

Bing Huang

List of Publications by Year in descending order

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84
papers

5,217
citations

87888

38
h-index

82547

72
g-index

86
all docs

86
docs citations

86
times ranked

7723
citing authors

#	ARTICLE	IF	CITATIONS
1	Role of interlayer coupling in second harmonic generation in bilayer transition metal dichalcogenides. <i>Physical Review B</i> , 2022, 105, .	3.2	9
2	Polarization-Driven Orientation Selective Growth of Single-Crystalline III-Nitride Semiconductors on Arbitrary Substrates. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	6
3	Temperature effect on charge-state transition levels of defects in semiconductors. <i>Physical Review B</i> , 2022, 105, .	3.2	7
4	Polarization-Driven Orientation Selective Growth of Single-Crystalline III-Nitride Semiconductors on Arbitrary Substrates (<i>Adv. Funct. Mater.</i> 14/2022). <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	0
5	Stability of superconducting Nd _{0.8} Sr _{0.2} NiO ₂ thin films. <i>Science China: Physics, Mechanics and Astronomy</i> , 2022, 65, .	5.1	14
6	Emergent Phenomena in Magnetic Two-Dimensional Materials and van der Waals Heterostructures. <i>ACS Applied Electronic Materials</i> , 2022, 4, 3278-3302.	4.3	26
7	Exotic Structural and Optoelectronic Properties of Layered Halide Double Perovskite Polymorphs. <i>Advanced Functional Materials</i> , 2021, 31, 2008620.	14.9	5
8	Relating Gain Degradation to Defects Production in Neutron-Irradiated 4H-SiC Transistors. <i>IEEE Transactions on Nuclear Science</i> , 2021, 68, 312-317.	2.0	6
9	Approaching Charge Separation Efficiency to Unity without Charge Recombination. <i>Physical Review Letters</i> , 2021, 126, 176401.	7.8	35
10	Alloy Engineering of a Polar (Si,Ge) ₂ N ₂ O System for Controllable Second Harmonic Performance. <i>Inorganic Chemistry</i> , 2021, 60, 7381-7388.	4.0	5
11	Density-independent plasmons for terahertz-stable topological metamaterials. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	14
12	Deep-Ultraviolet Nonlinear Optical van der Waals Beryllium Borates**. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 16680-16686.	13.8	17
13	Deep-Ultraviolet Nonlinear Optical van der Waals Beryllium Borates**. <i>Angewandte Chemie</i> , 2021, 133, 16816-16822.	2.0	4
14	Electronic and doping properties of hexagonal silicon carbide with stacking faults induced cubic inclusions. <i>Journal of Applied Physics</i> , 2021, 129, .	2.5	2
15	Crystal Symmetry Engineering in Epitaxial Perovskite Superlattices. <i>Advanced Functional Materials</i> , 2021, 31, 2106466.	14.9	7
16	A tied Fermi liquid to Luttinger liquid model for nonlinear transport in conducting polymers. <i>Nature Communications</i> , 2021, 12, 58.	12.8	15
17	Universal Theory and Basic Rules of Strain-Dependent Doping Behaviors in Semiconductors. <i>Chinese Physics Letters</i> , 2021, 38, 087103.	3.3	9
18	Trends of complete anion substitution on electronic, ferroelectric, and optoelectronic properties of BiFeX ₃ (X = O, S, Se, and Te). <i>AIP Advances</i> , 2021, 11, 115108.	1.3	0

