

Junke Jiang

List of Publications by Year in descending order

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92
papers

4,326
citations

117625

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106344

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94
all docs

94
docs citations

94
times ranked

5513
citing authors

#	ARTICLE	IF	CITATIONS
1	The role of solvents in the formation of methylammonium lead triiodide perovskite. <i>Journal of Energy Chemistry</i> , 2022, 68, 393-400.	12.9	10
2	Germanium Halides Serving as Ideal Precursors: Designing a More Effective and Less Toxic Route to High-Optoelectronic-Quality Metal Halide Perovskite Nanocrystals. <i>Nano Letters</i> , 2022, 22, 636-643.	9.1	15
3	Improved Thermoelectricâ€“Photovoltaic Performance of Ag ₂ Se Originating from a Halogenation-Induced Wider Band Gap and Low Crystal Symmetry. <i>ACS Applied Energy Materials</i> , 2022, 5, 6019-6031.	5.1	6
4	Monolayer h-BN/C3B lateral heterostructures with promising electronic and optical properties: A first-principles study. <i>Chemical Physics</i> , 2021, 541, 111042.	1.9	2
5	Monolayer Janus Te ₂ Se-based gas sensor to detect SO ₂ and NO _x : a first-principles study. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 1675-1683.	2.8	19
6	The role of sodium in stabilizing tinâ€“lead (Snâ€“Pb) alloyed perovskite quantum dots. <i>Journal of Materials Chemistry A</i> , 2021, 9, 12087-12098.	10.3	9
7	Ultra-Halide-Rich Synthesis of Stable Pure Tin-Based Halide Perovskite Quantum Dots: Implications for Photovoltaics. <i>ACS Applied Nano Materials</i> , 2021, 4, 3958-3968.	5.0	9
8	Gas Sensor Based on Semihydrogenated and Semifluorinated h-BN for SF ₆ Decomposition Components Detection. <i>IEEE Transactions on Electron Devices</i> , 2021, 68, 1878-1885.	3.0	12
9	Stretchable AgX (X = Se, Te) for Efficient Thermoelectrics and Photovoltaics. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 25121-25136.	8.0	10
10	A heterostructure of C3N/h-BN with effectively regulated electronic properties by E-field and strain. <i>Chemical Physics Letters</i> , 2021, 770, 138461.	2.6	5
11	Multifunctional Molecule Engineered SnO ₂ for Perovskite Solar Cells with High Efficiency and Reduced Lead Leakage. <i>Solar Rrl</i> , 2021, 5, 2100464.	5.8	26
12	Properties-enhanced gas sensor based on Cu-doped tellurene monolayer to detect acetone molecule: a first-principles study. <i>Molecular Physics</i> , 2021, 119, .	1.7	6
13	Effect of Coâ€“Solvents on the Crystallization and Phase Distribution of Mixedâ€“Dimensional Perovskites. <i>Advanced Energy Materials</i> , 2021, 11, 2102144.	19.5	25
14	Effect of Coâ€“Solvents on the Crystallization and Phase Distribution of Mixedâ€“Dimensional Perovskites (Adv. Energy Mater. 42/2021). <i>Advanced Energy Materials</i> , 2021, 11, 2170168.	19.5	0
15	Atomistic and Electronic Origin of Phase Instability of Metal Halide Perovskites. <i>ACS Applied Energy Materials</i> , 2020, 3, 11548-11558.	5.1	23
16	High sensitivity gas sensor to detect SF ₆ decomposition components based on monolayer antimonide phosphorus. <i>Chemical Physics Letters</i> , 2020, 756, 137868.	2.6	20
17	Alkali-cation-enhanced benzylammonium passivation for efficient and stable perovskite solar cells fabricated through sequential deposition. <i>Journal of Materials Chemistry A</i> , 2020, 8, 19357-19366.	10.3	13
18	Nearâ€“Infrared Emission from Tinâ€“Lead (Snâ€“Pb) Alloyed Perovskite Quantum Dots by Sodium Doping. <i>Angewandte Chemie</i> , 2020, 132, 8499-8502.	2.0	10

