

# Xiaolong Liu

## List of Publications by Year in descending order

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52  
papers

7,854  
citations

126708

33  
h-index

174990

52  
g-index

53  
all docs

53  
docs citations

53  
times ranked

11217  
citing authors

#	ARTICLE	IF	CITATIONS
1	Synthesis of borophenes: Anisotropic, two-dimensional boron polymorphs. <i>Science</i> , 2015, 350, 1513-1516.	6.0	2,047
2	Effective Passivation of Exfoliated Black Phosphorus Transistors against Ambient Degradation. <i>Nano Letters</i> , 2014, 14, 6964-6970.	4.5	1,294
3	Solvent Exfoliation of Electronic-Grade, Two-Dimensional Black Phosphorus. <i>ACS Nano</i> , 2015, 9, 3596-3604.	7.3	655
4	Polyelemental nanoparticle libraries. <i>Science</i> , 2016, 352, 1565-1569.	6.0	332
5	2D materials for quantum information science. <i>Nature Reviews Materials</i> , 2019, 4, 669-684.	23.3	305
6	Borophene Synthesis on Au(111). <i>ACS Nano</i> , 2019, 13, 3816-3822.	7.3	261
7	Planar carbon nanotube-graphene hybrid films for high-performance broadband photodetectors. <i>Nature Communications</i> , 2015, 6, 8589.	5.8	258
8	In Situ Thermal Decomposition of Exfoliated Two-Dimensional Black Phosphorus. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 773-778.	2.1	209
9	Stable aqueous dispersions of optically and electronically active phosphorene. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 11688-11693.	3.3	206
10	Rotationally Commensurate Growth of MoS <sub>2</sub> on Epitaxial Graphene. <i>ACS Nano</i> , 2016, 10, 1067-1075.	7.3	176
11	High-Performance Solid-State Supercapacitors and Microsupercapacitors Derived from Printable Graphene Inks. <i>Advanced Energy Materials</i> , 2016, 6, 1600909.	10.2	139
12	Borophene synthesis beyond the single-atomic-layer limit. <i>Nature Materials</i> , 2022, 21, 35-40.	13.3	137
13	Epitaxial Ultrathin Organic Crystals on Graphene for High-Efficiency Phototransistors. <i>Advanced Materials</i> , 2016, 28, 5200-5205.	11.1	134
14	Interface Characterization and Control of 2D Materials and Heterostructures. <i>Advanced Materials</i> , 2018, 30, e1801586.	11.1	134
15	Intermixing and periodic self-assembly of borophene line defects. <i>Nature Materials</i> , 2018, 17, 783-788.	13.3	129
16	Point Defects and Grain Boundaries in Rotationally Commensurate MoS <sub>2</sub> on Epitaxial Graphene. <i>Journal of Physical Chemistry C</i> , 2016, 120, 20798-20805.	1.5	99
17	Precise, Self-Limited Epitaxy of Ultrathin Organic Semiconductors and Heterojunctions Tailored by van der Waals Interactions. <i>Nano Letters</i> , 2016, 16, 3754-3759.	4.5	92
18	Borophene-graphene heterostructures. <i>Science Advances</i> , 2019, 5, eaax6444.	4.7	89

#	ARTICLE	IF	CITATIONS
19	Improving the Performance of Graphene Phototransistors Using a Heterostructure as the Light-Absorbing Layer. <i>Nano Letters</i> , 2017, 17, 6391-6396.	4.5	87
20	Self-assembly of electronically abrupt borophene/organic lateral heterostructures. <i>Science Advances</i> , 2017, 3, e1602356.	4.7	79
21	Solution-Based Processing of Optoelectronically Active Indium Selenide. <i>Advanced Materials</i> , 2018, 30, e1802990.	11.1	78
22	Resolving the In-Plane Anisotropic Properties of Black Phosphorus. <i>Small Methods</i> , 2017, 1, 1700143.	4.6	73
23	Layer-by-Layer Assembled 2D Montmorillonite Dielectrics for Solution-Processed Electronics. <i>Advanced Materials</i> , 2016, 28, 63-68.	11.1	72
24	Chemical vapor deposition of monolayer MoS <sub>2</sub> directly on ultrathin Al <sub>2</sub> O <sub>3</sub> for low-power electronics. <i>Applied Physics Letters</i> , 2017, 110, .	1.5	72
25	Geometric imaging of borophene polymorphs with functionalized probes. <i>Nature Communications</i> , 2019, 10, 1642.	5.8	65
26	Scanning Probe Nanopatterning and Layer-by-Layer Thinning of Black Phosphorus. <i>Advanced Materials</i> , 2017, 29, 1604121.	11.1	62
27	Layer-by-Layer Sorting of Rhenium Disulfide via High-Density Isopycnic Density Gradient Ultracentrifugation. <i>Nano Letters</i> , 2016, 16, 7216-7223.	4.5	54
28	Solution-Processed Layered Gallium Telluride Thin-Film Photodetectors. <i>ACS Photonics</i> , 2018, 5, 3996-4002.	3.2	52
29	Discovery of a Cooper-pair density wave state in a transition-metal dichalcogenide. <i>Science</i> , 2021, 372, 1447-1452.	6.0	48
30	Near-equilibrium growth from borophene edges on silver. <i>Science Advances</i> , 2019, 5, eaax0246.	4.7	47
31	Anhydrous Liquid-Phase Exfoliation of Pristine Electrochemically Active GeS Nanosheets. <i>Chemistry of Materials</i> , 2018, 30, 2245-2250.	3.2	41
32	High aspect ratio nanotubes assembled from macrocyclic iminium salts. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 8883-8888.	3.3	36
33	Borophene Concentric Superlattices via Self-Assembly of Twin Boundaries. <i>Nano Letters</i> , 2020, 20, 1315-1321.	4.5	36
34	Angstrom-Scale Spectroscopic Visualization of Interfacial Interactions in an Organic/Borophene Vertical Heterostructure. <i>Journal of the American Chemical Society</i> , 2021, 143, 15624-15634.	6.6	29
35	Revealing the Effects of Electrode Crystallographic Orientation on Battery Electrochemistry via the Anisotropic Lithiation and Sodiation of ReS <sub>2</sub> . <i>ACS Nano</i> , 2018, 12, 7875-7882.	7.3	28
36	Tunable Crystallinity and Charge Transfer in Two-Dimensional Gd-Quadruplex Organic Frameworks. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 3985-3989.	7.2	26