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19	Realization of Lieb lattice in covalent-organic frameworks with tunable topology and magnetism. <i>Nature Communications</i> , 2020, 11, 66.	12.8	49
20	Layered oxide $\text{B}_2\text{S}_2\text{O}_9$ with a deep-ultraviolet band gap and a strong and robust second-harmonic generation. <i>Physical Review B</i> , 2020, 101, .	3.2	25
21	Response to Comment on "Prediction of Novel p -Type Transparent Conductors in Layered Double Perovskites: A First-Principles Study". <i>Advanced Functional Materials</i> , 2020, 30, 2003149.	14.9	5
22	Deep-ultraviolet nonlinear optical crystals by design: A computer-aided modeling blueprint from first principles. <i>Science China Materials</i> , 2020, 63, 1597-1612.	6.3	33
23	First-principles study of electronic and diffusion properties of intrinsic defects in 4H-SiC. <i>Journal of Applied Physics</i> , 2020, 127, .	2.5	32
24	Giant enhancement of solid solubility in monolayer alloys by selective orbital coupling. <i>Physical Review B</i> , 2020, 101, .	3.2	0
25	Functionalizing Two-Dimensional Materials for Energy Applications. , 2020, , 567-603.		2
26	Anomalous Dirac Plasmons in 1D Topological Electrides. <i>Physical Review Letters</i> , 2019, 123, 206402.	7.8	33
27	Defect Engineering of Grain Boundaries in Lead-Free Halide Double Perovskites for Better Optoelectronic Performance. <i>Advanced Functional Materials</i> , 2019, 29, 1805870.	14.9	30
28	Prediction of room-temperature half-metallicity in layered halide double perovskites. <i>Npj Computational Materials</i> , 2019, 5, .	8.7	19
29	Prediction of Novel p -Type Transparent Conductors in Layered Double Perovskites: A First-Principles Study. <i>Advanced Functional Materials</i> , 2018, 28, 1800332.	14.9	49
30	Design of n -Type Transparent Conducting Oxides: The Case of Transition Metal Doping in In_2O_3 . <i>Advanced Electronic Materials</i> , 2018, 4, 1700553.	5.1	58
31	Functionalizing Two-Dimensional Materials for Energy Applications. , 2018, , 1-37.		0
32	Toward Intrinsic Room-Temperature Ferromagnetism in Two-Dimensional Semiconductors. <i>Journal of the American Chemical Society</i> , 2018, 140, 11519-11525.	13.7	280
33	Quantum Spin Hall Effect and Tunable Spin Transport in As-Graphane. <i>Nano Letters</i> , 2017, 17, 4359-4364.	9.1	15
34	Intrinsic Defect Physics in Indium-based Lead-free Halide Double Perovskites. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 4391-4396.	4.6	71
35	Extremely Low Density and Super-Compressible Graphene Cellular Materials. <i>Advanced Materials</i> , 2017, 29, 1701553.	21.0	126
36	Two-dimensional GaSe/MoSe_2 misfit bilayer heterojunctions by van der Waals epitaxy. <i>Science Advances</i> , 2016, 2, e1501882.	10.3	239

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37	Interlayer Coupling in Twisted WSe_2/WSe_2 Bilayer Heterostructures Revealed by Optical Spectroscopy. ACS Nano, 2016, 10, 6612-6622.	14.6	249
38	Growth of Metal Phthalocyanine on Deactivated Semiconducting Surfaces Steered by Selective Orbital Coupling. Physical Review Letters, 2015, 115, 096101.	7.8	30
39	Alloy Engineering of Defect Properties in Semiconductors: Suppression of Deep Levels in Transition-Metal Dichalcogenides. Physical Review Letters, 2015, 115, 126806.	7.8	81
40	Highly stable two-dimensional silicon phosphides: Different stoichiometries and exotic electronic properties. Physical Review B, 2015, 91, .	3.2	58
41	Period-doubling reconstructions of semiconductor partial dislocations. NPG Asia Materials, 2015, 7, e216-e216.	7.9	12
42	Van der Waals Epitaxial Growth of Two-Dimensional Single-Crystalline GaSe Domains on Graphene. ACS Nano, 2015, 9, 8078-8088.	14.6	103
43	Exceptional Optoelectronic Properties of Hydrogenated Bilayer Silicene. Physical Review X, 2014, 4, .	8.9	35
44	Origin of Reduced Efficiency in $Cu(In,Ga)Se_2$ Solar Cells With High Ga Concentration: Alloy Solubility Versus Intrinsic Defects. IEEE Journal of Photovoltaics, 2014, 4, 477-482.	2.5	69
45	Xiangetal.Reply:. Physical Review Letters, 2014, 112, 199802.	7.8	3
46	Tailoring the Electronic Band Gap of Graphyne. Journal of Physical Chemistry C, 2014, 118, 2463-2468.	3.1	34
47	Widely tunable band gaps of graphdiyne: an ab initio study. Physical Chemistry Chemical Physics, 2014, 16, 8935-8939.	2.8	56
48	Chemical Functionalization of Silicene: Spontaneous Structural Transition and Exotic Electronic Properties. Physical Review Letters, 2013, 111, 145502. Stability and electronic structure of Cu	7.8	68
49	$ZnSnS_4$ surfaces: First-principles study. Physical Review B, 2013, 87, 115411.	3.2	55
50	$Zn(Sn,Ge)Se$ and Cu	3.2	90
51	Exotic Geometrical and Electronic Properties in Hydrogenated Graphyne. Journal of Physical Chemistry C, 2013, 117, 11960-11967.	3.1	41
52	Towards Direct-Gap Silicon Phases by the Inverse Band Structure Design Approach. Physical Review Letters, 2013, 110, 118702.	7.8	136
53	Hexagonal boron nitride and 6H-SiC heterostructures. Applied Physics Letters, 2013, 102, .	3.3	43
54	Overcoming the Phase Inhomogeneity in Chemically Functionalized Graphene: The Case of Graphene Oxides. Physical Review Letters, 2013, 110, 085501.	7.8	47

