

Jun Zhang

List of Publications by Year in descending order

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41258

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128
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128
times ranked

15925
citing authors

#	ARTICLE	IF	CITATIONS
1	Interlayer Breathing and Shear Modes in Few-Trilayer MoS ₂ and WSe ₂ . Nano Letters, 2013, 13, 1007-1015.	4.5	576
2	Observation of Internal Photoinduced Electron and Hole Separation in Hybrid Two-Dimensional Perovskite Films. Journal of the American Chemical Society, 2017, 139, 1432-1435.	6.6	477
3	Laminated Carbon Nanotube Networks for Metal Electrode-Free Efficient Perovskite Solar Cells. ACS Nano, 2014, 8, 6797-6804.	7.3	427
4	Raman Spectroscopy of Few-Quintuple Layer Topological Insulator Bi ₂ Se ₃ Nanoplatelets. Nano Letters, 2011, 11, 2407-2414.	4.5	409
5	Large-Area Synthesis of Monolayer and Few-Layer MoSe ₂ Films on SiO ₂ Substrates. Nano Letters, 2014, 14, 2419-2425.	4.5	376
6	Real-Space Identification of Intermolecular Bonding with Atomic Force Microscopy. Science, 2013, 342, 611-614.	6.0	365
7	A two-dimensional Fe-doped SnS ₂ magnetic semiconductor. Nature Communications, 2017, 8, 1958.	5.8	315
8	Raman spectroscopy of atomically thin two-dimensional magnetic iron phosphorus trisulfide (FePS ₃). Nature Communications, 2017, 8, 1958.	2.0	299
9	Resonance Fluorescence from a Coherently Driven Semiconductor Quantum Dot in a Cavity. Physical Review Letters, 2007, 99, 187402.	2.9	293
10	Laser cooling of organic-inorganic lead halide perovskites. Nature Photonics, 2016, 10, 115-121.	15.6	282
11	Laser cooling of a semiconductor by 40 kelvin. Nature, 2013, 493, 504-508.	13.7	264
12	Ultrafast Carrier Thermalization and Cooling Dynamics in Few-Layer MoS ₂ . ACS Nano, 2014, 8, 10931-10940.	7.3	236
13	Catalytic Growth of Large-Scale Single-Crystal CdS Nanowires by Physical Evaporation and Their Photoluminescence. Chemistry of Materials, 2002, 14, 1773-1777.	3.2	221
14	Vertically Aligned Gold Nanorod Monolayer on Arbitrary Substrates: Self-Assembly and Femtomolar Detection of Food Contaminants. ACS Nano, 2013, 7, 5993-6000.	7.3	218
15	Flexible Visible-Infrared Metamaterials and Their Applications in Highly Sensitive Chemical and Biological Sensing. Nano Letters, 2011, 11, 3232-3238.	4.5	215
16	Topology-Driven Magnetic Quantum Phase Transition in Topological Insulators. Science, 2013, 339, 1582-1586.	6.0	206
17	Effects of lower symmetry and dimensionality on Raman spectra in two-dimensional WSe ₂ . Physical Review B, 2013, 88, .	1.1	204
18	Layer-Number Dependent Optical Properties of 2D Materials and Their Application for Thickness Determination. Advanced Functional Materials, 2017, 27, 1604468.	7.8	189

