carbon Nanotubes, and Hydroxyapatite Nanoparticles as Flame Retardants for Epoxy Resins. ACS Applied Nano Materials, 2021, 4, 11753-11762.	5.0	25
23	Comparative Study on the Flame Retardancy and Retarding Mechanism of Rare Earth (La, Ce, and) Tj ETQq1 1 0.784314 rgBT /Overlock	3.5	14
24	Repeated administrations of Mn₃O₄ nanoparticles cause testis damage and fertility decrease through PPAR-signaling pathway. Nanotoxicology, 2020, 14, 326-340.	3.0	14
25	Experimental Observation of the Gate-Controlled Reversal of the Anomalous Hall Effect in the Intrinsic Magnetic Topological Insulator MnBi₂Te₄ Device. Nano Letters, 2020, 20, 709-714.	9.1	60
26	Theoretical studies on the BC 2 N monolayers with promising photoelectronic characteristics and remarkable environmental stabilities. International Journal of Quantum Chemistry, 2020, 120, e26120.	2.0	6
27	Large magnetoresistance in topological insulator candidate TaSe3. AIP Advances, 2020, 10, .	1.3	9
28	Thermal Decomposition Mechanism and Fire-Extinguishing Performance of trans-1,1,1,4,4,4-Hexafluoro-2-butene: A Potential Candidate for Halon Substitutes. Journal of Physical Chemistry A, 2020, 124, 5944-5953.	2.5	24
29	In situ growth of SiC nanowires toughened preceramic resin-based adhesive for connecting Cf/C composites in extreme environments. Ceramics International, 2020, 46, 24860-24872.	4.8	7
30	Unconventional dual-vacancies in nickel diselenide-graphene nanocomposite for high-efficiency oxygen evolution catalysis. Nano Research, 2020, 13, 3292-3298.	10.4	16
31	Low-temperature in-situ grown mullite whiskers toughened heat-resistant inorganic adhesive. Journal of Alloys and Compounds, 2020, 836, 155349.	5.5	18
32	Metalâ€“Organic Framework-Derived Strategy for Improving Catalytic Performance of a Chromia-Based Catalyst in the Chlorine/Fluorine Exchange Reactions for Unsaturated Fluorocarbons. ACS Omega, 2020, 5, 13115-13122.	3.5	5
33	The mechanism exploration for zero-field ferromagnetism in intrinsic topological insulator MnBi2Te4 by Bi2Te3 intercalations. Applied Physics Letters, 2020, 116, 221902.	3.3	17
34	Dynamical axion state with hidden pseudospin Chern numbers in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>MnBi</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mn></mml:mn></mml:mrow></mml:math>-based heterostructures. Physical Review B, 2020, 101, .	3.2	31
35	Theoretical and experimental studies on the thermal decomposition and fireâ€extinguishing performance of cisâ€1,1,1,4,4,4â€hexafluoroâ€2â€butene. International Journal of Quantum Chemistry, 2020, 120, e26160.	2.0	11
36	Enhancement of Solarâ€Driven Photocatalytic Activity of BiOI Nanosheets through Predominant Exposed High Energy Facets and Vacancy Engineering. Small, 2020, 16, e1904783.	10.0	54

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37	Be3BN3 monolayer with ultrawide band gap and promising stability for deep ultraviolet applications. Computational Materials Science, 2020, 177, 109552.	3.0	1
38	A Cu₂B₂ monolayer with planar hypercoordinate motifs: an efficient catalyst for CO electroreduction to ethanol. Journal of Materials Chemistry A, 2020, 8, 9607-9615.	10.3	32
39	Photonic non-Hermitian skin effect and non-Bloch bulk-boundary correspondence. Physical Review Research, 2020, 2, .	3.6	116
40	Evidence of anisotropic Majorana bound states in 2M-WS2. Nature Physics, 2019, 15, 1046-1051.	16.7	104
41	Hybrid Acoustic Topological Insulator in Three Dimensions. Physical Review Letters, 2019, 123, 195503.	7.8	26
