

Xiaoyong Wang

List of Publications by Year in descending order

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papers

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citing authors

#	ARTICLE	IF	CITATIONS
1	Universal Existence of Localized Single-Photon Emitters in the Perovskite Film of All-Inorganic CsPbBr ₃ Microcrystals. <i>Advanced Materials</i> , 2022, 34, e2106278.	21.0	10
2	Observation of high-density multi-excitons in medium-size CdSe/CdZnS/ZnS colloidal quantum dots through transient spectroscopy and their optical gain properties. <i>Nanoscale</i> , 2022, 14, 5369-5376.	5.6	1
3	Nonblinking Colloidal Quantum Dots via Efficient Multiexciton Emission. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 2371-2378.	4.6	3
4	Quantized Exciton Motion and Fine Energy-Level Structure of a Single Perovskite Nanowire. <i>Nano Letters</i> , 2022, 22, 2907-2914.	9.1	5
5	Electrical control of biexciton Auger recombination in single CdSe/CdS nanocrystals. <i>Nanoscale</i> , 2022, 14, 7674-7681.	5.6	1
6	An energy level alignment strategy to boost the open-circuit voltage via a Mg:TiO ₂ compact layer in the planar heterojunction CsPbBr ₃ solar cells. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	5
7	Electron-phonon coupling-assisted universal red luminescence of o-phenylenediamine-based carbon dots. <i>Light: Science and Applications</i> , 2022, 11, .	16.6	102
8	Size-Dependent Hot Carrier Dynamics in Perovskite Nanocrystals Revealed by Two-Dimensional Electronic Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 238-244.	4.6	20
9	Bimetallic oxyhydroxide <i>in situ</i> derived from an Fe ₂ Co-MOF for efficient electrocatalytic oxygen evolution. <i>Journal of Materials Chemistry A</i> , 2021, 9, 13271-13278.	10.3	27
10	Electrocatalytic fixation of N ₂ into NO ₃ ⁻ : electron transfer between oxygen vacancies and loaded Au in Nb ₂ O ₅ nanobelts to promote ambient nitrogen oxidation. <i>Journal of Materials Chemistry A</i> , 2021, 9, 17442-17450.	10.3	33
11	Fe ₂ O ₃ /Ag/CdS ternary heterojunction photoanode for efficient solar water oxidation. <i>Catalysis Science and Technology</i> , 2021, 11, 5859-5867.	4.1	7
12	Ultra-Bright and Stable Pure Blue Light-Emitting Diode from O, N Co-Doped Carbon Dots. <i>Laser and Photonics Reviews</i> , 2021, 15, 2000412.	8.7	54
13	Nonradiative Triplet Loss Suppressed in Organic Photovoltaic Blends with Fluoridated Nonfullerene Acceptors. <i>Journal of the American Chemical Society</i> , 2021, 143, 4359-4366.	13.7	60
14	Elegant Construction of ZnIn ₂ S ₄ /BiVO ₄ Hierarchical Heterostructures as Direct Z-Scheme Photocatalysts for Efficient CO ₂ Photoreduction. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 15092-15100.	8.0	115
15	Free-triplet generation with improved efficiency in tetracene oligomers through spatially separated triplet pair states. <i>Nature Chemistry</i> , 2021, 13, 559-567.	13.6	46
16	3D Hydrangea-like InVO ₄ /Ti ₃ C ₂ T _x Hierarchical Heterosystem Collaborating with 2D/2D Interface Interaction for Enhanced Photocatalytic CO ₂ Reduction. <i>ChemNanoMat</i> , 2021, 7, 815-823.	2.8	14
17	Exciton-acoustic phonon coupling revealed by resonant excitation of single perovskite nanocrystals. <i>Nature Communications</i> , 2021, 12, 2192.	12.8	10
18	Enhanced Multiexciton Emission Property in Gradient Alloy Core/Shell CdZnSeS/ZnS Quantum Dots: Balance between Surface Passivation and Strain-Induced Lattice Defect. <i>Journal of Physical Chemistry C</i> , 2021, 125, 10759-10767.	3.1	11

