

# Wei-bo Gao

## List of Publications by Year in descending order

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119  
papers

7,420  
citations

71004

43  
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64407

83  
g-index

122  
all docs

122  
docs citations

122  
times ranked

9682  
citing authors

#	ARTICLE	IF	CITATIONS
1	Composition and phase engineering of metal chalcogenides and phosphorous chalcogenides. Nature Materials, 2023, 22, 450-458.	13.3	62
2	Phase-pure two-dimensional FexGeTe2 magnets with near-room-temperature TC. Nano Research, 2022, 15, 457-464.	5.8	21
3	Interlayer Excitons in Transition Metal Dichalcogenide Semiconductors for 2D Optoelectronics. Advanced Materials, 2022, 34, e2107138.	11.1	28
4	Patterning of Oncogenic Ras Clustering in Live Cells Using Vertically Aligned Nanostructure Arrays. Nano Letters, 2022, 22, 1007-1016.	4.5	7
5	Deterministic and Scalable Generation of Exciton Emitters in 2D Semiconductor Nanodisks. Advanced Optical Materials, 2022, 10, .	3.6	3
6	Donor-acceptor Pair Quantum Emitters in Hexagonal Boron Nitride. Nano Letters, 2022, 22, 1331-1337.	4.5	17
7	Berry connection polarizability tensor and third-order Hall effect. Physical Review B, 2022, 105, .	1.1	26
8	Revealing the heterogeneity in neuroblastoma cells via nanopillar-guided subnuclear deformation. Nanoscale, 2022, , .	2.8	1
9	Chiral Phonon Diode Effect in Chiral Crystals. Nano Letters, 2022, 22, 1688-1693.	4.5	24
10	Chiral phonons in lattices with $C_{4v}$ symmetry. Physical Review B, 2022, 105, .	4.1	1
11	Monolithic Silicon Carbide Metalenses. ACS Photonics, 2022, 9, 1409-1414.	3.2	8
12	A room-temperature gate-tunable bipolar valley Hall effect in molybdenum disulfide/tungsten diselenide heterostructures. Nature Electronics, 2022, 5, 23-27.	13.1	16
13	Phase engineering of Cr5Te8 with colossal anomalous Hall effect. Nature Electronics, 2022, 5, 224-232.	13.1	68
14	Excited-State Optically Detected Magnetic Resonance of Spin Defects in Hexagonal Boron Nitride. Physical Review Letters, 2022, 128, .	2.9	25
15	Opto-valleytronics in the 2D van der Waals heterostructure. Nano Research, 2021, 14, 1901-1911.	5.8	25
16	Chiral Single-Photon Generators. ACS Nano, 2021, 15, 1912-1916.	7.3	16
17	Third-order nonlinear Hall effect induced by the Berry-connection polarizability tensor. Nature Nanotechnology, 2021, 16, 869-873.	15.6	50
18	Fabrication of Photonic Resonators in Bulk 4H-siC. Advanced Materials Technologies, 2021, 6, 2100589.	3.0	5

#	ARTICLE	IF	CITATIONS
19	RCD: Relation Map Driven Cognitive Diagnosis for Intelligent Education Systems. , 2021, , .		35
20	Layer-engineered interlayer excitons. Science Advances, 2021, 7, .	4.7	22
21	Layer Hall effect in a 2D topological axion antiferromagnet. Nature, 2021, 595, 521-525.	13.7	136
22	Improving the hole transport performance of perovskite solar cells through adjusting the mobility of the as-synthesized conjugated polymer. Journal of Materials Chemistry C, 2021, 9, 3421-3428.	2.7	12
23	Exploring Low Power and Ultrafast Memristor on p-Type van der Waals SnS. Nano Letters, 2021, 21, 8800-8807.	4.5	57
24	Room-Temperature Solid-State Quantum Emitters in the Telecom Range. Advanced Quantum Technologies, 2021, 4, 2100076.	1.8	4
25	Building Blocks for Quantum Network Based on Group-IV Split-Vacancy Centers in Diamond. Advanced Quantum Technologies, 2020, 3, 1900069.	1.8	28
26	Robust Room Temperature Valley Hall Effect of Interlayer Excitons. Nano Letters, 2020, 20, 1345-1351.	4.5	44
27	Molecular Aggregation of Naphthalene Diimide (NDI) Derivatives in Electron Transport Layers of Inverted Perovskite Solar Cells and Their Influence on the Device Performance. Chemistry - an Asian Journal, 2020, 15, 112-121.	1.7	20
28	U-Shaped Helical Azaarenes: Synthesis, Structures, and Properties. Journal of Organic Chemistry, 2020, 85, 291-295.	1.7	10
29	Electrically controllable router of interlayer excitons. Science Advances, 2020, 6, .	4.7	48
30	Enhancing Spin-Phonon and Spin-Spin Interactions Using Linear Resources in a Hybrid Quantum System. Physical Review Letters, 2020, 125, 153602.	2.9	63
31	Observation of Binary Spectral Jumps in Color Centers in Diamond. Advanced Optical Materials, 2020, 8, 2000495.	3.6	2
32	Coherent Manipulation with Resonant Excitation and Single Emitter Creation of Nitrogen Vacancy Centers in 4H Silicon Carbide. Nano Letters, 2020, 20, 6142-6147.	4.5	46
33	Comparative Study of Curvature Sensing Mediated by F-BAR and an Intrinsically Disordered Region of FBP17. IScience, 2020, 23, 101712.	1.9	18
34	Fabricating 3D Metastructures by Simultaneous Modulation of Flexible Resist Stencils and Basal Molds. Advanced Materials, 2020, 32, 2002570.	11.1	3
35	Versatile direct-writing of dopants in a solid state host through recoil implantation. Nature Communications, 2020, 11, 5039.	5.8	15
36	Single-molecule photoreaction quantitation through intraparticle-surface energy transfer (i-SET) spectroscopy. Nature Communications, 2020, 11, 4297.	5.8	40

