

# Jia-Bing Yu

## List of Publications by Year in descending order

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69  
papers

1,962  
citations

318942

23  
h-index

299063

42  
g-index

70  
all docs

70  
docs citations

70  
times ranked

2224  
citing authors

#	ARTICLE	IF	CITATIONS
1	The promotion of sulfuric vacancy in two-dimensional molybdenum disulfide on the sensing performance of SF <sub>6</sub> decomposition components. Applied Surface Science, 2022, 571, 151377.	3.1	10
2	Highly adjustable piezoelectric properties in two-dimensional LiAlTe <sub>2</sub> by strain and stacking. Nanotechnology, 2022, 33, 055702.	1.3	4
3	Laser In-Situ synthesis of metallic cobalt decorated porous graphene for flexible In-Plane microsupercapacitors. Journal of Colloid and Interface Science, 2022, 610, 775-784.	5.0	10
4	Laser In Situ Preparation of S-Doped Porous Graphene for Flexible Microsupercapacitors. IEEE Electron Device Letters, 2022, 43, 327-330.	2.2	3
5	Indium Selenide/Antimonene Heterostructure for Multifunctional Optoelectronics. IEEE Transactions on Electron Devices, 2022, 69, 1155-1161.	1.6	8
6	The piezoelectricity of 2D Janus ZnBrI: Multiscale prediction. Chemical Physics Letters, 2022, 794, 139506.	1.2	6
7	Metal Oxides/Carbon Felt Pressure Sensors with Ultra-Broad-Range High Sensitivity. Advanced Materials Interfaces, 2022, 9, .	1.9	10
8	Polyaniline Modified Laser-Scribed Graphene for High-Performance Microsupercapacitors. IEEE Electron Device Letters, 2022, 43, 966-969.	2.2	6
9	Ultrasensitive and self-alarm pressure sensor based on laser-induced graphene and sea urchin-shaped Fe <sub>2</sub> O <sub>3</sub> sandwiched structure. Chemical Engineering Journal, 2022, 448, 137664.	6.6	17
10	Graphene-based film heater fabricated by laser writing. Materials Letters, 2021, 284, 128869.	1.3	11
11	Monolayer h-BN/C <sub>3</sub> N lateral heterostructures with promising electronic and optical properties: A first-principles study. Chemical Physics, 2021, 541, 111042.	0.9	2
12	Monolayer Janus Te <sub>2</sub> Se-based gas sensor to detect SO <sub>2</sub> and NO <sub>x</sub> : a first-principles study. Physical Chemistry Chemical Physics, 2021, 23, 1675-1683.	1.3	19
13	Theoretical investigations of novel Janus Pb <sub>2</sub> SSe monolayer as a potential multifunctional material for piezoelectric, photovoltaic, and thermoelectric applications. Nanoscale, 2021, 13, 15611-15623.	2.8	12
14	Low-temperature Sintering of Cu/functionalized Multi-walled Carbon Nanotubes Composite Paste for Power Electronic Packaging. IEEE Transactions on Power Electronics, 2021, , 1-1.	5.4	3
15	A C <sub>2</sub> N/ZnSe heterostructure with type-II band alignment and excellent photocatalytic water splitting performance. New Journal of Chemistry, 2021, 45, 13571-13578.	1.4	10
16	Sea urchin-like microstructure pressure sensors with an ultra-broad range and high sensitivity. Nature Communications, 2021, 12, 1776.	5.8	109
17	Piezoelectricity of Janus Sb <sub>2</sub> Se <sub>2</sub> Te monolayers: A first-principles study. Journal of Applied Physics, 2021, 129, .	1.1	26
18	Gas Sensor Based on Semihydrogenated and Semifluorinated h-BN for SF <sub>6</sub> ,† Decomposition Components Detection. IEEE Transactions on Electron Devices, 2021, 68, 1878-1885.	1.6	12