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37	Electron transport properties of magnetic granular films. <i>Science China: Physics, Mechanics and Astronomy</i> , 2013, 56, 15-28.	2.0	25
38	Nanoscale Probing of Image-Potential States and Electron Transfer Doping in Borophene Polymorphs. <i>Nano Letters</i> , 2021, 21, 1169-1174.	4.5	20
39	Molecular-Scale Characterization of Photoinduced Charge Separation in Mixed-Dimensional InSe/Organic van der Waals Heterostructures. <i>ACS Nano</i> , 2020, 14, 3509-3518.	7.3	17
40	Visualizing Thermally Activated Memristive Switching in Percolating Networks of Solution-Processed 2D Semiconductors. <i>Advanced Functional Materials</i> , 2021, 31, 2107385.	7.8	17
41	Ultrahigh Vacuum Self-Assembly of Rotationally Commensurate C8-BTBT/MoS <sub>2</sub> /Graphene Mixed-Dimensional Heterostructures. <i>Chemistry of Materials</i> , 2019, 31, 1761-1766.	3.2	16
42	A piezo motor based on a new principle with high output force, rigidity and integrity: The Tuna Drive. <i>Review of Scientific Instruments</i> , 2012, 83, 115111.	0.6	13
43	Self-Assembled Borophene/Graphene Nanoribbon Mixed-Dimensional Heterostructures. <i>Nano Letters</i> , 2021, 21, 4029-4035.	4.5	11
44	Tunable Crystallinity and Charge Transfer in Two-Dimensional Gd-Quadruplex Organic Frameworks. <i>Angewandte Chemie</i> , 2018, 130, 4049-4053.	1.6	10
45	Severe Dirac Mass Gap Suppression in Sb <sub>2</sub> Te <sub>3</sub> -Based Quantum Anomalous Hall Materials. <i>Nano Letters</i> , 2020, 20, 8001-8007.	4.5	10
46	Atomic-scale visualization of electronic fluid flow. <i>Nature Materials</i> , 2021, 20, 1480-1484.	13.3	10
47	Probing borophene oxidation at the atomic scale. <i>Nanotechnology</i> , 2022, 33, 235702.	1.3	7
48	Selective Transfer of Rotationally Commensurate MoS <sub>2</sub> from an Epitaxially Grown van der Waals Heterostructure. <i>Chemistry of Materials</i> , 2018, 30, 8495-8500.	3.2	6
49	Improved device performance of Si-based heterojunction solar cells by using phosphorus doped Si nanocrystals embedded in SiC host matrix. <i>AIP Advances</i> , 2019, 9, .	0.6	5
50	Transistors: Layer-by-Layer Assembled 2D Montmorillonite Dielectrics for Solution-Processed Electronics (Adv. Mater. 1/2016). <i>Advanced Materials</i> , 2016, 28, 203-203.	11.1	2
51	Anisotropic Lithiation and Sodiation of ReS <sub>2</sub> Studied by In-situ TEM. <i>Microscopy and Microanalysis</i> , 2018, 24, 1570-1571.	0.2	2
52	Dual Management of Electrons and Photons to Get High-Performance Light Emitting Devices Based on Si Nanowires and Si Quantum Dots with Al <sub>2</sub> O <sub>3</sub> -Ag Hybrid Nanostructures. <i>Particle and Particle Systems Characterization</i> , 2018, 35, 1800289.	1.2	0