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37	Improving the Fill Factor of Perovskite Solar Cells by Employing an Amine-tethered Diketopyrrolopyrrole-Based Polymer as the Dopant-free Hole Transport Layer. <i>ACS Applied Energy Materials</i> , 2020, 3, 9600-9609.	2.5	26
38	Bright Exciton Fine-Structure in Two-Dimensional Lead Halide Perovskites. <i>Nano Letters</i> , 2020, 20, 5141-5148.	4.5	57
39	Chiral-perovskite optoelectronics. <i>Nature Reviews Materials</i> , 2020, 5, 423-439.	23.3	445
40	Enhanced Valley Zeeman Splitting in Fe-Doped Monolayer MoS <sub>2</sub> . <i>ACS Nano</i> , 2020, 14, 4636-4645.	7.3	69
41	Magnetic Proximity Effect in Graphene/CrBr <sub>3</sub> van der Waals Heterostructures. <i>Advanced Materials</i> , 2020, 32, e1908498.	11.1	90
42	Advanced optical gain materials keep on giving. <i>Science China Materials</i> , 2020, 63, 1345-1347.	3.5	4
43	Valley-Layer Coupling: A New Design Principle for Valleytronics. <i>Physical Review Letters</i> , 2020, 124, 037701.	2.9	69
44	Synthesis of Co-Doped MoS <sub>2</sub> Monolayers with Enhanced Valley Splitting. <i>Advanced Materials</i> , 2020, 32, e1906536.	11.1	84
45	Enhancing bifunctionality of CoN nanowires by Mn doping for long-lasting Zn-air batteries. <i>Science China Chemistry</i> , 2020, 63, 890-896.	4.2	41
46	Imide-Fused Diazatetracenes: Synthesis, Characterization, and Application in Perovskite Solar Cells. <i>Chemistry - A European Journal</i> , 2020, 26, 4220-4225.	1.7	4
47	Neural Mathematical Solver with Enhanced Formula Structure. , 2020, , .		11
48	Tunable geometric photocurrent in van der Waals heterostructure. <i>Optica</i> , 2020, 7, 1204.	4.8	9
49	Optical Gating of Resonance Fluorescence from a Single Germanium Vacancy Color Center in Diamond. <i>Physical Review Letters</i> , 2019, 123, 033602.	2.9	31
50	Sulfur Position in Pyrene-Based PTTIs Plays a Key Role To Determine the Performance of Perovskite Solar Cells When PTTIs Were Employed as Electron Transport Layers. <i>ACS Applied Energy Materials</i> , 2019, 2, 5716-5723.	2.5	13
51	Quantum light sources from semiconductor. <i>Journal of Semiconductors</i> , 2019, 40, 070301.	2.0	3
52	A Review of Perovskite Photovoltaic Materials's™ Synthesis and Applications via Chemical Vapor Deposition Method. <i>Materials</i> , 2019, 12, 3304.	1.3	25
53	Influences of Structural Modification of Naphthalenediimides with Benzothiazole on Organic Field-Effect Transistor and Non-Fullerene Perovskite Solar Cell Characteristics. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 44487-44500.	4.0	27
54	Synthesis, characterization and photophysical studies of a novel polycyclic diborane. <i>New Journal of Chemistry</i> , 2019, 43, 564-568.	1.4	3

