Liangbo Liang

List of Publications by Citations

96 papers	7,328 citations	40 h-index	85 g-index
108 ext. papers	8,709 ext. citations	9.7 avg, IF	5.86 L-index

#	Paper	IF	Citations
96	Recent Advances in Two-Dimensional Materials beyond Graphene. *ACS Nano*, **2015**, 9, 11509-39	16.7	1581
95	Graphene nanoribbon heterojunctions. *Nature Nanotechnology*, **2014**, 9, 896-900	28.7	443
94	Electronic bandgap and edge reconstruction in phosphorene materials. *Nano Letters*, **2014**, 14, 6400-6	11.5	365
93	PdSe: Pentagonal Two-Dimensional Layers with High Air Stability for Electronics. *Journal of the American Chemical Society*, **2017**, 139, 14090-14097	16.4	318
92	Anisotropic Electron-Photon and Electron-Phonon Interactions in Black Phosphorus. *Nano Letters*, **2016**, 16, 2260-7	11.5	266
91	First-principles Raman spectra of MoS2, WS2 and their heterostructures. *Nanoscale*, **2014**, 6, 5394-401	7.7	261
90	Raman Shifts in Electron-Irradiated Monolayer MoS2. *ACS Nano*, **2016**, 10, 4134-42	16.7	226
89	On-Surface Synthesis and Characterization of 9-Atom Wide Armchair Graphene Nanoribbons. *ACS Nano*, **2017**, 11, 1380-1388	16.7	196
88	A physical catalyst for the electrolysis of nitrogen to ammonia. *Science Advances*, **2018**, 4, e1700336	14.3	196
87	High-Selectivity Electrochemical Conversion of CO2 to Ethanol using a Copper Nanoparticle/N-Doped Graphene Electrode. *ChemistrySelect*, **2016**, 1, 6055-6061	1.8	175
86	Ultrathin nanosheets of CrSiTe3: a semiconducting two-dimensional ferromagnetic material. *Journal of Materials Chemistry C*, **2016**, 4, 315-322	7.1	171
85	Probing the interlayer coupling of twisted bilayer MoS2 using photoluminescence spectroscopy. *Nano Letters*, **2014**, 14, 5500-8	11.5	168
84	Low-Frequency Interlayer Breathing Modes in Few-Layer Black Phosphorus. *Nano Letters*, **2015**, 15, 4080-8	11.5	154
83	Ultrasensitive gas detection of large-area boron-doped graphene. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 14527-32	11.5	146
82	Transition-Metal Substitution Doping in Synthetic Atomically Thin Semiconductors. *Advanced Materials*, **2016**, 28, 9735-9743	24	145
81	Molecular selectivity of graphene-enhanced Raman scattering. *Nano Letters*, **2015**, 15, 2892-901	11.5	136
80	Low-Frequency Interlayer Raman Modes to Probe Interface of Twisted Bilayer MoS2. *Nano Letters*, **2016**, 16, 1435-44	11.5	130