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19	Low-Frequency Shear and Layer-Breathing Modes in Raman Scattering of Two-Dimensional Materials. ACS Nano, 2017, 11, 11777-11802.	7.3	179
20	Moiré Phonons in Twisted Bilayer MoS ₂ . ACS Nano, 2018, 12, 8770-8780.	7.3	149
21	Assembly of reconfigurable one-dimensional colloidal superlattices due to a synergy of fundamental nanoscale forces. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 2240-2245.	3.3	144
22	Recent developments and future directions in the growth of nanostructures by van der Waals epitaxy. Nanoscale, 2013, 5, 3570.	2.8	144
23	Raman and photoluminescence spectra of two-dimensional nanocrystallites of monolayer WS ₂ and WSe ₂ . 2D Materials, 2016, 3, 025016.	2.0	144
24	Influences of Structural Properties on Stability of Fullerenols. Journal of Physical Chemistry B, 2004, 108, 11473-11479.	1.2	139
25	Iron Pyrite Thin Film Counter Electrodes for Dye-Sensitized Solar Cells: High Efficiency for Iodine and Cobalt Redox Electrolyte Cells. ACS Nano, 2014, 8, 10597-10605.	7.3	138
26	Superlubricity of a graphene/MoS ₂ heterostructure: a combined experimental and DFT study. Nanoscale, 2017, 9, 10846-10853.	2.8	133
27	Phonons in Bi ₂ S ₃ nanostructures: Raman scattering and first-principles studies. Physical Review B, 2011, 84, .	1.1	126
28	Polytypism and unexpected strong interlayer coupling in two-dimensional layered ReS ₂ . Nanoscale, 2016, 8, 8324-8332.	2.8	120
29	Layer-by-layer thinning of MoS ₂ by thermal annealing. Nanoscale, 2013, 5, 8904-8908.	2.8	110
30	Exciton-phonon coupling in individual ZnTe nanorods studied by resonant Raman spectroscopy. Physical Review B, 2012, 85, .	1.1	109
31	Metamaterials-Based Label-Free Nanosensor for Conformation and Affinity Biosensing. ACS Nano, 2013, 7, 7583-7591.	7.3	104
32	Anomalous frequency trends in MoS ₂ thin films attributed to surface effects. Physical Review B, 2013, 88, .	1.1	104
33	Gapped Spin-1/2 Spinon Excitations in a New Kagome Quantum Spin Liquid Compound Cu ₃ Zn(OH) ₆ FBr. Chinese Physics Letters, 2017, 34, 077502.	1.3	98
34	Rapid and Nondestructive Identification of Polytypism and Stacking Sequences in Few-Layer Molybdenum Diselenide by Raman Spectroscopy. Advanced Materials, 2015, 27, 4502-4508.	11.1	96
35	Tunable Dirac Fermion Dynamics in Topological Insulators. Scientific Reports, 2013, 3, 2411.	1.6	94
36	Lattice vibrations and Raman scattering in two-dimensional layered materials beyond graphene. Nano Research, 2016, 9, 3559-3597.	5.8	93

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37	Interfacial Interactions in van der Waals Heterostructures of MoS ₂ and Graphene. ACS Nano, 2017, 11, 11714-11723.	7.3	92
38	Charge transfer and optical phonon mixing in few-layer graphene chemically doped with sulfuric acid. Physical Review B, 2010, 82, .	1.1	87
39	Interlayer vibrational modes in few-quintuple-layer Bi_2S_3 crystals: Raman spectroscopy and. Physical Review B, 2014, 90, .	1.1	87
40	Electrochemical fabrication of ordered Bi ₂ S ₃ nanowire arrays. Journal Physics D: Applied Physics, 2001, 34, 3224-3228.	1.3	76
41	Synthesis and optical properties of VI 1D nanostructures. Nanoscale, 2012, 4, 1422.	2.8	74
42	Probing the Magnetic Ordering of Antiferromagnetic MnPS ₃ by Raman Spectroscopy. Journal of Physical Chemistry Letters, 2019, 10, 3087-3093.	2.1	74
43	The Electrical Detection of Lead Ions Using Gold Nanoparticle and DNAzyme Functionalized Graphene Device. Advanced Healthcare Materials, 2013, 2, 271-274.	3.9	73
44	Electric-Field-Dependent Photoconductivity in CdS Nanowires and Nanobelts: Exciton Ionization, Franz-Keldysh, and Stark Effects. Nano Letters, 2012, 12, 2993-2999.	4.5	62
45	Surface Depletion Induced Quantum Confinement in CdS Nanobelts. ACS Nano, 2012, 6, 5283-5290.	7.3	60
46	Cross-dimensional electron-phonon coupling in van der Waals heterostructures. Nature Communications, 2019, 10, 2419.	5.8	60
47	The origin of sub-bands in the Raman D-band of graphene. Carbon, 2012, 50, 4252-4258.	5.4	54
48	Controllable Synthesis of Two-Dimensional Ruddlesden-Popper-Type Perovskite Heterostructures. Journal of Physical Chemistry Letters, 2017, 8, 6211-6219.	2.1	54
49	Anomalous Pressure Characteristics of Defects in Hexagonal Boron Nitride Flakes. ACS Nano, 2018, 12, 7127-7133.	7.3	51
50	Anomalous Temperature-Dependent Exciton-Phonon Coupling in Cesium Lead Bromide Perovskite Nanosheets. Journal of Physical Chemistry C, 2019, 123, 5128-5135.	1.5	50
51	Switchable Wettability in SnO ₂ Nanowires and SnO ₂ @SnO ₂ Heterostructures. Journal of Physical Chemistry C, 2011, 115, 22225-22231.	1.5	49
52	Transparent free-standing metamaterials and their applications in surface-enhanced Raman scattering. Nanoscale, 2014, 6, 132-139.	2.8	48
53	Review on the quantum emitters in two-dimensional materials. Journal of Semiconductors, 2019, 40, 071903.	2.0	47
54	Highly Enhanced Exciton Recombination Rate by Strong Electron-Phonon Coupling in Single ZnTe Nanobelt. Nano Letters, 2012, 12, 6420-6427.	4.5	43

