

# Li Yang

## List of Publications by Year in descending order

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111  
papers

18,449  
citations

25034

57  
h-index

24982

109  
g-index

114  
all docs

114  
docs citations

114  
times ranked

17887  
citing authors

#	ARTICLE	IF	CITATIONS
1	Layer-controlled band gap and anisotropic excitons in few-layer black phosphorus. <i>Physical Review B</i> , 2014, 89, .	3.2	1,940
2	Highly anisotropic and robust excitons in monolayer black phosphorus. <i>Nature Nanotechnology</i> , 2015, 10, 517-521.	31.5	1,204
3	Graphene at the Edge: Stability and Dynamics. <i>Science</i> , 2009, 323, 1705-1708.	12.6	1,153
4	Strain-Engineering the Anisotropic Electrical Conductance of Few-Layer Black Phosphorus. <i>Nano Letters</i> , 2014, 14, 2884-2889.	9.1	1,125
5	Quasiparticle Energies and Band Gaps in Graphene Nanoribbons. <i>Physical Review Letters</i> , 2007, 99, 186801.	7.8	1,092
6	Evidence for moiré excitons in van der Waals heterostructures. <i>Nature</i> , 2019, 567, 71-75.	27.8	933
7	Enhanced Thermoelectric Efficiency via Orthogonal Electrical and Thermal Conductances in Phosphorene. <i>Nano Letters</i> , 2014, 14, 6393-6399.	9.1	680
8	Anisotropic behaviours of massless Dirac fermions in graphene under periodic potentials. <i>Nature Physics</i> , 2008, 4, 213-217.	16.7	609
9	Excitonic Effects on the Optical Response of Graphene and Bilayer Graphene. <i>Physical Review Letters</i> , 2009, 103, 186802.	7.8	604
10	Giant piezoelectricity of monolayer group IV monochalcogenides: SnSe, SnS, GeSe, and GeS. <i>Applied Physics Letters</i> , 2015, 107, .	3.3	569
11	Quantum Confinement and Electronic Properties of Silicon Nanowires. <i>Physical Review Letters</i> , 2004, 92, 236805.	7.8	468
12	Ferroelectricity and Phase Transitions in Monolayer Group-IV Monochalcogenides. <i>Physical Review Letters</i> , 2016, 117, 097601.	7.8	468
13	New Generation of Massless Dirac Fermions in Graphene under External Periodic Potentials. <i>Physical Review Letters</i> , 2008, 101, 126804.	7.8	370
14	Tensile Strain Switched Ferromagnetism in Layered NbS <sub>2</sub> and NbSe <sub>2</sub> . <i>ACS Nano</i> , 2012, 6, 9727-9736.	14.6	325
15	Widely tunable black phosphorus mid-infrared photodetector. <i>Nature Communications</i> , 2017, 8, 1672.	12.8	283
16	Quantum oscillations in a two-dimensional electron gas in black phosphorus thin films. <i>Nature Nanotechnology</i> , 2015, 10, 608-613.	31.5	282
17	Ligand-field helical luminescence in a 2D ferromagnetic insulator. <i>Nature Physics</i> , 2018, 14, 277-281.	16.7	275
18	Scaling laws for the band gap and optical response of phosphorene nanoribbons. <i>Physical Review B</i> , 2014, 89, .	3.2	256

