

Liangbo Liang

List of Publications by Year in descending order

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106
papers

10,071
citations

66234

42
h-index

33814

99
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108
all docs

108
docs citations

108
times ranked

14909
citing authors

#	ARTICLE	IF	CITATIONS
19	On-surface cyclodehydrogenation reaction pathway determined by selective molecular deuterations. <i>Chemical Science</i> , 2021, 12, 15637-15644.	3.7	11
20	Defects in Highly Anisotropic Transition-Metal Dichalcogenide PdSe ₂ . <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 740-746.	2.1	28
21	The magnetic, electronic, and light-induced topological properties in two-dimensional hexagonal FeX ₂ (X = Cl, Br, I) monolayers. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	18
22	Polytypism in few-layer gallium selenide. <i>Nanoscale</i> , 2020, 12, 8563-8573.	2.8	26
23	Low Energy Implantation into Transition-Metal Dichalcogenide Monolayers to Form Janus Structures. <i>ACS Nano</i> , 2020, 14, 3896-3906.	7.3	136
24	Anisotropic Phonon Response of Few-Layer PdSe ₂ under Uniaxial Strain. <i>Advanced Functional Materials</i> , 2020, 30, 2003215.	7.8	26
25	Atomically Precise PdSe ₂ Pentagonal Nanoribbons. <i>ACS Nano</i> , 2020, 14, 1951-1957.	7.3	21
26	Engineering Edge States of Graphene Nanoribbons for Narrow-Band Photoluminescence. <i>ACS Nano</i> , 2020, 14, 5090-5098.	7.3	27
27	Interlayer magnetism in FeTe_3 . <i>Physical Review Materials</i> , 2020, 4, .	0.0	0
28	(Invited) Charge Carrier Transport and Separation in Pristine and Nitrogen-Doped Graphene Nanowiggle Heterostructures. <i>ECS Meeting Abstracts</i> , 2020, MA2020-01, 736-736.	0.0	0
29	The role of mid-gap phonon modes in thermal transport of transition metal dichalcogenides. <i>Journal of Physics Condensed Matter</i> , 2020, 32, 025306.	0.7	3
30	Direct Observation of Symmetry-Dependent Electron-Phonon Coupling in Black Phosphorus. <i>Journal of the American Chemical Society</i> , 2019, 141, 18994-19001.	6.6	21
31	Optimized Substrates and Measurement Approaches for Raman Spectroscopy of Graphene Nanoribbons. <i>Physica Status Solidi (B): Basic Research</i> , 2019, 256, 1900343.	0.7	26
32	Ab initio investigation of the cyclodehydrogenation process for polyanthrylene transformation to graphene nanoribbons. <i>Npj Computational Materials</i> , 2019, 5, .	3.5	9
33	Isotope-Engineering the Thermal Conductivity of Two-Dimensional MoS ₂ . <i>ACS Nano</i> , 2019, 13, 2481-2489.	7.3	42
34	Bifacial Raman Enhancement on Monolayer Two-Dimensional Materials. <i>Nano Letters</i> , 2019, 19, 1124-1130.	4.5	10
35	Modeling the Kondo effect of a magnetic atom adsorbed on graphene. <i>2D Materials</i> , 2019, 6, 035038.	2.0	3
36	On-Surface Synthesis and Characterization of Acene-Based Nanoribbons Incorporating Four-Membered Rings. <i>Chemistry - A European Journal</i> , 2019, 25, 12074-12082.	1.7	38