42	Intrinsic magnetic topological insulator phases in the Sb doped MnBi2Te4 bulks and thin flakes. Nature Communications, 2019, 10, 4469.	12.8	212
43	B₄C₃ Monolayer with Impressive Electronic, Optical, and Mechanical Properties: A Potential Metal-Free Photocatalyst for CO₂ Reduction under Visible Light. Journal of Physical Chemistry C, 2019, 123, 25091-25101.	3.1	19
44	Discovery of Superconductivity in 2M WS₂ with Possible Topological Surface States. Advanced Materials, 2019, 31, e1901942.	21.0	102
45	Topological Axion States in the Magnetic Insulator <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>MnBi</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn> with the Quantized Magnetoelectric Effect. Physical Review Letters, 2019, 122, 206401.	7.8	554
46	Observation of Anomalous <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Ï€</mml:mi></mml:math> Modes in Photonic Floquet Engineering. Physical Review Letters, 2019, 122, 173901.	7.8	98
47	Non-Hermitian nodal-line semimetals with an anomalous bulk-boundary correspondence. Physical Review B, 2019, 99, .	3.2	118
48	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi mathvariant="script">PT</mml:mi></mml:math> -symmetry-protected Dirac states in strain-induced hidden <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>Mo</mml:mi><mml:msub><mml:mi mathvariant="normal">S</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> monolayer. Physical Review B, 2019, 100, .	3.2	9
49	Isoelectronic analogues of graphene: the BCN monolayers with visible-light absorption and high carrier mobility. Journal of Physics Condensed Matter, 2019, 31, 125301.	1.8	22
50	Point Defect Effects on Photoelectronic Properties of the Potential Metal-Free C₂N Photocatalysts: Insight from First-Principles Computations. Journal of Physical Chemistry C, 2018, 122, 5291-5302.	3.1	47
51	Interconnected molybdenum disulfide@tin disulfide heterojunctions with different morphologies: a type of enhanced counter electrode for dye-sensitized solar cells. CrystEngComm, 2018, 20, 1252-1263.	2.6	18
52	Topological Phase Transition-Induced Triaxial Vector Magnetoresistance in (Bi_{1â€“x}In_x)₂Se₃ Nanodevices. ACS Nano, 2018, 12, 1537-1543.	14.6	13
53	Improving Photocatalytic Water Treatment through Nanocrystal Engineering: Mesoporous Nanosheet-Assembled 3D BiOCl Hierarchical Nanostructures That Induce Unprecedented Large Vacancies. Environmental Science & Technology, 2018, 52, 6872-6880.	10.0	63
54	Nano-TiO₂-Catalyzed Dehydrochlorination of 1,1,2,2-Tetrachloroethane: Roles of Crystalline Phase and Exposed Facets. Environmental Science & Technology, 2018, 52, 4031-4039.	10.0	14

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55	Observation of Coulomb gap in the quantum spin Hall candidate single-layer 1Tâ€™-WTe2. Nature Communications, 2018, 9, 4071.	12.8	60
56	Theoretical Studies on the Electronic and Optical Properties of Honeycomb BC₃ monolayer: A Promising Candidate for Metal-free Photocatalysts. ACS Omega, 2018, 3, 10517-10525.	3.5	50
57	Porous hexagonal boron oxide monolayer with robust wide band gap: A computational study. FlatChem, 2018, 9, 27-32.	5.6	29
58	Engineering topological phases in the Luttinger semimetal <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î±</mml:mi></mml:math> -Sn. Physical Review B, 2018, 97, .	3.2	47
59	Enhanced electrocatalytic performance of nickel diselenide grown on graphene toward the reduction of triiodide redox couples. RSC Advances, 2018, 8, 28131-28138.	3.6	6