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19	Giant Piezoelectricity of Janus $M\text{As}_2\text{SeX}$ ( $M = \text{Ge, Sn}$ ; $X = \text{S, Te}$ ) Monolayers. <i>IEEE Electron Device Letters</i> , 2021, 42, 561-564.	2.2	25
20	High sensitive and selective toxic gas sensor based on monolayer Tetra-MoN <sub>2</sub> for sensing NO: A first-principles study. <i>Chemical Physics Letters</i> , 2021, 769, 138359.	1.2	4
21	A heterostructure of C <sub>3</sub> N/h-BN with effectively regulated electronic properties by E-field and strain. <i>Chemical Physics Letters</i> , 2021, 770, 138461.	1.2	5
22	Optimal Cu paste thickness for large-area Cu-Cu joint. <i>Materials Letters</i> , 2021, 291, 129533.	1.3	3
23	Facile and Scalable Fabrication of High-Performance Microsupercapacitors Based on Laser-Scribed <i>In Situ</i> Heteroatom-Doped Porous Graphene. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 22426-22437.	4.0	35
24	Monolayer square-Ag <sub>2</sub> X ( $X = \text{S, Se}$ ): Excellent n-type thermoelectric materials with high power factors. <i>Applied Surface Science</i> , 2021, 550, 149230.	3.1	4
25	One-step laser fabrication of phosphorus-doped porous graphene electrodes for high-performance flexible microsupercapacitor. <i>Carbon</i> , 2021, 180, 56-66.	5.4	59
26	Type-II AsP/Sc <sub>2</sub> CO <sub>2</sub> van der Waals heterostructure: an excellent photocatalyst for overall water splitting. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 32882-32892.	3.8	23
27	A novel Hf <sub>2</sub> CO <sub>2</sub> /WS <sub>2</sub> van der Waals heterostructure as a potential candidate for overall water splitting photocatalyst. <i>Materials Science in Semiconductor Processing</i> , 2021, 133, 105947.	1.9	17
28	PbSn <sub>1-x</sub> Se <sub>x</sub> -Based Gas Sensor to Detect SF <sub>6</sub> Decompositions: DFT and NEGF Calculations. <i>IEEE Transactions on Electron Devices</i> , 2021, 68, 5322-5325.	1.6	13
29	SWCNT-bridged laser-induced graphene fibers decorated with MnO <sub>2</sub> nanoparticles for high-performance flexible micro-supercapacitors. <i>Carbon</i> , 2021, 183, 128-137.	5.4	43
30	Laser synthesis of superhydrophilic O/S co-doped porous graphene derived from sodium lignosulfonate for enhanced microsupercapacitors. <i>Journal of Power Sources</i> , 2021, 513, 230558.	4.0	36
31	2D $\text{HfTe}_2$ -tellurene: Increase sensitivity toward toxic cyanide molecules. <i>Vacuum</i> , 2021, 194, 110619.	1.6	5
32	Facile fabrication of rGO/LIG-based temperature sensor with high sensitivity. <i>Materials Letters</i> , 2021, 304, 130637.	1.3	23
33	Properties-enhanced gas sensor based on Cu-doped tellurene monolayer to detect acetone molecule: a first-principles study. <i>Molecular Physics</i> , 2021, 119, .	0.8	6
34	Sc <sub>2</sub> CF <sub>2</sub> /Janus MoSSe heterostructure: A potential Z-scheme photocatalyst with ultra-high solar-to-hydrogen efficiency. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 39830-39843.	3.8	34
35	Porous ZnO/rGO Nanosheet-Based NO <sub>2</sub> Gas Sensor with High Sensitivity and ppb Level Detection Limit at Room Temperature. <i>Advanced Materials Interfaces</i> , 2021, 8, 2101511.	1.9	18
36	Novel Braceletlike BiSbX <sub>3</sub> ( $X = \text{S, Se}$ ) Monolayers with an In-Plane Negative Poisson's Ratio and Anisotropic Photoelectric Properties. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 11353-11360.	2.1	4