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19	Near-Infrared Emission from Tin-Lead (Sn-Pb) Alloyed Perovskite Quantum Dots by Sodium Doping. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 8421-8424.	13.8	38
20	Microscopic Degradation in Formamidinium-Cesium Lead Iodide Perovskite Solar Cells under Operational Stressors. <i>Joule</i> , 2020, 4, 1743-1758.	24.0	156
21	The Impacts and Origins of A-site Instability in Formamidinium-Cesium Lead Iodide Perovskite Solar Cells Under Extended Operation. , 2020, , .		0
22	Excellent carrier mobility and optoelectronic performance material prediction: Focusing on single layer X_2Te_3 ($X = Sb, Bi$). <i>Applied Surface Science</i> , 2019, 491, 690-697.	6.1	0
23	Tunable electronic and optical properties of the WS_2 /IGZO heterostructure via an external electric field and strain: a theoretical study. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 14713-14721.	2.8	4
24	Absolute energy level positions in tin- and lead-based halide perovskites. <i>Nature Communications</i> , 2019, 10, 2560.	12.8	381
25	ZnO/WSe_2 vdW heterostructure for photocatalytic water splitting. <i>Journal of Materials Chemistry C</i> , 2019, 7, 7104-7113.	5.5	93
26	SnSe monolayer: A promising candidate of SO_2 sensor with high adsorption quantity. <i>Applied Surface Science</i> , 2019, 484, 33-38.	6.1	43
27	Photothermal effects induced by surface plasmon resonance at graphene/gold nanointerfaces: A multiscale modeling study. <i>Biosensors and Bioelectronics</i> , 2019, 126, 470-477.	10.1	14
28	Ge_2 Additive for High Optoelectronic Quality $CsPbI_3$ Quantum Dots and Their Application in Photovoltaic Devices. <i>Chemistry of Materials</i> , 2019, 31, 798-807.	6.7	112
29	Superior Selectivity and Sensitivity of C_3N Sensor in Probing Toxic Gases NO_2 and SO_2 . <i>IEEE Electron Device Letters</i> , 2018, 39, 284-287.	3.9	108
30	Two-dimensional penta-Sn $_3$ H $_2$ monolayer for nanoelectronics and photocatalytic water splitting: a first-principles study. <i>RSC Advances</i> , 2018, 8, 11799-11806.	3.6	6
31	Tunable electronic properties of silicene/GaP heterobilayer: Effects of electric field or biaxial tensile strain. <i>Chemical Physics Letters</i> , 2018, 700, 114-121.	2.6	10
32	High Selective Gas Detection for small molecules based on Germanium selenide monolayer. <i>Applied Surface Science</i> , 2018, 433, 575-581.	6.1	68
33	Selective gas adsorption and I_{on} response of monolayer boron phosphide introduced by dopants: A first-principle study. <i>Applied Surface Science</i> , 2018, 427, 176-188.	6.1	47
34	Novel GaN-based nanocomposites: Effective band structure and optical property tuning by tensile strain or external field. <i>Applied Surface Science</i> , 2018, 427, 554-562.	6.1	9
35	Partially replacing Pb^{2+} by Mn^{2+} in hybrid metal halide perovskites: Structural and electronic properties. <i>APL Materials</i> , 2018, 6, .	5.1	15
36	Novel electronic structures and enhanced optical properties of boron phosphide/blue phosphorene and F_4TCNQ /blue phosphorene heterostructures: a DFT + NEGF study. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 28777-28785.	2.8	15