60	Strain- and Fluorination-Induced Quantum Spin Hall Insulators in Blue Phosphorene: A First-Principles Study. Journal of Physical Chemistry C, 2017, 121, 12945-12952.	3.1	36
61	Helicity dependent photocurrent in electrically gated (Bi1âˆ’x Sb x)2Te3 thin films. Nature Communications, 2017, 8, 1037.	12.8	66
62	Strain-induced quantum topological phase transitions in Na3Bi. Physical Review B, 2017, 96, .	3.2	37
63	Functional Group Effects on the Photoelectronic Properties of MXene (Sc2CT2, T = O, F, OH) and Their Possible Photocatalytic Activities. Scientific Reports, 2017, 7, 15095.	3.3	74
64	Revealing Fermi arcs and Weyl nodes in MoTe2 by quasiparticle interference mapping. Physical Review B, 2017, 95, .	3.2	21
65	FeB₆ Monolayers: The Graphene-like Material with Hypercoordinate Transition Metal. Journal of the American Chemical Society, 2016, 138, 5644-5651.	13.7	219
66	Experimental observation of topological Fermi arcs in type-II Weyl semimetal MoTe2. Nature Physics, 2016, 12, 1105-1110.	16.7	663
67	Dirac State in the FeB₂ Monolayer with Graphene-Like Boron Sheet. Nano Letters, 2016, 16, 6124-6129.	9.1	200
68	Classification of stable Dirac and Weyl semimetals with reflection and rotational symmetry. Physical Review B, 2016, 93, .	3.2	60
69	Semiconductor-topological insulator transition of two-dimensional SbAs induced by biaxial tensile strain. Physical Review B, 2016, 93, .	3.2	118
70	Ideal Weyl Semimetals in the Chalcopyrites<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>CuTlSe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn> <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>AgTlTe</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn> <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"> Physical Review Letters, 2016, 116, 226801.	7.8	116
71	Computational studies on the structural, electronic and optical properties of graphene-like MXenes (M₂CT₂, M = Ti, Zr, Hf; T = O, F, OH) and their potential applications as visible-light driven photocatalysts. Journal of Materials Chemistry A, 2016, 4, 12913-12920.	10.3	205
72	Symmetry-protected ideal Weyl semimetal in HgTe-class materials. Nature Communications, 2016, 7, 11136.	12.8	206

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73	The stabilization of NiCo2O4 nanobelts used for catalyzing triiodides in dye-sensitized solar cells by the presence of RGO sheets. Solar Energy Materials and Solar Cells, 2016, 149, 9-14.	6.2	59
74	Facet Energy and Reactivity versus Cytotoxicity: The Surprising Behavior of CdS Nanorods. Nano Letters, 2016, 16, 688-694.	9.1	30
75	Predicting a new phase (Tâ€²â€²) of two-dimensional transition metal di-chalcogenides and strain-controlled topological phase transition. Nanoscale, 2016, 8, 4969-4975.	5.6	50
76	Origin of photoactivity in graphitic carbon nitride and strategies for enhancement of photocatalytic efficiency: insights from first-principles computations. Physical Chemistry Chemical Physics, 2015, 17, 6280-6288.	2.8	115
77	Graphene-wrapped CuInS₂ composites for efficient dye-sensitized solar cells. Functional Materials Letters, 2015, 08, 1550011.	1.2	4
78	Structural transition and amorphization in compressed<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î±</mml:mi><mml:mo>â^'</mml:mo><mml:msub><mml:mrow><mml:mi mathvariant="normal">Sb</mml:mi></mml:mrow><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mrow><mml:mi mathvariant="normal">O</mml:mi></mml:mrow><mml:mn>3</mml:mn></mml:msub></mml:math>. Physical Review B, 2015, 91, .	3.2	14