#	ARTICLE	IF	CITATIONS
19	Excitonic Effects in the Optical Spectra of Graphene Nanoribbons. Nano Letters, 2007, 7, 3112-3115.	9.1	254
20	Electron Beam Supercollimation in Graphene Superlattices. Nano Letters, 2008, 8, 2920-2924.	9.1	253
21	Efficient electrical control of thin-film black phosphorus bandgap. Nature Communications, 2017, 8, 14474.	12.8	249
22	Interfacial Properties of Monolayer and Bilayer MoS <sub>2</sub> Contacts with Metals: Beyond the Energy Band Calculations. Scientific Reports, 2016, 6, 21786.	3.3	224
23	Black phosphorus and its isoelectronic materials. Nature Reviews Physics, 2019, 1, 306-317.	26.6	196
24	Interlayer interactions in anisotropic atomically thin rhenium diselenide. Nano Research, 2015, 8, 3651-3661.	10.4	159
25	Lattice vibrational modes and Raman scattering spectra of strained phosphorene. Applied Physics Letters, 2014, 105, .	3.3	154
26	Connectivity of icosahedral network and a dramatically growing static length scale in Cu-Zr binary metallic glasses. Physical Review B, 2013, 87, .	3.2	143
27	Magnetic Edge-State Excitons in Zigzag Graphene Nanoribbons. Physical Review Letters, 2008, 101, 186401.	7.8	139
28	Landau Levels and Quantum Hall Effect in Graphene Superlattices. Physical Review Letters, 2009, 103, 046808.	7.8	137
29	Quasiparticle band-edge energy and band offsets of monolayer of molybdenum and tungsten chalcogenides. Applied Physics Letters, 2013, 103, .	3.3	132
30	Van Hove Singularities and Excitonic Effects in the Optical Conductivity of Twisted Bilayer Graphene. Nano Letters, 2014, 14, 3353-3357.	9.1	132
31	Quasiparticle band gaps, excitonic effects, and anisotropic optical properties of the monolayer distorted structures	3.2	131
32	Ultrahigh Electrical Conductivity of Graphene Embedded in Metals. Advanced Functional Materials, 2019, 29, 1806792.	14.9	126
33	Raman response and transport properties of tellurium atomic chains encapsulated in nanotubes. Nature Electronics, 2020, 3, 141-147.	26.0	126
34	Carrier Plasmon Induced Nonlinear Band Gap Renormalization in Two-Dimensional Semiconductors. Physical Review Letters, 2015, 114, 063001.	7.8	118
35	Microsecond Valley Lifetime of Defect-Bound Excitons in Monolayer	7.8	114
36	Low-symmetry two-dimensional materials for electronic and photonic applications. Nano Today, 2016, 11, 763-777.	11.9	113

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37	Emerging photoluminescence from the dark-exciton phonon replica in monolayer WSe <sub>2</sub> . Nature Communications, 2019, 10, 2469.	12.8	102
38	Size and orientation dependence in the electronic properties of silicon nanowires. Physical Review B, 2007, 76, .	3.2	101
39	Tellurization Velocity-Dependent Metallicâ€“Semiconductingâ€“Metallic Phase Evolution in Chemical Vapor Deposition Growth of Large-Area, Few-Layer MoTe <sub>2</sub> . ACS Nano, 2017, 11, 1964-1972.	14.6	96
40	Interlayer Coupling and Gate-Tunable Excitons in Transition Metal Dichalcogenide Heterostructures. Nano Letters, 2017, 17, 7809-7813.	9.1	95
41	Schottky Barriers in Bilayer Phosphorene Transistors. ACS Applied Materials & Interfaces, 2017, 9, 12694-12705.	8.0	94
42	Topologically protected Dirac cones in compressed bulk black phosphorus. Physical Review B, 2015, 91, .	3.2	90
43	Artificial Multiferroics and Enhanced Magnetoelectric Effect in van der Waals Heterostructures. ACS Applied Materials & Interfaces, 2020, 12, 6243-6249.	8.0	81
44	First-principles study of NaAlH <sub>4</sub> and Na <sub>3</sub> AlH <sub>6</sub> complex hydrides. Physical Review B, 2004, 70, .	3.2	80
45	Giant gate-tunable bandgap renormalization and excitonic effects in a 2D semiconductor. Science Advances, 2019, 5, eaaw2347.	10.3	80
46	Widely tunable mid-infrared light emission in thin-film black phosphorus. Science Advances, 2020, 6, eaay6134.	10.3	80
47	Electronic structure and quasiparticle bandgap of silicene structures. Applied Physics Letters, 2013, 102, .	3.3	79
48	Dynamical Excitonic Effects in Doped Two-Dimensional Semiconductors. Nano Letters, 2016, 16, 5568-5573.	9.1	79
49	Quasiparticle energies, excitons, and optical spectra of few-layer black phosphorus. 2D Materials, 2015, 2, 044014.	4.4	77
50	Excitons in intrinsic and bilayer graphene. Physical Review B, 2011, 83, .	3.2	75
51	Excitonic Effects on Optical Absorption Spectra of Doped Graphene. Nano Letters, 2011, 11, 3844-3847.	9.1	73
52	Quantum confinement effect in Si/Ge core-shell nanowires: First-principles calculations. Physical Review B, 2008, 77, .	3.2	69
53	Renormalization of the quasiparticle band gap in doped two-dimensional materials from many-body calculations. Physical Review B, 2017, 96, .	3.2	69
54	Remarkable anisotropic phonon response in uniaxially strained few-layer black phosphorus. Nano Research, 2015, 8, 3944-3953.	10.4	68

