

Zhixing Gan

List of Publications by Year in descending order

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117
papers

3,924
citations

126858

33
h-index

138417

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all docs

119
docs citations

119
times ranked

5738
citing authors

#	ARTICLE	IF	CITATIONS
1	Mechanism for excitation-dependent photoluminescence from graphene quantum dots and other graphene oxide derivatives: consensus, debates and challenges. <i>Nanoscale</i> , 2016, 8, 7794-7807.	2.8	393
2	Photothermal Contribution to Enhanced Photocatalytic Performance of Graphene-Based Nanocomposites. <i>ACS Nano</i> , 2014, 8, 9304-9310.	7.3	240
3	Quantum confinement effects across two-dimensional planes in MoS ₂ quantum dots. <i>Applied Physics Letters</i> , 2015, 106, .	1.5	180
4	Solar steam generation based on the photothermal effect: from designs to applications, and beyond. <i>Journal of Materials Chemistry A</i> , 2019, 7, 19203-19227.	5.2	175
5	Mechanism of Photoluminescence from Chemically Derived Graphene Oxide: Role of Chemical Reduction. <i>Advanced Optical Materials</i> , 2013, 1, 926-932.	3.6	160
6	Is There Real Upconversion Photoluminescence from Graphene Quantum Dots?. <i>Advanced Optical Materials</i> , 2013, 1, 554-558.	3.6	128
7	Light-Induced Ferroelectricity in Bioinspired Self-Assembled Diphenylalanine Nanotubes/Microtubes. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 2055-2059.	7.2	88
8	The Dominant Energy Transport Pathway in Halide Perovskites: Photon Recycling or Carrier Diffusion?. <i>Advanced Energy Materials</i> , 2019, 9, 1900185.	10.2	85
9	Mn ²⁺ -Bonded Reduced Graphene Oxide with Strong Radiative Recombination in Broad Visible Range Caused by Resonant Energy Transfer. <i>Nano Letters</i> , 2011, 11, 3951-3956.	4.5	82
10	Low-Cost, Scalable, and Reusable Photothermal Layers for Highly Efficient Solar Steam Generation and Versatile Energy Conversion. <i>Advanced Sustainable Systems</i> , 2020, 4, 1900153.	2.7	79
11	Amorphous nickel/cobalt tungsten sulfide electrocatalysts for high-efficiency hydrogen evolution reaction. <i>Applied Surface Science</i> , 2015, 341, 149-156.	3.1	76
12	Template-Free Synthesis of High-Yield Fe-Doped Cesium Lead Halide Perovskite Ultralong Microwires with Enhanced Two-Photon Absorption. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 4878-4885.	2.1	73
13	Poly(ethylene glycol)/carbon quantum dot composite solid films exhibiting intense and tunable blue-red emission. <i>Applied Surface Science</i> , 2014, 311, 490-497.	3.1	71
14	The origins of the broadband photoluminescence from carbon nitrides and applications to white light emitting. <i>Nano Research</i> , 2016, 9, 1801-1812.	5.8	66
15	The mechanism of blue photoluminescence from carbon nanodots. <i>CrystEngComm</i> , 2014, 16, 4981-4986.	1.3	62
16	Copper nanoparticles with near-unity, omnidirectional, and broadband optical absorption for highly efficient solar steam generation. <i>Nanotechnology</i> , 2019, 30, 015402.	1.3	59
17	Photophysics of 2D Organic-Inorganic Hybrid Lead Halide Perovskites: Progress, Debates, and Challenges. <i>Advanced Science</i> , 2021, 8, 2001843.	5.6	59
18	Porous reduced graphene oxide/nickel foam for highly efficient solar steam generation. <i>Nanotechnology</i> , 2019, 30, 425403.	1.3	58