79	Low-Frequency Raman Fingerprints of Two-Dimensional Metal Dichalcogenide Layer Stacking Configurations. *ACS Nano*, **2015**, 9, 6333-42	16.7	121
78	Low-Frequency Shear and Layer-Breathing Modes in Raman Scattering of Two-Dimensional Materials. *ACS Nano*, **2017**, 11, 11777-11802	16.7	109
77	Enhanced Raman Scattering on In-Plane Anisotropic Layered Materials. *Journal of the American Chemical Society*, **2015**, 137, 15511-7	16.4	97
76	Twisted MoSe□Bilayers with Variable Local Stacking and Interlayer Coupling Revealed by Low-Frequency Raman Spectroscopy. *ACS Nano*, **2016**, 10, 2736-44	16.7	95
75	Tailoring Vacancies Far Beyond Intrinsic Levels Changes the Carrier Type and Optical Response in Monolayer MoSe2-x Crystals. *Nano Letters*, **2016**, 16, 5213-20	11.5	85
74	Controlled Sculpture of Black Phosphorus Nanoribbons. *ACS Nano*, **2016**, 10, 5687-95	16.7	84
73	In-Plane Heterojunctions Enable Multiphasic Two-Dimensional (2D) MoS2 Nanosheets As Efficient Photocatalysts for Hydrogen Evolution from Water Reduction. *ACS Catalysis*, **2016**, 6, 6723-6729	13.1	84
72	The role of collective motion in the ultrafast charge transfer in van der Waals heterostructures. *Nature Communications*, **2016**, 7, 11504	17.4	79
71	Quasi one-dimensional band dispersion and surface metallization in long-range ordered polymeric wires. *Nature Communications*, **2016**, 7, 10235	17.4	79
70	Enhanced thermoelectric figure of merit in assembled graphene nanoribbons. *Physical Review B*, **2012**, 86,	3.3	68
69	Emergence of atypical properties in assembled graphene nanoribbons. *Physical Review Letters*, **2011**, 107, 135501	7.4	65
68	Low Energy Implantation into Transition-Metal Dichalcogenide Monolayers to Form Janus Structures. *ACS Nano*, **2020**, 14, 3896-3906	16.7	56
67	Nanoforging Single Layer MoSe2 Through Defect Engineering with Focused Helium Ion Beams. *Scientific Reports*, **2016**, 6, 30481	4.9	55
66	Distinct spin-lattice and spin-phonon interactions in monolayer magnetic CrI. *Physical Chemistry Chemical Physics*, **2018**, 20, 23546-23555	3.6	54
65	Seamless Staircase Electrical Contact to Semiconducting Graphene Nanoribbons. *Nano Letters*, **2017**, 17, 6241-6247	11.5	51
64	Observation of single-defect memristor in an MoS atomic sheet. *Nature Nanotechnology*, **2021**, 16, 58-62	28.7	50
63	Surface-Synthesized Graphene Nanoribbons for Room Temperature Switching Devices: Substrate Transfer and ex Situ Characterization. *ACS Applied Nano Materials*, **2019**, 2, 2184-2192	5.6	49
62	Anomalous interlayer vibrations in strongly coupled layered PdSe 2. *2D Materials*, **2018**, 5, 035016	5.9	46

61	Aminopolymer functionalization of boron nitride nanosheets for highly efficient capture of carbon dioxide. *Journal of Materials Chemistry A*, **2017**, 5, 16241-16248	13	45
60	Controllable conversion of quasi-freestanding polymer chains to graphene nanoribbons. *Nature Communications*, **2017**, 8, 14815	17.4	45
59	3D Imaging and Manipulation of Subsurface Selenium Vacancies in PdSe_{2}. *Physical Review Letters* , **2018**, 121, 086101	7.4	43
58	Electronic structure of assembled graphene nanoribbons: Substrate and many-body effects. *Physical Review B*, **2012**, 86,	3.3	42
57	High Conduction Hopping Behavior Induced in Transition Metal Dichalcogenides by Percolating Defect Networks: Toward Atomically Thin Circuits. *Advanced Functional Materials*, **2017**, 27, 1702829	15.6	41
56	Exploring the air stability of PdSe2 via electrical transport measurements and defect calculations. *Npj 2D Materials and Applications*, **2019**, 3,	8.8	34
55	Interlayer bond polarizability model for stacking-dependent low-frequency Raman scattering in layered materials. *Nanoscale*, **2017**, 9, 15340-15355	7.7	32
54	Isotope-Engineering the Thermal Conductivity of Two-Dimensional MoS. *ACS Nano*, **2019**, 13, 2481-2489	16.7	32
53	Atomically Precise Graphene Nanoribbon Heterojunctions for Excitonic Solar Cells. *Journal of Physical Chemistry C*, **2015**, 119, 775-783	3.8	28
52	High-temperature magnetostructural transition in van der Waals-layered MoCl3. *Physical Review Materials*, **2017**, 1,	3.2	28
51	A Library of Atomically Thin 2D Materials Featuring the Conductive-Point Resistive Switching Phenomenon. *Advanced Materials*, **2021**, 33, 2007792	24	27
50	Electronic and thermoelectric properties of assembled graphene nanoribbons with elastic strain and structural dislocation. *Applied Physics Letters*, **2013**, 102, 143101	3.4	25
49	Anisotropic Electron-Phonon Interactions in Angle-Resolved Raman Study of Strained Black Phosphorus. *ACS Nano*, **2018**, 12, 12512-12522	16.7	25
48	Elastic, plastic, and fracture mechanisms in graphene materials. *Journal of Physics Condensed Matter* , **2015**, 27, 373002	1.8	22
47	Anomalous vibrational modes in few layer WTe 2 revealed by polarized Raman scattering and first-principles calculations. *2D Materials*, **2017**, 4, 035024	5.9	21
46	Structural and electronic properties of graphitic nanowiggles. *Physical Review B*, **2012**, 85,	3.3	21
45	Atmospheric and Long-term Aging Effects on the Electrical Properties of Variable Thickness WSe Transistors. *ACS Applied Materials & Interfaces*, **2018**, 10, 36540-36548	9.5	21
44	Greatly enhanced and controlled manganese photoluminescence in water-soluble ZnCdS:Mn/ZnS core/shell quantum dots. *Chemical Physics Letters*, **2010**, 488, 73-76	2.5	19