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55	Anti-Stokes excitation of solid-state quantum emitters for nanoscale thermometry. Science Advances, 2019, 5, eaav9180.	4.7	55
56	Room temperature nanocavity laser with interlayer excitons in 2D heterostructures. Science Advances, 2019, 5, eaav4506.	4.7	108
57	Theoretical Prediction of Chiral 3D Hybrid Organic-Inorganic Perovskites. Advanced Materials, 2019, 31, e1807628.	11.1	64
58	Direct Photoluminescence Probing of Ferromagnetism in Monolayer Two-Dimensional CrBr <sub>3</sub> . Nano Letters, 2019, 19, 3138-3142.	4.5	265
59	Exploring Multi-Objective Exercise Recommendations in Online Education Systems. , 2019, , .		52
60	High-resolution resonant excitation of NV centers in $\text{SiC}$ : A matrix for quantum technology applications. Physical Review B, 2019, 100, .	11.1	265
61	Quantum nanophotonics with group IV defects in diamond. Nature Communications, 2019, 10, 5625.	5.8	263
62	Efficient Inverted Perovskite Solar Cells by Employing Na <sub>2</sub> CO <sub>3</sub> Type (D <sub>2</sub> h <sub>12</sub> h <sub>2</sub> ) Polymers as Electron Transporting Layer. Small, 2019, 15, e1803339.	5.2	50
63	Synthesis, Photophysical Properties and Two-Photon Absorption Study of Tetraazachrysenes-based Na-Heteroocenes. Chemistry - an Asian Journal, 2019, 14, 1807-1813.	1.7	18
64	Transition metal qubits in $\text{SiC}$ : A correlated EPR and DFT study of the spin vanadium $\text{SiC}$ .	11.1	265
65	Anti-Stokes Excitation of Solid-State Quantum Emitters for Nanoscale Thermometry. , 2019, , .		1
66	Membrane curvature sensing of the lipid-anchored K-Ras small GTPase. Life Science Alliance, 2019, 2, e201900343.	1.3	35
67	Microsecond dark-exciton valley polarization memory in two-dimensional heterostructures. Nature Communications, 2018, 9, 753.	5.8	96
68	Optical properties of implanted Xe color centers in diamond. Optics Communications, 2018, 411, 182-186.	1.0	16
69	Room temperature solid-state quantum emitters in the telecom range. Science Advances, 2018, 4, eaar3580.	4.7	91
70	Electron paramagnetic resonance tagged high-resolution excitation spectroscopy of NV-centers in $\text{SiC}$ . Physical Review B, 2018, 98, .	11.1	265
71	Direct writing of single germanium vacancy center arrays in diamond. New Journal of Physics, 2018, 20, 125004.	1.2	28
72	Optical spin pumping induced pseudomagnetic field in two-dimensional heterostructures. Physical Review B, 2018, 98, .	1.1	10

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73	Bright room temperature single photon source at telecom range in cubic silicon carbide. Nature Communications, 2018, 9, 4106.	5.8	91
74	Nitrogen vacancy center in cubic silicon carbide: A promising qubit in the $\sim 1.5\ \mu\text{m}$ spectral range for photonic quantum networks. Physical Review B, 2018, 98, .	1.1	43
75	Boosting the performance of organic cathodes through structure tuning. Journal of Materials Chemistry A, 2018, 6, 12985-12991.	5.2	87
76	Spin control in reduced-dimensional chiral perovskites. Nature Photonics, 2018, 12, 528-533.	15.6	371
77	Integrated Chip for Continuous-variable Quantum Key Distribution using Silicon Photonic Fabrication. , 2018, , .		1
78	A Large-Number and Multilayer Quantum Walk using Silicon Nano-photonic Chip. , 2018, , .		0
79	Determinating Full Parameters of U-Matrix for Reconfigurable Boson Sampling Circuits using Machine Learning. , 2018, , .		0
80	Scalable Fabrication of Single Silicon Vacancy Defect Arrays in Silicon Carbide Using Focused Ion Beam. ACS Photonics, 2017, 4, 1054-1059.	3.2	55
81	Coherent control of a strongly driven silicon vacancy optical transition in diamond. Nature Communications, 2017, 8, 14451.	5.8	57
82	Correlated fluorescence blinking in two-dimensional semiconductor heterostructures. Nature, 2017, 541, 62-67.	13.7	158
83	Zeeman splitting via spin-valley-layer coupling in bilayer MoTe <sub>2</sub> . Nature Communications, 2017, 8, 802.	5.8	56
84	High-quality monolayer superconductor NbSe <sub>2</sub> grown by chemical vapour deposition. Nature Communications, 2017, 8, 394.	5.8	290
85	Coherent Perfect Absorption in Metamaterials with Entangled Photons. ACS Photonics, 2017, 4, 2124-2128.	3.2	31
86	Self-Protected Thermometry with Infrared Photons and Defect Spins in Silicon Carbide. Physical Review Applied, 2017, 8, .	1.5	40
87	Efficient Generation of an Array of Single Silicon-Vacancy Defects in Silicon Carbide. Physical Review Applied, 2017, 7, .	1.5	81
88	Quantum Photonic Wavelength Conversion and Modulation using Low Loss Aluminum Nitride. , 2017, , .		0
89	Two-qubits Controlled-unitary Quantum Gates for Quantum Computing by Silicon Photonic Chip. , 2017, , .		1
90	Two-dimensional Quantum Walk using 3D Silicon Photonic Fabrication. , 2017, , .		0