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19	Reusable Self-Sterilization Masks Based on Electrothermal Graphene Filters. ACS Applied Materials & Interfaces, 2020, 12, 56579-56586.	4.0	57
20	Emission from Trions in Carbon Quantum Dots. Journal of Physical Chemistry C, 2015, 119, 2956-2962.	1.5	53
21	Photon Reabsorption and Nonradiative Energy-Transfer-Induced Quenching of Blue Photoluminescence from Aggregated Graphene Quantum Dots. Journal of Physical Chemistry C, 2016, 120, 29432-29438.	1.5	50
22	Cubic In ₂ O ₃ Microparticles for Efficient Photoelectrochemical Oxygen Evolution. Journal of Physical Chemistry Letters, 2014, 5, 4298-4304.	2.1	49
23	Photoluminescence of MoS ₂ quantum dots quenched by hydrogen peroxide: A fluorescent sensor for hydrogen peroxide. Journal of Applied Physics, 2016, 120, .	1.1	48
24	Transient Energy Reservoir in 2D Perovskites. Advanced Optical Materials, 2019, 7, 1900971.	3.6	46
25	The dissolution behaviour and thermodynamic properties calculation of praziquantel in pure and mixed organic solvents. Journal of Chemical Thermodynamics, 2020, 144, 106062.	1.0	46
26	Resilient Graphene Ultrathin Flat Lens in Aerospace, Chemical, and Biological Harsh Environments. ACS Applied Materials & Interfaces, 2019, 11, 20298-20303.	4.0	45
27	Spatially Modulating the Fluorescence Color of Mixed-Halide Perovskite Nanoplatelets through Direct Femtosecond Laser Writing. ACS Applied Materials & Interfaces, 2019, 11, 26017-26023.	4.0	44
28	The optical properties of Cs ₄ PbBr ₆ "CsPbBr ₃ perovskite composites. Nanoscale, 2019, 11, 14676-14683.	2.8	40
29	Low-cost carbonized kelp for highly efficient solar steam generation. AIP Advances, 2019, 9, .	0.6	39
30	External Stokes shift of perovskite nanocrystals enlarged by photon recycling. Applied Physics Letters, 2019, 114, .	1.5	36
31	Thermoplastic Polyurethane Nanofiber Membrane Based Air Filters for Efficient Removal of Ultrafine Particulate Matter PM _{0.1} . ACS Applied Nano Materials, 2021, 4, 182-189.	2.4	36
32	In Situ Thermal Imaging and Absolute Temperature Monitoring by Luminescent Diphenylalanine Nanotubes. Biomacromolecules, 2013, 14, 2112-2116.	2.6	34
33	Tunable photoluminescence from sheet-like black phosphorus crystal by electrochemical oxidation. Applied Physics Letters, 2015, 107, 021901.	1.5	34
34	Atmospheric water harvester-assisted solar steam generation for highly efficient collection of distilled water. Journal of Materials Chemistry A, 2022, 10, 1885-1890.	5.2	33
35	Multi-Level Anti-Counterfeiting and Optical Information Storage Based on Luminescence of Mn-Doped Perovskite Quantum Dots. Advanced Optical Materials, 2022, 10, .	3.6	33
36	Unidirectionally aligned diphenylalanine nanotube/microtube arrays with excellent supercapacitive performance. Nano Research, 2014, 7, 929-937.	5.8	32