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37	Surface-Synthesized Graphene Nanoribbons for Room Temperature Switching Devices: Substrate Transfer and <i>in situ</i> Characterization. ACS Applied Nano Materials, 2019, 2, 2184-2192.	2.4	75
38	First-principles study of the thermodynamic and vibrational properties of ReS_2 under pressure. Physical Review B, 2019, 100, .		
39	Exploring the air stability of PdSe ₂ via electrical transport measurements and defect calculations. Npj 2D Materials and Applications, 2019, 3, .	3.9	55
40	Design of Atomically Precise Nanoscale Negative Differential Resistance Devices. Advanced Theory and Simulations, 2019, 2, 1800172.	1.3	18
41	Direct writing of heterostructures in single atomically precise graphene nanoribbons. Physical Review Materials, 2019, 3, .	0.9	18
42	Anomalous interlayer vibrations in strongly coupled layered PdSe ₂ . 2D Materials, 2018, 5, 035016.	2.0	60
43	Electronic characterization of silicon intercalated chevron graphene nanoribbons on Au(111). Chemical Communications, 2018, 54, 1619-1622.	2.2	19
44	A physical catalyst for the electrolysis of nitrogen to ammonia. Science Advances, 2018, 4, e1700336.	4.7	264
45	Anisotropic Electron-Phonon Interactions in Angle-Resolved Raman Study of Strained Black Phosphorus. ACS Nano, 2018, 12, 12512-12522.	7.3	33
46	Laser Synthesis, Processing, and Spectroscopy of Atomically-Thin Two Dimensional Materials. Springer Series in Materials Science, 2018, , 1-37.	0.4	1
47	Atmospheric and Long-term Aging Effects on the Electrical Properties of Variable Thickness WSe ₂ Transistors. ACS Applied Materials & Interfaces, 2018, 10, 36540-36548.	4.0	31
48	Distinct spin-lattice and spin-phonon interactions in monolayer magnetic CrI ₃ . Physical Chemistry Chemical Physics, 2018, 20, 23546-23555.	1.3	84
49	3D Imaging and Manipulation of Subsurface Selenium Vacancies in PdSe_2 . Physical Review Letters, 2018, 121, 086101.	2.9	66
50	On-Surface Synthesis and Characterization of 9-Atom Wide Armchair Graphene Nanoribbons. ACS Nano, 2017, 11, 1380-1388.	7.3	270
51	Aminopolymer functionalization of boron nitride nanosheets for highly efficient capture of carbon dioxide. Journal of Materials Chemistry A, 2017, 5, 16241-16248.	5.2	67
52	Hydro-deoxygenation of CO on functionalized carbon nanotubes for liquid fuels production. Carbon, 2017, 121, 274-284.	5.4	14
53	Optical signatures of defects in low temperature Raman and photoluminescence spectra of 2D crystals (Conference Presentation). , 2017, , .		0
54	Controllable conversion of quasi-freestanding polymer chains to graphene nanoribbons. Nature Communications, 2017, 8, 14815.	5.8	58