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91	Entanglement Generation Based on Quantum Dot Spins. Nano-optics and Nanophotonics, 2017, , 379-407.	0.2	0
92	An Integrated Photonic Chip for Continuous-variable Quantum Key Distribution. , 2017, , .		0
93	Nonblinking Emitters with Nearly Lifetime-Limited Linewidths in CVD Nanodiamonds. Physical Review Applied, 2016, 6, .	1.5	41
94	Generation of heralded entanglement between distant hole spins. Nature Physics, 2016, 12, 218-223.	6.5	226
95	Coherent manipulation, measurement and entanglement of individual solid-state spins using optical fields. Nature Photonics, 2015, 9, 363-373.	15.6	208
96	Quantum dot spin-photon entanglement and photon-to-spin teleportation. Proceedings of SPIE, 2014, , .	0.8	0
97	Observation of Quantum Jumps of a Single Quantum Dot Spin Using Submicrosecond Single-Shot Optical Readout. Physical Review Letters, 2014, 112, 116802.	2.9	61
98	Quantum dot spin-photon entanglement and quantum teleportation from a Photon to a Solid-State Spin Qubit. , 2014, , .		1
99	Quantum teleportation from a propagating photon to a solid-state spin qubit. Nature Communications, 2013, 4, 2744.	5.8	135
100	Observation of entanglement between a quantum dot spin and a single photon. Nature, 2012, 491, 426-430.	13.7	380
101	Experimental demonstration of topological error correction. Nature, 2012, 482, 489-494.	13.7	162
102	Experimental measurement-based quantum computing beyond the cluster-state model. Nature Photonics, 2011, 5, 117-123.	15.6	19
103	Experimental demonstration of a hyper-entangled ten-qubit Schrödinger cat state. Nature Physics, 2010, 6, 331-335.	6.5	282
104	Bell inequality tests of four-photon six-qubit graph states. Physical Review A, 2010, 82, .	1.0	10
105	Increasing the Statistical Significance of Entanglement Detection in Experiments. Physical Review Letters, 2010, 104, 210401.	2.9	32
106	Experimental Realization of Programmable Quantum Gate Array for Directly Probing Commutation Relations of Pauli Operators. Physical Review Letters, 2010, 105, 120402.	2.9	11
107	Experimental Realization of a Controlled-NOT Gate with Four-Photon Six-Qubit Cluster States. Physical Review Letters, 2010, 104, 020501.	2.9	71
108	Teleportation-based realization of an optical quantum two-qubit entangling gate. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 20869-20874.	3.3	44

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109	Demonstrating Anyonic Fractional Statistics with a Six-Qubit Quantum Simulator. Physical Review Letters, 2009, 102, 030502.	2.9	111
110	Greenberger-Horne-Zeilinger-type violation of local realism by mixed states. Physical Review A, 2008, 78, .	1.0	6
111	Experimental quantum coding against qubit loss error. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 11050-11054.	3.3	63
112	A proof-of-principle experiment of eliminating photon-loss errors in cluster states. New Journal of Physics, 2008, 10, 055003.	1.2	2
113	Toolbox for entanglement detection and fidelity estimation. Physical Review A, 2007, 76, .	1.0	92
114	Experimental Long-Distance Decoy-State Quantum Key Distribution Based on Polarization Encoding. Physical Review Letters, 2007, 98, 010505.	2.9	295
115	On Common Eigenvector of Parametric Interaction Hamiltonian and Number-Difference Operator Derived by Virtue of Entangled State Representation. Communications in Theoretical Physics, 2007, 47, 139-142.	1.1	0
116	Experimental entanglement of six photons in graph states. Nature Physics, 2007, 3, 91-95.	6.5	554
117	SIMULTANEOUS EIGENSTATES OF THE NUMBER-DIFFERENCE OPERATOR AND A BILINEAR INTERACTION HAMILTONIAN DERIVED BY SOLVING A COMPLEX DIFFERENTIAL EQUATION. Modern Physics Letters A, 2006, 21, 2903-2911.	0.5	2
118	ABCD rule for Gaussian beam propagation in the context of quantum optics derived by the IWOP technique. Annals of Physics, 2006, 321, 2116-2127.	1.0	18
119	Optically Driven Giant Superbunching from a Single Perovskite Quantum Dot. Advanced Optical Materials, 0, , 2100879.	3.6	4