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37	Manipulation of anisotropic magnetoresistance and domain configuration in Co/PMN-PT (011) multiferroic heterostructures by electric field. <i>Applied Physics Letters</i> , 2017, 111, .	1.5	31
38	Illumination-Induced Halide Segregation in Gradient Bandgap Mixed-Halide Perovskite Nanoplatelets. <i>Advanced Optical Materials</i> , 2018, 6, 1801107.	3.6	30
39	Bioinspired Tunable Structural Color Film with Janus Wettability and Interfacial Floatability towards Visible Water Quality Monitoring. <i>Advanced Functional Materials</i> , 2021, 31, 2010406.	7.8	30
40	Photoluminescence of Diphenylalanine Peptide Nano/Microstructures: From Mechanisms to Applications. <i>Macromolecular Rapid Communications</i> , 2017, 38, 1700370.	2.0	29
41	Long-Distance Ionic Diffusion in Cesium Lead Mixed Halide Perovskite Induced by Focused Illumination. <i>Chemistry of Materials</i> , 2019, 31, 9049-9056.	3.2	28
42	Photoluminescence and optical temperature sensing in Sm ³⁺ -doped Ba _{0.85} Ca _{0.15} Ti _{0.90} Zr _{0.10} O ₃ lead-free ceramics. <i>Ceramics International</i> , 2019, 45, 588-594.	2.3	28
43	A self-floating and integrated bionic mushroom for highly efficient solar steam generation. <i>Journal of Colloid and Interface Science</i> , 2022, 612, 88-96.	5.0	28
44	Ultrahigh quantum efficiency photodetector and ultrafast reversible surface wettability transition of square In ₂ O ₃ nanowires. <i>Nano Research</i> , 2017, 10, 2772-2781.	5.8	27
45	Synthesis and photocatalytic performance of MoS ₂ /Polycrystalline black phosphorus heterojunction composite. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 3530-3538.	3.8	26
46	Boosted photoelectrochemical performance of In ₂ O ₃ nanowires via modulating oxygen vacancies on crystal facets. <i>Journal of Alloys and Compounds</i> , 2020, 845, 156311.	2.8	25
47	Highly Efficient Solar-Driven Photothermal Performance in Au-Carbon Core-Shell Nanospheres. <i>Solar Rrl</i> , 2017, 1, 1600032.	3.1	24
48	A metal-free 3C-SiC/g-C ₃ N ₄ composite with enhanced visible light photocatalytic activity. <i>RSC Advances</i> , 2017, 7, 40028-40033.	1.7	24
49	Encapsulation of colloid perovskite nanocrystals into solid polymer matrices: Impact on electronic transition and photoluminescence. <i>Journal of Luminescence</i> , 2020, 219, 116938.	1.5	24
50	Concentrated Acid-Induced Dehydration of Fallen Leaves for Efficient, Sustainable, and Self-Cleaning Solar Steam Generation. <i>Advanced Energy and Sustainability Research</i> , 2020, 1, 2000034.	2.8	21
51	Bioinspired Free-Standing One-Dimensional Photonic Crystals with Janus Wettability for Water Quality Monitoring. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 40979-40984.	4.0	21
52	Direct-Indirect Transition of Pressurized Two-Dimensional Halide Perovskite: Role of Benzene Ring Stack Ordering. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 5687-5693.	2.1	20
53	Upconversion photoluminescence modulation by electric field poling in Er ³⁺ doped (Ba _{0.85} Ca _{0.15})(Zr _{0.1} Ti _{0.9})O ₃ piezoelectric ceramics. <i>Journal of Alloys and Compounds</i> , 2019, 794, 325-332.	2.8	20
54	Determining In-Plane Carrier Diffusion in Two-Dimensional Perovskite Using Local Time-Resolved Photoluminescence. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 26384-26390.	4.0	20