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55	Raman characterization of AB- and ABC-stacked few-layer graphene by interlayer shear modes. Carbon, 2016, 99, 118-122.	5.4	43
56	Tailoring Alphabetical Metamaterials in Optical Frequency: Plasmonic Coupling, Dispersion, and Sensing. ACS Nano, 2014, 8, 3796-3806.	7.3	42
57	Resolved-sideband Raman cooling of an optical phonon in semiconductor materials. Nature Photonics, 2016, 10, 600-605.	15.6	42
58	p-type Field-Effect Transistors of Single-Crystal Zinc Telluride Nanobelts. Angewandte Chemie - International Edition, 2008, 47, 9469-9471.	7.2	41
59	Observation of forbidden phonons, Fano resonance and dark excitons by resonance Raman scattering in few-layer WS ₂ . 2D Materials, 2017, 4, 031007.	2.0	41
60	Twisted-Angle-Dependent Optical Behaviors of Intralayer Excitons and Trions in WS ₂ /WSe ₂ Heterostructure. ACS Photonics, 2019, 6, 3082-3091.	3.2	41
61	Controlled synthesis of CdE (E = S, Se and Te) nanowires. RSC Advances, 2012, 2, 5243.	1.7	36
62	Valley Zeeman splitting of monolayer MoS ₂ probed by low-field magnetic circular dichroism spectroscopy at room temperature. Applied Physics Letters, 2018, 112, .	1.5	34
63	Laser cooling of CdS nanobelts: Thickness matters. Optics Express, 2013, 21, 19302.	1.7	31
64	Transition metal oxides on organic semiconductors. Organic Electronics, 2014, 15, 871-877.	1.4	30
65	All Optical Switching through Anisotropic Gain of CsPbBr ₃ Single Crystal Microplatelet. Nano Letters, 2022, 22, 4049-4057.	4.5	29
66	Study of rare earth encapsulated carbon nanomolecules for biomedical uses. Journal of Alloys and Compounds, 2006, 408-412, 400-404.	2.8	28
67	Detection of electron-phonon coupling in two-dimensional materials by light scattering. Nano Research, 2021, 14, 1711-1733.	5.8	25
68	High-Quality Hexagonal Nonlayered CdS Nanoplatelets for Low-Threshold Whispering-Gallery-Mode Lasing. Small, 2019, 15, e1901364.	5.2	24
69	Synthesis and in vivo study of metallofullerene based MRI contrast agent. Journal of Radioanalytical and Nuclear Chemistry, 2007, 272, 605-609.	0.7	23
70	Direct Observation and Measurement of Mobile Charge Carriers in a Monolayer Organic Semiconductor on a Dielectric Substrate. ACS Nano, 2011, 5, 6195-6201.	7.3	23
71	Photoluminescent Quantum Interference in a van der Waals Magnet Preserved by Symmetry Breaking. ACS Nano, 2020, 14, 1003-1010.	7.3	23
72	Te-seeded growth of few-quintuple layer Bi ₂ Te ₃ nanoplates. Nano Research, 2014, 7, 1243-1253.	5.8	22