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55	Enhanced electron-hole interaction and optical absorption in a silicon nanowire. Physical Review B, 2007, 75, .	3.2	65
56	Meron-like topological spin defects in monolayer CrCl <sub>3</sub> . Nature Communications, 2020, 11, 4724.	12.8	65
57	Interlayer Exciton Transport in MoSe <sub>2</sub> /WSe <sub>2</sub> Heterostructures. ACS Nano, 2021, 15, 1539-1547.	14.6	61
58	Off-plane polarization ordering in metal chalcogen diphosphates from bulk to monolayer. Physical Review B, 2017, 96, .	3.2	60
59	Highly Conducting, <i>n</i> -Type Bi <sub>12</sub> O <sub>15</sub> Cl <sub>6</sub> Nanosheets with Superlattice-like Structure. Chemistry of Materials, 2015, 27, 7710-7718.	6.7	55
60	Tunable Optical Excitations in Twisted Bilayer Graphene Form Strongly Bound Excitons. Nano Letters, 2015, 15, 5932-5937.	9.1	53
61	Temperature effect on optical spectra of monolayer molybdenum disulfide. Applied Physics Letters, 2014, 104, .	3.3	51
62	Modulated interlayer exciton properties in a two-dimensional moiré crystal. Physical Review B, 2019, 100, .	3.2	48
63	A locally preferred structure characterises all dynamical regimes of a supercooled liquid. Philosophical Magazine, 2016, 96, 1212-1227.	1.6	47
64	Curie temperature of emerging two-dimensional magnetic structures. Physical Review B, 2019, 100, .	3.2	47
65	Optically Driven Magnetic Phase Transition of Monolayer RuCl <sub>3</sub> . Nano Letters, 2019, 19, 7673-7680.	9.1	45
66	Direct Observation of Semiconductor–Metal Phase Transition in Bilayer Tungsten Diselenide Induced by Potassium Surface Functionalization. ACS Nano, 2018, 12, 2070-2077.	14.6	44
67	Modulation Doping via a Two-Dimensional Atomic Crystalline Acceptor. Nano Letters, 2020, 20, 8446-8452.	9.1	44
68	Strain-controlled fundamental gap and structure of bulk black phosphorus. Physical Review B, 2016, 94, .	3.2	40
69	Tunable Second Harmonic Generation in Twisted Bilayer Graphene. Matter, 2020, 3, 1361-1376.	10.0	40
70	Giant photogalvanic effect and second-harmonic generation in magnetic axion insulators. Physical Review B, 2020, 102, .	3.2	39
71	Raman Spectra Shift of Few-Layer IV-VI 2D Materials. Scientific Reports, 2019, 9, 19826.	3.3	36
72	Exciton spectra in two-dimensional graphene derivatives. Physical Review B, 2013, 88, .	3.2	31

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73	Anomalous thermal contraction of the first coordination shell in metallic alloy liquids. Journal of Chemical Physics, 2014, 140, 044505.	3.0	31
74	Anomalous Above-Gap Photoexcitations and Optical Signatures of Localized Charge Puddles in Monolayer Molybdenum Disulfide. ACS Nano, 2017, 11, 2115-2123.	14.6	29
75	First-principles study of the optical absorption spectra of electrically gated bilayer graphene. Physical Review B, 2010, 81, .	3.2	28
76	Quasiparticle band gaps and optical spectra of strained monolayer transition-metal dichalcogenides. Physical Review B, 2017, 96, .	3.2	28
77	Dependence of excited-state properties of tellurium on dimensionality: From bulk to two dimensions to one dimensions. Physical Review B, 2018, 98, .	3.2	27
78	Strain engineering of band offsets in Si/Ge core-shell nanowires. Applied Physics Letters, 2011, 98, .	3.3	26
79	Mechanism of Extreme Optical Nonlinearities in Spiral $WS_2$ above the Bandgap. Nano Letters, 2020, 20, 2667-2673.	9.1	25
80	First-principles Studies of Second-Order Nonlinear Optical Properties of Organic-Inorganic Hybrid Halide Perovskites. Physical Review Applied, 2020, 13, .	3.8	24
81	Strain-tunable topological quantum phase transition in buckled honeycomb lattices. Applied Physics Letters, 2015, 106, .	3.3	22
82	$\langle P \rangle_T$ -Symmetry-Enabled Spin Circular Photogalvanic Effect in Antiferromagnetic Insulators. Physical Review Letters, 2021, 127, 207402.	7.8	22
83	Anomalous structural evolution and liquid fragility signatures in Cu–Zr and Cu–Hf liquids and glasses. Acta Materialia, 2013, 61, 7411-7421.	7.9	21
84	Standing and sitting adlayers in atomic layer deposition of ZnO. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2016, 34, .	2.1	20
85	Vertical dielectric screening of few-layer van der Waals semiconductors. Nanoscale, 2017, 9, 14540-14547.	5.6	20
86	Lattice Vibrational Modes and their Frequency Shifts in Semiconductor Nanowires. Nano Letters, 2011, 11, 2618-2621.	9.1	19
87	Strongly bound excitons in gapless two-dimensional structures. Physical Review B, 2014, 90, .	3.2	17
88	Switchable Enhanced Spin Photocurrent in Rashba and Cubic Dresselhaus Ferroelectric Semiconductors. Nano Letters, 2021, 21, 2265-2271.	9.1	15
89	Electronic Structure and Optical Absorption of Fluorographene. Materials Research Society Symposia Proceedings, 2011, 1370, 37.	0.1	14
90	Photodegradation Protection in 2D In-Plane Heterostructures Revealed by Hyperspectral Nanoimaging: The Role of Nanointerface 2D Alloys. ACS Nano, 2021, 15, 2447-2457.	14.6	14