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55	Fluorescence enhancement of perovskite nanocrystals using photonic crystals. <i>Journal of Materials Chemistry C</i> , 2021, 9, 908-915.	2.7	19
56	Revealing Dynamic Effects of Mobile Ions in Halide Perovskite Solar Cells Using Time-Resolved Microspectroscopy. <i>Small Methods</i> , 2021, 5, e2000731.	4.6	18
57	Microsteganography on all inorganic perovskite micro-platelets by direct laser writing. <i>Nanoscale</i> , 2021, 13, 14450-14459.	2.8	18
58	Layer number dependent exciton dissociation and carrier recombination in 2D Ruddlesden-Popper halide perovskites. <i>Journal of Materials Chemistry C</i> , 2021, 9, 8966-8974.	2.7	18
59	Power-Free and Self-Cleaning Solar Light Detector Based on the Temperature-Sensitive Structural Color and Photothermal Effect. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 33566-33573.	4.0	18
60	Magnetic field enhanced photothermal effect of Fe ₃ O ₄ nanoparticles. <i>Journal of Applied Physics</i> , 2018, 123, .	1.1	17
61	Hydration of mixed halide perovskites investigated by Fourier transform infrared spectroscopy. <i>APL Materials</i> , 2019, 7, 031107.	2.2	17
62	Temperature-Dependent Dual Emission from Sucrose-Derived Carbon Nanodots: A Ratiometric Fluorescent Thermometer. <i>ChemNanoMat</i> , 2016, 2, 171-175.	1.5	16
63	Bright, stable, and tunable solid-state luminescence of carbon nanodot organogels. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 18089-18096.	1.3	16
64	Improved power conversion efficiency in radial junction thin film solar cells based on amorphous silicon germanium alloys. <i>Journal of Alloys and Compounds</i> , 2019, 803, 260-264.	2.8	15
65	Tunable high reflective bands to improve quantum dot white light-emitting diodes. <i>Journal of Materials Chemistry C</i> , 2017, 5, 1149-1154.	2.7	14
66	Carbon nanodots-based nanocomposites with enhanced photocatalytic performance and photothermal effects. <i>Applied Physics Letters</i> , 2017, 111, .	1.5	14
67	Hydrogenated TiO ₂ nanotube photonic crystals for enhanced photoelectrochemical water splitting. <i>Nanotechnology</i> , 2018, 29, 155401.	1.3	14
68	Efficient hydrogen evolution catalyzed by amorphous molybdenum sulfide/N-doped active carbon hybrid on carbon fiber paper. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 15135-15143.	3.8	14
69	Fluorescent variations during the phase conversion of Cs-Pb-Br compounds. <i>Journal of Alloys and Compounds</i> , 2020, 830, 154731.	2.8	14
70	Efficient Energy Funnelling by Engineering the Bandgap of a Perovskite: Förster Resonance Energy Transfer or Charge Transfer?. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 5963-5971.	2.1	14
71	Stable and multicolor solid-state luminescence of Mn doped CsPb(Cl/Br) ₃ perovskite quantum dots and its application in light-emitting diodes. <i>Journal of Luminescence</i> , 2022, 243, 118622.	1.5	14
72	Investigation of energy transfer mechanisms in rare-earth doped amorphous silica films embedded with tin oxide nanocrystals. <i>Optics Express</i> , 2019, 27, 2783.	1.7	13