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55	Interlayer bond polarizability model for stacking-dependent low-frequency Raman scattering in layered materials. <i>Nanoscale</i> , 2017, 9, 15340-15355.	2.8	38
56	PdSe ₂ : Pentagonal Two-Dimensional Layers with High Air Stability for Electronics. <i>Journal of the American Chemical Society</i> , 2017, 139, 14090-14097.	6.6	509
57	Seamless Staircase Electrical Contact to Semiconducting Graphene Nanoribbons. <i>Nano Letters</i> , 2017, 17, 6241-6247.	4.5	64
58	High Conduction Hopping Behavior Induced in Transition Metal Dichalcogenides by Percolating Defect Networks: Toward Atomically Thin Circuits. <i>Advanced Functional Materials</i> , 2017, 27, 1702829.	7.8	52
59	Anomalous vibrational modes in few layer WTe ₂ revealed by polarized Raman scattering and first-principles calculations. <i>2D Materials</i> , 2017, 4, 035024.	2.0	27
60	Low-Frequency Shear and Layer-Breathing Modes in Raman Scattering of Two-Dimensional Materials. <i>ACS Nano</i> , 2017, 11, 11777-11802.	7.3	179
61	High-temperature magnetostructural transition in van der Waals-layered M_2X_2 ($\text{M} = \text{W, Mo}$) revealed by polarized Raman scattering and first-principles calculations. <i>Physical Review Materials</i> , 2017, 1, .		
62	Controlled Sculpture of Black Phosphorus Nanoribbons. <i>ACS Nano</i> , 2016, 10, 5687-5695.	7.3	111
63	In-Plane Heterojunctions Enable Multiphase Two-Dimensional (2D) MoS ₂ Nanosheets As Efficient Photocatalysts for Hydrogen Evolution from Water Reduction. <i>ACS Catalysis</i> , 2016, 6, 6723-6729.	5.5	116
64	High-Selectivity Electrochemical Conversion of CO ₂ to Ethanol using a Copper Nanoparticle/N-doped Graphene Electrode. <i>ChemistrySelect</i> , 2016, 1, 6055-6061.	0.7	251
65	Modification of the electronic properties of hexagonal boron-nitride in BN/graphene vertical heterostructures. <i>2D Materials</i> , 2016, 3, 045002.	2.0	10
66	Electronic, vibrational, Raman, and scanning tunneling microscopy signatures of two-dimensional boron nanomaterials. <i>Physical Review B</i> , 2016, 94, .	1.1	21
67	Transition-Metal Substitution Doping in Synthetic Atomically Thin Semiconductors. <i>Advanced Materials</i> , 2016, 28, 9735-9743.	11.1	208
68	Catalytic Dealkylation of Ethers to Alcohols on Metal Surfaces. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 9881-9885.	7.2	23
69	Tailoring Vacancies Far Beyond Intrinsic Levels Changes the Carrier Type and Optical Response in Monolayer MoSe ₂ Crystals. <i>Nano Letters</i> , 2016, 16, 5213-5220.	4.5	121
70	The role of collective motion in the ultrafast charge transfer in van der Waals heterostructures. <i>Nature Communications</i> , 2016, 7, 11504.	5.8	103
71	Catalytic Dealkylation of Ethers to Alcohols on Metal Surfaces. <i>Angewandte Chemie</i> , 2016, 128, 10035-10039.	1.6	9
72	Nanoforging Single Layer MoSe ₂ Through Defect Engineering with Focused Helium Ion Beams. <i>Scientific Reports</i> , 2016, 6, 30481.	1.6	82

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73	Low-Frequency Interlayer Raman Modes to Probe Interface of Twisted Bilayer MoS ₂ . Nano Letters, 2016, 16, 1435-1444.	4.5	177
74	Twisted MoSe ₂ Bilayers with Variable Local Stacking and Interlayer Coupling Revealed by Low-Frequency Raman Spectroscopy. ACS Nano, 2016, 10, 2736-2744.	7.3	117
75	Raman Shifts in Electron-Irradiated Monolayer MoS ₂ . ACS Nano, 2016, 10, 4134-4142.	7.3	311
76	Anisotropic Electron-Photon and Electron-Phonon Interactions in Black Phosphorus. Nano Letters, 2016, 16, 2260-2267.	4.5	328
77	Ultrathin nanosheets of CrSiTe ₃ : a semiconducting two-dimensional ferromagnetic material. Journal of Materials Chemistry C, 2016, 4, 315-322.	2.7	235
78	Quasi one-dimensional band dispersion and surface metallization in long-range ordered polymeric wires. Nature Communications, 2016, 7, 10235.	5.8	91
79	Sodium Controlled Synthesis of Hexagonal-Phase NaGdF ₄ :Yb,Er Nanocrystals with Enhanced Upconversion Fluorescence for Bioimaging. Nanoscience and Nanotechnology Letters, 2015, 7, 121-126.	0.4	0
80	Electronic, structural, and substrate effect properties of single-layer covalent organic frameworks. Journal of Chemical Physics, 2015, 142, 184708.	1.2	19
81	Atomically Precise Graphene Nanoribbon Heterojunctions for Excitonic Solar Cells. Journal of Physical Chemistry C, 2015, 119, 775-783.	1.5	34
82	Low-Frequency Raman Fingerprints of Two-Dimensional Metal Dichalcogenide Layer Stacking Configurations. ACS Nano, 2015, 9, 6333-6342.	7.3	151
83	Low-Frequency Interlayer Breathing Modes in Few-Layer Black Phosphorus. Nano Letters, 2015, 15, 4080-4088.	4.5	182
84	Molecular Selectivity of Graphene-Enhanced Raman Scattering. Nano Letters, 2015, 15, 2892-2901.	4.5	177
85	Ultrasensitive gas detection of large-area boron-doped graphene. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 14527-14532.	3.3	177
86	Recent Advances in Two-Dimensional Materials beyond Graphene. ACS Nano, 2015, 9, 11509-11539.	7.3	2,069
87	Charge carrier transport and separation in pristine and nitrogen-doped graphene nanowiggle heterostructures. Carbon, 2015, 95, 833-842.	5.4	16
88	Elastic, plastic, and fracture mechanisms in graphene materials. Journal of Physics Condensed Matter, 2015, 27, 373002.	0.7	26
89	Enhanced Raman Scattering on In-Plane Anisotropic Layered Materials. Journal of the American Chemical Society, 2015, 137, 15511-15517.	6.6	122
90	Heterospin Junctions in Zigzag-Edged Graphene Nanoribbons. Applied Sciences (Switzerland), 2014, 4, 351-365.	1.3	1