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91	Enhanced doping effect on tuning structural phases of monolayer antimony. Applied Physics Letters, 2018, 112, 213104.	3.3	13
92	Off-Plane Dielectric Screening of Few-Layer Graphdiyne and Its Family. ACS Applied Materials & Interfaces, 2019, 11, 2571-2578.	8.0	13
93	Nonreciprocal second-harmonic generation in few-layer chromium triiodide. Physical Review B, 2020, 102, .	3.2	13
94	Emerging Optical In-Memory Computing Sensor Synapses Based on Low-Dimensional Nanomaterials for Neuromorphic Networks. Advanced Intelligent Systems, 2022, 4, .	6.1	13
95	Stark effect of doped two-dimensional transition metal dichalcogenides. Applied Physics Letters, 2017, 111, .	3.3	12
96	Theoretical investigation of the vertical dielectric screening dependence on defects for few-layered van der Waals materials. RSC Advances, 2019, 9, 40309-40315.	3.6	12
97	Spontaneous ripple formation in phosphorene: electronic properties and possible applications. Nanoscale, 2016, 8, 11827-11833.	5.6	11
98	Many-electron effects on optical absorption spectra of strained graphene. Journal of Materials Research, 2012, 27, 403-409.	2.6	10
99	Photoactive Control of Surface-Enhanced Raman Scattering with Reduced Graphene Oxide in Gas Atmosphere. ACS Nano, 2022, 16, 577-587.	14.6	10
100	Quasiparticle energy and optical excitations of gated bilayer graphene. Physical Review B, 2012, 86, .	3.2	8
101	Quasiparticle energies and excitonic effects of chromium trichloride: From two dimensions to bulk. Physical Review B, 2020, 101, .	3.2	6
102	Thermodynamic second law in irreversible processes of chaotic few-body systems. Physical Review E, 2001, 64, 045102.	2.1	4
103	High-pressure investigations on the semi-Heusler compound CuMnSb. Physical Review B, 2018, 98, .	3.2	4
104	Photonic Platforms Using In-Plane Optical Anisotropy of Tin (II) Selenide and Black Phosphorus. Advanced Photonics Research, 2021, 2, 2100176.	3.6	4
105	Edge-insensitive magnetism and half metallicity in graphene nanoribbons. Journal of Physics Condensed Matter, 2018, 30, 48LT01.	1.8	3
106	Noncollinearity-modulated Electronic Properties of Monolayer CrI3. Physical Review Applied, 2019, 11, .	3.8	3
107	Wedge energy bands of monolayer black phosphorus: a first-principles study. Journal of Physics Condensed Matter, 2016, 28, 305301.	1.8	1
108	Excited-State Properties of Thin Silicon Nanowires. , 2018, , 1-18.		1

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109	Excited-State Properties of Thin Silicon Nanowires. , 2019, , 1-18.		0
110	Excited-State Properties of Thin Silicon Nanowires. , 2020, , 617-633.		0
111	Multi-Meron Interactions and Statistics in Two-Dimensional Materials. Journal of Physics Condensed Matter, 2022, , .	1.8	0