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73	Mechanism of Photoinduced Phase Segregation in Mixed-Halide Perovskite Microplatelets and Its Application in Micropatterning. ACS Applied Materials & Interfaces, 2022, 14, 12412-12422.	4.0	13
74	Bioinspired diphenylalanine with aggregation-induced emission in deep ultraviolet range. New Journal of Chemistry, 2016, 40, 1970-1973.	1.4	12
75	Ultraviolet Photoluminescence of Carbon Nanospheres and its Surface Plasmon-Induced Enhancement. Small, 2018, 14, e1704239.	5.2	12
76	Highly Efficient Charge Transfer between Perovskite Nanocrystals and $g\text{-C}_3\text{N}_4$ Nanosheets. Physica Status Solidi (B): Basic Research, 2020, 257, 2000198.	0.7	12
77	3C-SiC nanocrystals/TiO ₂ nanotube heterostructures with enhanced photocatalytic performance. Applied Physics Letters, 2014, 104, .	1.5	11
78	Dynamics of anion exchange in cesium lead halide (CsPbX ₃) perovskite nanocrystals. New Journal of Chemistry, 2020, 44, 20592-20599.	1.4	11
79	Active sites provided by the surface autocatalytic effect and quantum confinement for stable and efficient photocatalytic hydrogen generation. Journal of Materials Chemistry A, 2021, 9, 14768-14774.	5.2	11
80	Black phosphorus-TiF ₃ photocatalyst for hydrogen production with an excellent capacity. Journal of Alloys and Compounds, 2021, 883, 160775.	2.8	11
81	Fluorescent dynamics of CsPbBr ₃ nanocrystals in polar solvents: a potential sensor for polarity. Nanotechnology, 2021, 32, 135701.	1.3	10
82	Broadband photodetectors based on enhanced photothermal effect of polymer encapsulated graphene film. Applied Surface Science Advances, 2021, 3, 100050.	2.9	10
83	Electron transition pathways of photoluminescence from 3C-SiC nanocrystals unraveled by steady-state, blinking and time-resolved photoluminescence measurements. Journal Physics D: Applied Physics, 2016, 49, 275107.	1.3	9
84	Hierarchical self-assembly of black phosphorus quantum dots with quantum confinement effects to a centimeter-scale membrane. Physica Status Solidi (B): Basic Research, 2017, 254, 1700011.	0.7	9
85	Large magnetocaloric and magnetoresistance effects in metamagnetic Sm _{0.55} (Sr _{0.5} Ca _{0.5}) _{0.45} MnO ₃ manganite. Ceramics International, 2017, 43, 7870-7874.	2.3	9
86	Gold Promotion of MCM-41 Supported Ruthenium Catalysts for Selective Hydrogenation of α,β -Unsaturated Aldehydes and Ketones. Catalysis Letters, 2018, 148, 267-276.	1.4	9
87	Relaxation of Excited Electrons on Carbon Nitrides Investigated by Electrochemiluminescence and Photoluminescence Spectra. Journal of Physical Chemistry C, 2020, 124, 19314-19323.	1.5	9
88	Photoluminescent Spectral Broadening of Lead Halide Perovskite Nanocrystals Investigated by Emission Wavelength Dependent Lifetime. Molecules, 2020, 25, 1151.	1.7	9
89	Solar-Driven Airflow-Enhanced All-Daytime Solar Steam Generation Based on Inverse-Bowl-Shaped Graphene Aerogels. Energy Technology, 2022, 10, .	1.8	9
90	Re-absorption-free perovskite quantum dots for boosting the efficiency of luminescent solar concentrator. Journal of Luminescence, 2022, 248, 118963.	1.5	9