43	On-Surface Synthesis and Characterization of Acene-Based Nanoribbons Incorporating Four-Membered Rings. *Chemistry - A European Journal*, **2019**, 25, 12074-12082	4.8	18
42	Efficient manganese luminescence induced by Ce3+-Mn2+ energy transfer in rare earth fluoride and phosphate nanocrystals. *Nanoscale Research Letters*, **2011**, 6, 119	5	18
41	Defects in Highly Anisotropic Transition-Metal Dichalcogenide PdSe. *Journal of Physical Chemistry Letters*, **2020**, 11, 740-746	6.4	18
40	Catalytic Dealkylation of Ethers to Alcohols on Metal Surfaces. *Angewandte Chemie - International Edition*, **2016**, 55, 9881-5	16.4	17
39	Design of Atomically Precise Nanoscale Negative Differential Resistance Devices. *Advanced Theory and Simulations*, **2019**, 2, 1800172	3.5	17
38	Electronic, structural, and substrate effect properties of single-layer covalent organic frameworks. *Journal of Chemical Physics*, **2015**, 142, 184708	3.9	15
37	Fabrication of rare-earth/quantum-dot nanocomposites for color-tunable sensing applications. *Journal of Nanoparticle Research*, **2011**, 13, 525-531	2.3	15
36	Anisotropic Phonon Response of Few-Layer PdSe2 under Uniaxial Strain. *Advanced Functional Materials*, **2020**, 30, 2003215	15.6	14
35	Atomically Precise PdSe Pentagonal Nanoribbons. *ACS Nano*, **2020**, 14, 1951-1957	16.7	14
34	Electronic characterization of silicon intercalated chevron graphene nanoribbons on Au(111). *Chemical Communications*, **2018**, 54, 1619-1622	5.8	14
33	Quasiparticle band gaps of graphene nanowiggles and their magnetism on Au(111). *Physical Review B*, **2013**, 88,	3.3	14
32	Direct writing of heterostructures in single atomically precise graphene nanoribbons. *Physical Review Materials*, **2019**, 3,	3.2	14
31	Optimized Substrates and Measurement Approaches for Raman Spectroscopy of Graphene Nanoribbons. *Physica Status Solidi (B): Basic Research*, **2019**, 256, 1900343	1.3	13
30	Charge carrier transport and separation in pristine and nitrogen-doped graphene nanowiggle heterostructures. *Carbon*, **2015**, 95, 833-842	10.4	13
29	Interfacial properties and design of functional energy materials. *Accounts of Chemical Research*, **2014**, 47, 3395-405	24.3	13
28	Engineering Edge States of Graphene Nanoribbons for Narrow-Band Photoluminescence. *ACS Nano* , **2020**, 14, 5090-5098	16.7	12
27	Polytypism in few-layer gallium selenide. *Nanoscale*, **2020**, 12, 8563-8573	7.7	11
26	Electronic, vibrational, Raman, and scanning tunneling microscopy signatures of two-dimensional boron nanomaterials. *Physical Review B*, **2016**, 94,	3.3	11