79	NiS nanoparticles anchored on reduced graphene oxide to enhance the performance of dye-sensitized solar cells. Journal of Materials Science: Materials in Electronics, 2015, 26, 8176-8181.	2.2	22
80	Pressure induced metallization with absence of structural transition in layered molybdenum diselenide. Nature Communications, 2015, 6, 7312.	12.8	193
81	Facet-Dependent Catalytic Activity of Nanosheet-Assembled Bismuth Oxyiodide Microspheres in Degradation of Bisphenol A. Environmental Science & Technology, 2015, 49, 6240-6248.	10.0	179
82	Understanding the Halogenation Effects in Diketopyrrolopyrrole-Based Small Molecule Photovoltaics. ACS Applied Materials & Interfaces, 2015, 7, 19914-19922.	8.0	37
83	Quantum spin hall insulators in strain-modified arsenene. Nanoscale, 2015, 7, 19152-19159.	5.6	151
84	Flexible structural and electronic properties of a pentagonal B₂C monolayer via external strain: a computational investigation. Physical Chemistry Chemical Physics, 2015, 17, 24151-24156.	2.8	127
85	Nanocomposite of Tin Sulfide Nanoparticles with Reduced Graphene Oxide in High-Efficiency Dye-Sensitized Solar Cells. ACS Applied Materials & Interfaces, 2015, 7, 137-143.	8.0	129
86	Facile synthesis of Bi₂S₃â€“C composite microspheres as low-cost counter electrodes for dye-sensitized solar cells. RSC Advances, 2014, 4, 57412-57418.	3.6	19
87	Enhanced Photocatalytic Properties in BiOBr Nanosheets with Dominantly Exposed (102) Facets. Journal of Physical Chemistry C, 2014, 118, 14662-14669.	3.1	150
88	A novel Pt-free counter electrode for dye-sensitized solar cells: Nickel sulfide hollow spheres. Materials Letters, 2014, 136, 241-244.	2.6	17
89	Synthesis of nickel sulfides of different phases for counter electrodes in dye-sensitized solar cells by a solvothermal method with different solvents. Journal of Materials Research, 2014, 29, 935-941.	2.6	33
90	Large-Gap Quantum Spin Hall Insulators in Tin Films. Physical Review Letters, 2013, 111, 136804.	7.8	1,140

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91	ZnOâ€“GaN heterostructured nanosheets for solar energy harvesting: computational studies based on hybrid density functional theory. Journal of Materials Chemistry A, 2013, 1, 2231-2237.	10.3	54
92	Synthesis and Catalytic Properties of Sb₂S₃ Nanowire Bundles as Counter Electrodes for Dye-Sensitized Solar Cells. Journal of Physical Chemistry C, 2013, 117, 10285-10290.	3.1	42
93	First-principles studies on structural and electronic properties of GaNâ€“AlN heterostructure nanowires. Nanoscale, 2012, 4, 1078-1084.	5.6	26
94	Towards better photocatalysts: first-principles studies of the alloying effects on the photocatalytic activities of bismuth oxyhalides under visible light. Physical Chemistry Chemical Physics, 2012, 14, 1286-1292.	2.8	216
95	Facet-dependent activity of bismuth sulfide as low-cost counter-electrode materials for dye-sensitized solar cells. Journal of Materials Chemistry, 2012, 22, 18572.	6.7	46
96	First-principles studies on facet-dependent photocatalytic properties of bismuth oxyhalides (BiOXs). RSC Advances, 2012, 2, 9224.	3.6	196
97	Synthesis of mesoporous Eu₂O₃microspheres and Eu₂O₃nanoparticle-wires as well as their optical properties. CrystEngComm, 2011, 13, 637-641.	2.6	16
98	Topological insulators in Bi2Se3, Bi2Te3 and Sb2Te3 with a single Dirac cone on the surface. Nature Physics, 2009, 5, 438-442.	16.7	5,240
99	Electronic structures and surface states of the topological insulator<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mtext>Bi</mml:mtext></mml:mrow><mml:mrow><mml:mn>1</mml:mn> Physical Review B, 2009, 80, .	3.2	113