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91	Energy Funneling in Quasi-2D Ruddlesden-Popper Perovskites: Charge Transfer versus Resonant Energy Transfer. <i>Advanced Photonics Research</i> , 2022, 3, 2100283.	1.7	8
92	Electron transfer from organic dyes to reduced graphene oxide studied by photoluminescence spectroscopy. <i>Physica Status Solidi (B): Basic Research</i> , 2016, 253, 1138-1143.	0.7	7
93	Modulating the fluorescent color of carbon nanodots via photon reabsorption and carbonization degree. <i>Applied Physics Letters</i> , 2017, 111, .	1.5	7
94	Engineering the carrier dynamics of $g-C_3N_4$ by rolling up planar sheets into nanotubes via ultrasonic cavitation. <i>Nanoscale</i> , 2018, 10, 22448-22455.	2.8	7
95	Fluorescence enhancement of perovskite nanocrystals by flexible photonic crystals and its application in optical strain gauge. <i>Applied Physics Letters</i> , 2021, 119, .	1.5	7
96	Structural characterizations on the degradation of 2D organic-inorganic hybrid perovskites and its enlightenment to improved stability. <i>Nanotechnology</i> , 2022, 33, 285702.	1.3	7
97	3C-SiC/ZnS heterostructured nanospheres with high photocatalytic activity and enhancement mechanism. <i>AIP Advances</i> , 2015, 5, .	0.6	6
98	Bimetallic $Ag_2Ru_3O_3$ nanoparticles for selective hydrogenation of cinnamaldehyde to hydrocinnamaldehyde. <i>Micro and Nano Letters</i> , 2018, 13, 243-247.	0.6	6
99	Construction of 2D-layered quantum dots/2D-nanosheets heterostructures with compact interfaces for highly efficient photocatalytic hydrogen evolution. <i>Journal of Colloid and Interface Science</i> , 2022, 608, 284-293.	5.0	6
100	Highly Efficient Solar Steam Generation with Real Time Salinity Monitoring for Seawater Desalination. <i>Advanced Sustainable Systems</i> , 2022, 6, .	2.7	6
101	The luminescent carbon nanoparticles with controllable oxygen-related functional groups prepared by pulsed laser ablation in water. <i>Modern Physics Letters B</i> , 2016, 30, 1650320.	1.0	5
102	The roles of self-absorption and radiative energy transfer in photoluminescence of N-doped carbon nanodots in solution. <i>AIP Advances</i> , 2019, 9, 035135.	0.6	5
103	Synthesis of Ag/Co nanoparticles by dual pulsed laser ablation for synergistic photothermal study. <i>Applied Physics A: Materials Science and Processing</i> , 2021, 127, 1.	1.1	5
104	Visualization of deep ultraviolet photons based on Förster resonance energy transfer and cascade photon reabsorption in diphenylalanine-carbon nitrides composite film. <i>Applied Physics Letters</i> , 2016, 109, .	1.5	3
105	Manipulating the anomalous Josephson effect by interface valley-polarized mixing. <i>Europhysics Letters</i> , 2019, 126, 67002.	0.7	3
106	An emerging solar-thermal-electric conversion system based on highly-efficient photothermal nanoabsorber layer. <i>Materials Research Express</i> , 2019, 6, 115531.	0.8	3
107	Black 3D-TiO ₂ Nanotube Arrays on Ti Meshes for Boosted Photoelectrochemical Water Splitting. <i>Nanomaterials</i> , 2022, 12, 1447.	1.9	3
108	Ultrafast Charge Carrier Dynamics of $CsPbBr_3/Cs_4PbBr_6$ Nanocomposites. <i>Journal of Physical Chemistry C</i> , 2022, 126, 8777-8786.	1.5	3

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109	Effects of Size and Distribution of Silver Nanoparticles on Directional Fluorescence Emission Enhancement. IEEE Photonics Journal, 2017, 9, 1-8.	1.0	2
110	Growth and optical properties of lead-free Cs ₃ Bi ₂ Br ₉ perovskite microplatelets. Physica Status Solidi (B): Basic Research, 0, , .	0.7	2
111	Clean TiO ₂ nanocuboid film tightly attached on a conductive substrate for highly efficient photoelectrochemical water splitting. Journal Physics D: Applied Physics, 2016, 49, 48LT01.	1.3	1
112	Modulation of nonradiative processes of single colloidal quantum dots by glycerol passivation. Journal Physics D: Applied Physics, 2017, 50, 435103.	1.3	1
113	Increase of photoluminescence blinking frequency of 3C-SiC nanocrystals with excitation power. Chinese Physics B, 2018, 27, 127804.	0.7	1
114	Simultaneously Reconfigurable Multispectral Microscopic Imaging Based on a Digital Micromirror Device. IEEE Photonics Technology Letters, 2022, 34, 417-419.	1.3	1
115	Observation of biexciton emission in graphitic-C ₃ N ₄ nanotubes. Journal of Luminescence, 2021, 238, 118310.	1.5	0
116	Tuning the fluorescence color of gradient bandgap perovskite nanoplate by direct laser writing. , 2019, , .		0
117	Enhanced and angle dependent blue fluorescence of perovskite nanocrystals on three typical photonic crystals. Optik, 2022, 252, 168517.	1.4	0