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73	Solid-State Semiconductor Optical Cryocooler Based on CdS Nanobelts. <i>Nano Letters</i> , 2014, 14, 4724-4728.	4.5	22
74	Phonon Confinement Effect in Two-dimensional Nanocrystallites of Monolayer MoS ₂ to Probe Phonon Dispersion Trends Away from Brillouin-Zone Center. <i>Chinese Physics Letters</i> , 2016, 33, 057801.	1.3	22
75	Zone-Folded Longitudinal Acoustic Phonons Driving Self-Trapped State Emission in Colloidal CdSe Nanoplatelet Superlattices. <i>Nano Letters</i> , 2021, 21, 4137-4144.	4.5	22
76	Phonon-Assisted Photoluminescence Up-Conversion of Silicon-Vacancy Centers in Diamond. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 6656-6661.	2.1	21
77	Phonon-Assisted Electro-Optical Switches and Logic Gates Based on Semiconductor Nanostructures. <i>Advanced Materials</i> , 2019, 31, e1901263.	11.1	21
78	Magnetic Phase Transitions and Magnetoelastic Coupling in a Two-Dimensional Stripy Antiferromagnet. <i>Nano Letters</i> , 2022, 22, 1233-1241.	4.5	21
79	Intelligent and Ultrasensitive Analysis of Mercury Trace Contaminants via Plasmonic Metamaterial-Based Surface-Enhanced Raman Spectroscopy. <i>Small</i> , 2014, 10, 3252-3256.	5.2	20
80	Diammonium-Cesium Lead Halide Perovskite with Phase-Segregated Interpenetrating Morphology for Photovoltaics. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 747-754.	2.1	20
81	Layer-number dependent high-frequency vibration modes in few-layer transition metal dichalcogenides induced by interlayer couplings. <i>Journal of Semiconductors</i> , 2017, 38, 031006.	2.0	18
82	Raman study of ultrathin Fe ₃ O ₄ films on GaAs(001) substrate: stoichiometry, epitaxial orientation and strain. <i>Journal of Raman Spectroscopy</i> , 2011, 42, 1388-1391.	1.2	17
83	Direct observation of inner and outer G [±] band double-resonance Raman scattering in free standing graphene. <i>Applied Physics Letters</i> , 2012, 100, .	1.5	17
84	Low Threshold Fabry-Pérot Mode Lasing from Lead Iodide Trapezoidal Nanoplatelets. <i>Small</i> , 2018, 14, e1801938.	5.2	17
85	Dynamic fingerprint of fractionalized excitations in single-crystalline Cu ₃ Zn(OH) ₆ FBr. <i>Nature Communications</i> , 2021, 12, 3048.	5.8	17
86	Donor-Acceptor Pair Quantum Emitters in Hexagonal Boron Nitride. <i>Nano Letters</i> , 2022, 22, 1331-1337.	4.5	17
87	UV-activated single-layer WSe ₂ for highly sensitive NO ₂ detection. <i>Rare Metals</i> , 2022, 41, 1520-1528.	3.6	16
88	Polarization-tunable nonlinear absorption patterns from saturated absorption to reverse saturated absorption in anisotropic GeS flake and an application of all-optical switching. <i>Science China Materials</i> , 2020, 63, 1489-1502.	3.5	15
89	Breakdown of Raman selection rules by Fröhlich interaction in few-layer WS ₂ . <i>Nano Research</i> , 2021, 14, 239-244.	5.8	15
90	Magneto-Raman Study of Magnon-Phonon Coupling in Two-Dimensional Ising Antiferromagnetic FePS ₃ . <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 1533-1539.	2.1	15