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37	Two dimensional XAs (X = Si, Ge, Sn) monolayers as promising photocatalysts for water splitting hydrogen production with high carrier mobility. Applied Materials Today, 2018, 13, 276-284.	4.3	51
38	Stabilizing Lead-Free All-Inorganic Tin Halide Perovskites by Ion Exchange. Journal of Physical Chemistry C, 2018, 122, 17660-17667.	3.1	68
39	First-principles approach to design and evaluation of graphene as methane sensors. Materials and Design, 2017, 119, 397-405.	7.0	30
40	Adsorption of gas molecules on graphene-like InN monolayer: A first-principle study. Applied Surface Science, 2017, 404, 291-299.	6.1	141
41	Electrical and optical properties of NO and H ₂ S adsorption on Arsenic Phosphorus. , 2017, , .		0
42	The intriguing electronic and optical properties modulation in blue phosphorene/g-III-nitrides heterostructures. , 2017, , .		0
43	First principle design of CdS/germanene heterostructures with tunable electronic and transport properties. , 2017, , .		0
44	An AlAs/germanene heterostructure with outstanding tunability of electronic properties. , 2017, , .		0
45	Exploration of new ferromagnetic, semiconducting and biocompatible Nb ₃ X ₈ (X = Cl, Br or I) monolayers with considerable visible and infrared light absorption. Nanoscale, 2017, 9, 2992-3001.	5.6	74
46	AlN/BP Heterostructure Photocatalyst for Water Splitting. IEEE Electron Device Letters, 2017, 38, 145-148.	3.9	68
47	The intriguing electronic and optical properties modulation of hydrogen and fluorine codecorated silicene layers. Applied Surface Science, 2017, 398, 73-80.	6.1	12
48	First Principles Investigation of Small Molecules Adsorption on Antimonene. IEEE Electron Device Letters, 2017, 38, 134-137.	3.9	109
49	DFT coupled with NEGF study of ultra-sensitive HCN and HNC gases detection and distinct I-V response based on phosphorene. Physical Chemistry Chemical Physics, 2017, 19, 30852-30860.	2.8	26
50	Considering the spin-orbit coupling effect on the photocatalytic performance of AlN/MX ₂ nanocomposites. Journal of Materials Chemistry C, 2017, 5, 9412-9420.	5.5	36
51	Adsorption of Gas Molecules on Graphene-Like ZnO Nanosheets: The Roles of Gas Concentration, Layer Number, and Heterolayer. Advanced Materials Interfaces, 2017, 4, 1700647.	3.7	33
52	Modelling for electric devices: Adsorption of polluted gases on g-ZnO monolayer. , 2017, , .		3
53	Modulation of the electric properties of SnSe bi/mono-layer by strain and electrical field. , 2017, , .		0
54	Sorption and Diffusion of Water Vapor and Carbon Dioxide in Sulfonated Polyaniline as Chemical Sensing Materials. Sensors, 2016, 16, 606.	3.8	17

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55	Tunable electronic structure and enhanced optical properties in quasi-metallic hydrogenated/fluorinated SiC heterobilayer. <i>Journal of Materials Chemistry C</i> , 2016, 4, 7406-7414.	5.5	27
56	The electronic and optical properties of silicene/g-ZnS heterobilayers: a theoretical study. <i>Journal of Materials Chemistry C</i> , 2016, 4, 7004-7012.	5.5	34
57	Functionalization-induced changes in the structural and physical properties of amorphous polyaniline: a first-principles and molecular dynamics study. <i>Scientific Reports</i> , 2016, 6, 20621.	3.3	40
58	The Influence of Tensile Stress on Polyaniline as Strain Sensor. <i>IEEE Electron Device Letters</i> , 2016, 37, 1636-1638.	3.9	5
59	Two-dimensional GeS with tunable electronic properties via external electric field and strain. <i>Nanotechnology</i> , 2016, 27, 274001.	2.6	85
60	Electronic structure and optical properties of graphene/stanene heterobilayer. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 16302-16309.	2.8	115
61	First-Principles Study of Sulfur Dioxide Sensor Based on Phosphorenes. <i>IEEE Electron Device Letters</i> , 2016, 37, 660-662.	3.9	110
62	The electronic and optical properties of novel germanene and antimonene heterostructures. <i>Journal of Materials Chemistry C</i> , 2016, 4, 5434-5441.	5.5	154
63	Tuning the electronic and optical properties of graphane/silicane and fhBN/silicane nanosheets via interfacial dihydrogen bonding and electrical field control. <i>Journal of Materials Chemistry C</i> , 2016, 4, 8962-8972.	5.5	16
64	A first-principle study of H ₂ , CO, CH ₄ , H ₂ S and SO ₂ gas molecules on antimonene. , 2016, , .		1
65	Adsorption of CO ₂ and CO gas on impurity-decorated phosphorenes: A first-principles study. , 2016, , .		1
66	The study of adsorption behavior of small molecules on stanene: A search of superior gas sensors. , 2016, , .		3
67	First-principles study of gas adsorption on indium nitride monolayer as gas sensor applications. , 2016, , .		2
68	SiGe/h-BN heterostructure with inspired electronic and optical properties: a first-principles study. <i>Journal of Materials Chemistry C</i> , 2016, 4, 10082-10089.	5.5	40
69	Electronic properties and work functions of silicane/fully hydrogenated h-BN and silicane/graphane nanosheets. , 2016, , .		0
70	Thermal Inductance in GaN Devices. <i>IEEE Electron Device Letters</i> , 2016, 37, 1473-1476.	3.9	6
71	An AlAs/germanene heterostructure with tunable electronic and optical properties via external electric field and strain. <i>Journal of Materials Chemistry C</i> , 2016, 4, 8171-8178.	5.5	81
72	Electrical and Optical Properties of Germanene on Single-Layer BeO Substrate. <i>Journal of Physical Chemistry C</i> , 2016, 120, 20350-20356.	3.1	46