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91	Role of Antiferromagnetic Ordering in the (1 $\bar{1}$ –2) Surface Reconstruction of Ca(Fe $_{1-x}$ Cox) $_2$ As $_2$. Physical Review Letters, 2014, 112, 077205.	2.9	7
92	First-principles Raman spectra of MoS $_2$, WS $_2$ and their heterostructures. Nanoscale, 2014, 6, 5394.	2.8	348
93	Electronic Bandgap and Edge Reconstruction in Phosphorene Materials. Nano Letters, 2014, 14, 6400-6406.	4.5	459
94	Graphene nanoribbon heterojunctions. Nature Nanotechnology, 2014, 9, 896-900.	15.6	528
95	Interfacial Properties and Design of Functional Energy Materials. Accounts of Chemical Research, 2014, 47, 3395-3405.	7.6	14
96	Probing the Interlayer Coupling of Twisted Bilayer MoS $_2$ Using Photoluminescence Spectroscopy. Nano Letters, 2014, 14, 5500-5508.	4.5	228
97	Electronic and thermoelectric properties of assembled graphene nanoribbons with elastic strain and structural dislocation. Applied Physics Letters, 2013, 102, .	1.5	31
98	Quasiparticle band gaps of graphene nanowiggles and their magnetism on Au(111). Physical Review B, 2013, 88, .	1.1	15
99	Enhanced thermoelectric figure of merit in assembled graphene nanoribbons. Physical Review B, 2012, 86, .	1.1	81
100	Electronic structure of assembled graphene nanoribbons: Substrate and many-body effects. Physical Review B, 2012, 86, .	1.1	43
101	Structural and electronic properties of graphitic nanowiggles. Physical Review B, 2012, 85, .	1.1	24
102	Emergence of Atypical Properties in Assembled Graphene Nanoribbons. Physical Review Letters, 2011, 107, 135501.	2.9	69
103	Fabrication of rare-earth/quantum-dot nanocomposites for color-tunable sensing applications. Journal of Nanoparticle Research, 2011, 13, 525-531.	0.8	16
104	Efficient manganese luminescence induced by Ce $^{3+}$ -Mn $^{2+}$ energy transfer in rare earth fluoride and phosphate nanocrystals. Nanoscale Research Letters, 2011, 6, 119.	3.1	21
105	Bimodal Fluorescence and Magnetic Resonance Imaging Using Water-Soluble Hexagonal NaYF $_4$:Ce,Tb,Gd Nanocrystals. Journal of Nanomaterials, 2011, 2011, 1-7.	1.5	6
106	Greatly enhanced and controlled manganese photoluminescence in water-soluble ZnCdS:Mn/ZnS core/shell quantum dots. Chemical Physics Letters, 2010, 488, 73-76.	1.2	23