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91	Unraveling the Defect Emission and Exciton-Lattice Interaction in Bilayer WS ₂ . <i>Journal of Physical Chemistry C</i> , 2019, 123, 4433-4440.	1.5	14
92	Scanning Tunneling Microscopy Investigation of Substrate-Dependent Adsorption and Assembly of Metallofullerene Gd@C ₈₂ on Cu(111) and Cu(100). <i>Journal of Physical Chemistry C</i> , 2011, 115, 6265-6268.	1.5	12
93	Room-temperature Near-infrared Excitonic Lasing from Mechanically Exfoliated InSe Microflake. <i>ACS Nano</i> , 2022, 16, 1477-1485.	7.3	11
94	Engineering Near-Infrared Light Emission in Mechanically Exfoliated InSe Platelets through Hydrostatic Pressure for Multicolor Microlasing. <i>Nano Letters</i> , 2022, 22, 3840-3847.	4.5	11
95	Raman scattering from an individual tubular graphite cone. <i>Carbon</i> , 2007, 45, 1116-1119.	5.4	10
96	Orientation of molecular interface dipole on metal surface investigated by noncontact atomic force microscopy. <i>Science Bulletin</i> , 2013, 58, 3630-3635.	1.7	10
97	Spin-polarized exciton formation in Co-doped GaN nanowires. <i>Materials Chemistry and Physics</i> , 2020, 245, 122756.	2.0	10
98	Review of Raman spectroscopy of two-dimensional magnetic van der Waals materials*. <i>Chinese Physics B</i> , 2021, 30, 117104.	0.7	10
99	Layer Number-Dependent Raman Spectra of ¹³³ InSe. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 3691-3697.	2.1	10
100	Observation of low-wavenumber out-of-plane optical phonon in few-layer graphene. <i>Journal of Raman Spectroscopy</i> , 2013, 44, 70-74.	1.2	9
101	Multiphonon Process in Mn-Doped ZnO Nanowires. <i>Nano Letters</i> , 2022, 22, 5385-5391.	4.5	8
102	CdS bulk crystal growth by optical floating zone method: strong photoluminescence upconversion and minimum trapped state emission. <i>Optical Engineering</i> , 2016, 56, 011109.	0.5	7
103	Monolayered adatom aggregation induced by metallofullerene molecules on Cu(100). <i>Surface Science</i> , 2012, 606, 78-82.	0.8	6
104	Exceptionally Stiff Two-Dimensional Molecular Crystal by Substrate-Confinement. <i>ACS Nano</i> , 2014, 8, 11425-11431.	7.3	6
105	Taming excitons in II-VI semiconductor nanowires and nanobelts. <i>Journal Physics D: Applied Physics</i> , 2014, 47, 394009.	1.3	6
106	Charge State Manipulation of NV Centers in Diamond under Phonon-Assisted Anti-Stokes Excitation of NV ⁰ . <i>ACS Photonics</i> , 2022, 9, 1605-1613.	3.2	6
107	Aqueous oxidation reaction enabled layer-by-layer corrosion of semiconductor nanoplates into single-crystalline 2D nanocrystals with single layer accuracy and ionic surface capping. <i>Chemical Communications</i> , 2016, 52, 3426-3429.	2.2	5
108	Measuring bulk and surface acoustic modes in diamond by angle-resolved Brillouin spectroscopy. <i>Science China: Physics, Mechanics and Astronomy</i> , 2021, 64, 1.	2.0	5

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109	Azimuth-Resolved Circular Dichroism of Metamaterials. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 1697-1704.	2.1	5
110	Optical Control of Bulk Phonon Modes in Crystalline Solids. <i>Advanced Quantum Technologies</i> , 2022, 5, .	1.8	5
111	Reply to: Can lasers really refrigerate CdS nanobelts?. <i>Nature</i> , 2019, 570, E62-E64.	13.7	4
112	Phonon-assisted Upconversion Photoluminescence in Monolayer MoSe ₂ and WSe ₂ . <i>Acta Chimica Sinica</i> , 2015, 73, 959.	0.5	3
113	Growth mechanism for vertically oriented layered In ₂ Se ₃ nanoplates. <i>Physical Review Materials</i> , 2020, 4, .	0.9	3
114	Structural change of metallofullerene: an easier thermal decomposition. <i>Nanoscale</i> , 2011, 3, 4130.	2.8	2
115	Demonstration of Net Laser Cooling in a Semiconductor. <i>Asia-Pacific Physics Newsletter</i> , 2013, 02, 27-28.	0.0	2
116	Ionic Liquid Passivation Eliminates Low-n Quantum Well Domains in Blue Quasi-2D Perovskite Films. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 57540-57547.	4.0	2
117	Brillouin Light Scattering of Halide Double Perovskite. <i>Advanced Photonics Research</i> , 2022, 3, .	1.7	2
118	Analogies between nuclear clusters and fullerene cages. <i>Nuclear Physics A</i> , 2004, 738, 459-462.	0.6	1
119	Brightening and controlling dark excitons in monolayer TMDCs. <i>Science China Materials</i> , 2018, 61, 1245-1247.	3.5	1
120	Single photon-chiral phonon entanglement in monolayer WSe ₂ . <i>Journal of Semiconductors</i> , 2019, 40, 070404.	2.0	1
121	Raman Spectroscopy of Isotropic Two-Dimensional Materials Beyond Graphene. <i>Springer Series in Materials Science</i> , 2019, , 29-52.	0.4	1
122	Laser cooling of a semiconductor by 40 kelvin: an optical refrigerator based on cadmium sulfide nanoribbons. , 2013, , .		0
123	Phonon assisted photoluminescence up-conversion of in diamond color centers. , 2019, , .		0