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73	Tuning electronic properties of bilayer boron-phosphide by stacking order and electric field: A first principles investigation. , 2016, , .		0
74	Graphane/fully hydrogenated h-BN bilayer: Marvellous dihydrogen bonding and effective band structure engineering. , 2016, , .		0
75	Design of graphene-like gallium nitride and WS ₂ /WSe ₂ nanocomposites for photocatalyst applications. Science China Materials, 2016, 59, 1027-1036.	6.3	65
76	Theoretical investigation of electric properties of the silicene / fully hydrogenated BN heterobilayer. , 2016, , .		0
77	Enhancement of H ₂ S detection in impurity-doped graphene. , 2016, , .		1
78	Effect of multilayer structure, stacking order and external electric field on the electrical properties of few-layer boron-phosphide. Physical Chemistry Chemical Physics, 2016, 18, 16229-16236.	2.8	68
79	Tuning the electronic properties and work functions of graphane/fully hydrogenated h-BN heterobilayers via heteronuclear dihydrogen bonding and electric field control. Physical Chemistry Chemical Physics, 2016, 18, 16386-16395.	2.8	41
80	Ab Initio Study of the Adsorption of Small Molecules on Stanene. Journal of Physical Chemistry C, 2016, 120, 13987-13994.	3.1	149
81	A review of small heat pipes for electronics. Applied Thermal Engineering, 2016, 96, 1-17.	6.0	224
82	First-principles study of the effect of functional groups on polyaniline backbone. Scientific Reports, 2015, 5, 16907.	3.3	61
83	Molecular modeling design of polyaniline as carbon dioxide sensor. , 2015, , .		0
84	Ab initio studies of the differences in the chemical reactivity and electronic properties of polyaniline and its derivatives. , 2015, , .		0
85	Ab Initio Study of Temperature, Humidity, and Covalent Functionalization-Induced Bandgap Change of Single-Walled Carbon Nanotubes. IEEE Electron Device Letters, 2015, 36, 606-608.	3.9	22
86	Gas adsorption on graphene with different layers: A first-principles study. , 2015, , .		2
87	Carbon nanotube based biosensors. Sensors and Actuators B: Chemical, 2015, 207, 690-715.	7.8	407
88	Molecular model for the charge carrier density dependence of conductivity of polyaniline as chemical sensing materials. Sensors and Actuators B: Chemical, 2013, 177, 856-861.	7.8	19
89	Nanowire-based gas sensors. Sensors and Actuators B: Chemical, 2013, 177, 178-195.	7.8	336
90	Impact of the functional group on the working range of polyaniline as carbon dioxide sensors. Sensors and Actuators B: Chemical, 2012, 175, 15-21.	7.8	54

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91	Molecular modeling of protonic acid doping of emeraldine base polyaniline for chemical sensors. Sensors and Actuators B: Chemical, 2012, 174, 210-216.	7.8	37
92	Molecular modeling of temperature dependence of solubility parameters for amorphous polymers. Journal of Molecular Modeling, 2012, 18, 2333-2341.	1.8	67