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37	The ultralow thermal conductivity and ultrahigh thermoelectric performance of fluorinated Sn <sub>2</sub> Bi sheet in room temperature. <i>Nano Energy</i> , 2020, 67, 104283.	8.2	16
38	Graphene oxide humidity sensor with laser-induced graphene porous electrodes. <i>Sensors and Actuators B: Chemical</i> , 2020, 325, 128790.	4.0	74
39	Tellurene Nanoflake-Based NO <sub>2</sub> Sensors with Superior Sensitivity and a Sub-Parts-per-Billion Detection Limit. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 47704-47713.	4.0	54
40	Enhancing power factor of SnSe sheet with grain boundary by doping germanium or silicon. <i>Npj Computational Materials</i> , 2020, 6, .	3.5	9
41	A Monolayer Composite of h-BN Doped by a Nano Graphene Domain: As Sensitive Material for SO <sub>2</sub> Gas Detection. <i>IEEE Electron Device Letters</i> , 2020, 41, 1404-1407.	2.2	18
42	Controlling information duration on rewritable luminescent paper based on hybrid antimony (III) chloride/small-molecule absorbates. <i>Science Advances</i> , 2020, 6, .	4.7	61
43	Integrated Sensing and Warning Multifunctional Devices Based on the Combined Mechanical and Thermal Effect of Porous Graphene. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 53049-53057.	4.0	16
44	Capacitance creep and recovery behavior of magnetorheological elastomers. <i>Journal of Intelligent Material Systems and Structures</i> , 2020, , 1045389X2096991.	1.4	2
45	Tellurene based biosensor for detecting DNA/RNA nucleobases and amino acids: A theoretical insight. <i>Applied Surface Science</i> , 2020, 532, 147451.	3.1	27
46	High sensitivity gas sensor to detect SF <sub>6</sub> decomposition components based on monolayer antimonide phosphorus. <i>Chemical Physics Letters</i> , 2020, 756, 137868.	1.2	20
47	Two-dimensional penta-SiAs <sub>2</sub> : a potential metal-free photocatalyst for overall water splitting. <i>Journal of Materials Chemistry C</i> , 2020, 8, 11980-11987.	2.7	24
48	Health Monitoring and Automatic Notification Device Based on Laser-Induced Graphene. <i>IEEE Transactions on Electron Devices</i> , 2020, 67, 4488-4492.	1.6	2
49	An investigation of the positive effects of doping an Al atom on the adsorption of CO <sub>2</sub> on BN nanosheets: a DFT study. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 9368-9374.	1.3	22
50	Promoting Crystal Distribution Uniformity Based on the CVD Method with the Aid of Finite Element Methods. <i>Crystal Growth and Design</i> , 2020, 20, 777-782.	1.4	3
51	Improved Performance of Flexible Graphene Heater Based on Repeated Laser Writing. <i>IEEE Electron Device Letters</i> , 2020, 41, 501-504.	2.2	26
52	Flexible laser-induced-graphene omnidirectional sound device. <i>Chemical Physics Letters</i> , 2020, 745, 137275.	1.2	15
53	Monolayer Tellurene-Based Gas Sensor to Detect SF <sub>6</sub> Decompositions: A First-Principles Study. <i>IEEE Electron Device Letters</i> , 2019, 40, 1522-1525.	2.2	44
54	PCF-Graphene: A 2D sp <sup>2</sup> -Hybridized Carbon Allotrope with a Direct Band Gap. <i>Journal of Physical Chemistry C</i> , 2019, 123, 4567-4573.	1.5	29

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55	Symmetry-breaking induced large piezoelectricity in Janus tellurene materials. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 1207-1216.	1.3	134
56	Single-layer BiOBr: An effective <i>p</i> -type 2D thermoelectric material. <i>Journal of Applied Physics</i> , 2019, 125, .	1.1	22
57	Ultralow lattice thermal conductivity induced high thermoelectric performance in the $\sqrt{2}\times\sqrt{2}$ Cu <sub>2</sub> S monolayer. <i>Nanoscale</i> , 2019, 11, 10306-10313.	2.8	43
58	Bi <sub>2</sub> O <sub>2</sub> Se nanosheet: An excellent high-temperature n-type thermoelectric material. <i>Applied Physics Letters</i> , 2018, 112, .	1.5	94
59	2D carbon sheets with negative Gaussian curvature assembled from pentagonal carbon nanoflakes. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 9123-9129.	1.3	6
60	A new porous metallic silicon dicarbide for highly efficient Li-ion battery anode identified by targeted structure search. <i>Carbon</i> , 2018, 140, 680-687.	5.4	25
61	Three-dimensional pentagonal silicon: Stability and properties. <i>Computational Materials Science</i> , 2018, 155, 373-377.	1.4	8
62	Cu S superionic compounds: Electronic structure and thermoelectric performance enhancement. <i>Journal of Alloys and Compounds</i> , 2017, 722, 17-24.	2.8	21
63	Recent advances in 2D thermoelectric materials. <i>Proceedings of SPIE</i> , 2016, , .	0.8	4
64	Lattice thermal conductivity of penta-graphene. <i>Carbon</i> , 2016, 105, 424-429.	5.4	120
65	Assembling $\pi$ -Conjugated Molecules with Negative Gaussian Curvature for Efficient Carbon-Based Metal-Free Thermoelectric Material. <i>Journal of Physical Chemistry C</i> , 2016, 120, 27829-27833.	1.5	7
66	A new C=C embedded porphyrin sheet with superior oxygen reduction performance. <i>Nano Research</i> , 2015, 8, 2901-2912.	5.8	35
67	Thermoelectric properties of single-layered SnSe sheet. <i>Nanoscale</i> , 2015, 7, 15962-15970.	2.8	256
68	Stability and properties of 2D porous nanosheets based on tetraoxa[8]circulene analogues. <i>Nanoscale</i> , 2014, 6, 14962-14970.	2.8	27
69	CuInSe <sub>2</sub> ultrathin nanoplatelets: novel self-sacrificial template-directed synthesis and application for flexible photodetectors. <i>Chemical Communications</i> , 2012, 48, 9162.	2.2	63