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55	Graphene Adsorbed on Corundum Surface: Clean Interface and Band Gap Opening. Materials Research Society Symposia Proceedings, 2012, 1407, 131.	0.1	0
56	Effective Control of the Charge and Magnetic States of Transition-Metal Atoms on Single-Layer Boron Nitride. Physical Review Letters, 2012, 108, 206802.	7.8	135
57	Stability and electronic structures of Cu _x S solar cell absorbers. , 2012, , .		4
58	Origin of the significantly enhanced optical transitions in layered boron nitride. Physical Review B, 2012, 86, .	3.2	49
59	Defect and impurity properties of hexagonal boron nitride: A first-principles calculation. Physical Review B, 2012, 86, .	3.2	187
60	Crystal and electronic structures of Cu _x S solar cell absorbers. Applied Physics Letters, 2012, 100, .	3.3	105
61	Edge stability of boron nitride nanoribbons and its application in designing hybrid BNC structures. Nano Research, 2012, 5, 62-72.	10.4	62
62	Theoretical study of corundum as an ideal gate dielectric material for graphene transistors. Physical Review B, 2011, 84, .	3.2	56
63	Electronic properties of boron and nitrogen doped graphene nanoribbons and its application for graphene electronics. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 845-848.	2.1	48
64	Controlling doping in graphene through a SiC substrate: A first-principles study. Physical Review B, 2011, 83, .	3.2	27
65	Strain control of magnetism in graphene decorated by transition-metal atoms. Physical Review B, 2011, 84, .	3.2	79
66	Comment on "Mechanisms of Postsynthesis Doping of Boron Nitride Nanostructures with Carbon from First-Principles Simulations" Physical Review Letters, 2011, 107, 239601; discussion 239602.	7.8	8
67	Beryllium-dihydrogen complexes on nanostructures. Applied Physics Letters, 2010, 96, .	3.3	14
68	Releasing H ₂ molecules with a partial pressure difference without the use of temperature. Physical Review B, 2010, 82, .	3.2	3
69	Multiple localized states and magnetic orderings in partially open zigzag carbon nanotube superlattices: An <i>ab initio</i> study. Journal of Chemical Physics, 2010, 133, 084702.	3.0	11
70	The Half-Metallicity of Zigzag Graphene Nanoribbons with Asymmetric Edge Terminations. Journal of Nanoscience and Nanotechnology, 2010, 10, 5374-5378.	0.9	15
71	Intrinsic half-metallic BN@C nanotubes. Applied Physics Letters, 2010, 97, 043115.	3.3	54
72	<i>Ab initio</i> study of beryllium-decorated fullerenes for hydrogen storage. Journal of Applied Physics, 2010, 107, .	2.5	22

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73	Structural and electronic properties of Ge-Si, Sn-Si, and Pb-Si dimers on Si(001) from density-functional calculations. <i>Physical Review B</i> , 2009, 79, .	3.2	1
74	Towards graphene nanoribbon-based electronics. <i>Frontiers of Physics in China</i> , 2009, 4, 269-279.	1.0	43
75	Quantum Manifestations of Graphene Edge Stress and Edge Instability: A First-Principles Study. <i>Physical Review Letters</i> , 2009, 102, 166404.	7.8	243
76	Electronic and Magnetic Properties of Partially Open Carbon Nanotubes. <i>Journal of the American Chemical Society</i> , 2009, 131, 17919-17925.	13.7	47
77	Hydrogen storage in alkali-metal-decorated organic molecules. <i>Applied Physics Letters</i> , 2008, 93, 063107.	3.3	28
78	Adsorption of Gas Molecules on Graphene Nanoribbons and Its Implication for Nanoscale Molecule Sensor. <i>Journal of Physical Chemistry C</i> , 2008, 112, 13442-13446.	3.1	488
79	Suppression of spin polarization in graphene nanoribbons by edge defects and impurities. <i>Physical Review B</i> , 2008, 77, .	3.2	178
80	Chemical Functionalization of Graphene Nanoribbons by Carboxyl Groups on Stone-Wales Defects. <i>Journal of Physical Chemistry C</i> , 2008, 112, 12003-12007.	3.1	93
81	Making a field effect transistor on a single graphene nanoribbon by selective doping. <i>Applied Physics Letters</i> , 2007, 91, 253122.	3.3	152
82	Intrinsic Current-Voltage Characteristics of Graphene Nanoribbon Transistors and Effect of Edge Doping. <i>Nano Letters</i> , 2007, 7, 1469-1473.	9.1	548
83	Enhanced Ability of Nanostructured Titania Film to Assist Photodegradation of Rhodamine B in Water Through Natural Aging. <i>Journal of the American Ceramic Society</i> , 2007, 90, 283-286.	3.8	17
84	Titania Nanoflowers with High Photocatalytic Activity. <i>Journal of the American Ceramic Society</i> , 2006, 89, 2660-2663.	3.8	43