25	Hydro-deoxygenation of CO on functionalized carbon nanotubes for liquid fuels production. *Carbon* , **2017**, 121, 274-284	10.4	10
24	Direct Observation of Symmetry-Dependent Electron-Phonon Coupling in Black Phosphorus. *Journal of the American Chemical Society*, **2019**, 141, 18994-19001	16.4	10
23	Interlayer magnetism in Fe3□GeTe2. *Physical Review Materials*, **2020**, 4,	3.2	8
22	Bifacial Raman Enhancement on Monolayer Two-Dimensional Materials. *Nano Letters*, **2019**, 19, 1124-1130	12.5	7
21	Modification of the electronic properties of hexagonal boron-nitride in BN/graphene vertical heterostructures. *2D Materials*, **2016**, 3, 045002	5.9	7
20	Ab initio investigation of the cyclodehydrogenation process for polyanthrylene transformation to graphene nanoribbons. *Npj Computational Materials*, **2019**, 5,	10.9	6
19	Catalytic Dealkylation of Ethers to Alcohols on Metal Surfaces. *Angewandte Chemie*, **2016**, 128, 10035-10039	3.3	6
18	Role of antiferromagnetic ordering in the (1□) surface reconstruction of Ca(Fe(1-x)Co(x))2As2. *Physical Review Letters*, **2014**, 112, 077205	7.4	6
17	Bimodal Fluorescence and Magnetic Resonance Imaging Using Water-Soluble Hexagonal NaYF4:Ce,Tb,Gd Nanocrystals. *Journal of Nanomaterials*, **2011**, 2011, 1-7	3.2	6
16	Thickness and Spin Dependence of Raman Modes in Magnetic Layered Fe3GeTe2. *Advanced Electronic Materials*, **2021**, 7, 2001159	6.4	6
15	First-principles study of the thermodynamic and vibrational properties of ReS2 under pressure. *Physical Review B*, **2019**, 100,	3.3	5
14	Low-frequency Raman signature of Ag-intercalated few-layer MoS2. *2D Materials*, **2021**, 8, 025031	5.9	5
13	The magnetic, electronic, and light-induced topological properties in two-dimensional hexagonal FeX2 (X = Cl, Br, I) monolayers. *Applied Physics Letters*, **2020**, 116, 192404	3.4	4
12	Switching interlayer magnetic order in bilayer CrI by stacking reversal. *Nanoscale*, **2021**, 13, 16172-16181	7.7	4
11	Modeling the Kondo effect of a magnetic atom adsorbed on graphene. *2D Materials*, **2019**, 6, 035038	5.9	3
10	Electronic Transport in Graphitic Carbon Nanoribbons **2013**, 319-346		2
9	Electronic Raman scattering in the 2D antiferromagnet NiPS.. *Science Advances*, **2022**, 8, eabl7707	14.3	2
8	The role of mid-gap phonon modes in thermal transport of transition metal dichalcogenides. *Journal of Physics Condensed Matter*, **2020**, 32, 025306	1.8	2

7	Resonance-Enhanced Excitation of Interlayer Vibrations in Atomically Thin Black Phosphorus. *Nano Letters*, **2021**, 21, 4809-4815	11.5	2
6	Heterospin Junctions in Zigzag-Edged Graphene Nanoribbons. *Applied Sciences (Switzerland)*, **2014**, 4, 351-365	2.6	1
5	Magnetostriction of RuCl3 Flakes in the Zigzag Phase. *Journal of Physical Chemistry C*, **2021**, 125, 25687-28694	3.7	1
4	On-surface cyclodehydrogenation reaction pathway determined by selective molecular deuterations.. *Chemical Science*, **2021**, 12, 15637-15644	9.4	1
3	Understanding Heterogeneities in Quantum Materials.. *Advanced Materials*, **2022**, e2106909	24	1
2	Mesoscale interplay between phonons and crystal electric field excitations in quantum spin liquid candidate CsYbSe2. *Journal of Materials Chemistry C*, **2022**, 10, 4148-4156	7.1	0
1	Laser Synthesis, Processing, and Spectroscopy of Atomically-Thin Two Dimensional Materials. *Springer Series in Materials Science*, **2018**, 1-37	0.9	