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19	Probing Permanent Dipole Moments and Removing Exciton Fine Structures in Single Perovskite Nanocrystals by an Electric Field. <i>Physical Review Letters</i> , 2021, 126, 197403.	7.8	9
20	Exciton linewidth broadening induced by exciton-phonon interactions in CsPbBr ₃ nanocrystals. <i>Journal of Chemical Physics</i> , 2021, 154, 214502.	3.0	14
21	Vacancy-defect modulated pathway of photoreduction of CO ₂ on single atomically thin AgInP ₂ S ₆ sheets into olefiant gas. <i>Nature Communications</i> , 2021, 12, 4747.	12.8	128
22	Hollow InVO ₄ Nanocuboid Assemblies toward Promoting Photocatalytic N ₂ Conversion Performance. <i>Advanced Materials</i> , 2021, 33, e2006780.	21.0	38
23	Electrical Switching of Optical Gain in Perovskite Semiconductor Nanocrystals. <i>Nano Letters</i> , 2021, 21, 7831-7838.	9.1	10
24	Ultrafast dynamics of photoexcited carriers in perovskite semiconductor nanocrystals. <i>Nanophotonics</i> , 2021, 10, 1943-1965.	6.0	16
25	Thickness dependent properties of ultrathin perovskite nanosheets with Ruddlesden-Popper-like atomic stackings. <i>Nanoscale</i> , 2021, 13, 18961-18966.	5.6	0
26	Low-Threshold Amplified Spontaneous Emission and Lasing from Thick-Shell CdSe/CdS Core/Shell Nanoplatelets Enabled by High-Temperature Growth. <i>Advanced Optical Materials</i> , 2020, 8, 1901615.	7.3	26
27	Engineering the Phases and Heterostructures of Ultrathin Hybrid Perovskite Nanosheets. <i>Advanced Materials</i> , 2020, 32, e2002392.	21.0	25
28	Inhomogeneous Biexciton Binding in Perovskite Semiconductor Nanocrystals Measured with Two-Dimensional Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 10173-10181.	4.6	25
29	Singlet Fission Dynamics in Tetracene Single Crystals Probed by Polarization-Dependent Two-Dimensional Electronic Spectroscopy. <i>Journal of Physical Chemistry A</i> , 2020, 124, 10447-10456.	2.5	14
30	Artificial Trees for Artificial Photosynthesis: Construction of Dendrite-Structured Fe ₂ O ₃ /g-C ₃ N ₄ Z-Scheme System for Efficient CO ₂ Reduction into Solar Fuels. <i>ACS Applied Energy Materials</i> , 2020, 3, 6561-6572.	5.1	67
31	Anchoring of black phosphorus quantum dots onto WO ₃ nanowires to boost photocatalytic CO ₂ conversion into solar fuels. <i>Chemical Communications</i> , 2020, 56, 7777-7780.	4.1	57
32	Charge Separation from an Intra-Moiety Intermediate State in the High-Performance PM6:Y6 Organic Photovoltaic Blend. <i>Journal of the American Chemical Society</i> , 2020, 142, 12751-12759.	13.7	228
33	Transition from Doublet to Triplet Excitons in Single Perovskite Nanocrystals. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 5750-5755.	4.6	9
34	Polarized emission from single perovskite FAPbBr ₃ nanocrystals. <i>Journal of Luminescence</i> , 2020, 221, 117032.	3.1	17
35	Hole Transfer Promoted by a Viscosity Additive in an All-Polymer Photovoltaic Blend. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 1384-1389.	4.6	6
36	Long Persistent Luminescence Enabled by Dissociation of Triplet Intermediate States in an Organic Guest/Host System. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 3582-3588.	4.6	12

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37	Trion-Facilitated Dexter-Type Energy Transfer in a Cluster of Single Perovskite CsPbBr ₃ Nanocrystals. Chinese Physics Letters, 2020, 37, 127801.	3.3	2
38	Optical studies of semiconductor perovskite nanocrystals for classical optoelectronic applications and quantum information technologies: a review. Advanced Photonics, 2020, 2, .	11.8	30
39	Two-photon excited photoluminescence of single perovskite nanocrystals. Journal of Chemical Physics, 2019, 151, 154201.	3.0	17
40	Weakly coupled triplet pair states probed by quantum beating in delayed fluorescence in tetracene crystals. Journal of Chemical Physics, 2019, 151, 134309.	3.0	10
41	Tailoring exciton dynamics of monolayer transition metal dichalcogenides by interfacial electron-phonon coupling. Communications Physics, 2019, 2, .	5.3	27
42	Ultrafast hole transfer mediated by polaron pairs in all-polymer photovoltaic blends. Nature Communications, 2019, 10, 398.	12.8	56
43	Quantum Interference in a Single Perovskite Nanocrystal. Nano Letters, 2019, 19, 4442-4447.	9.1	35
44	Quantum-confined stark effect in the ensemble of phase-pure CdSe/CdS quantum dots. Nanoscale, 2019, 11, 12619-12625.	5.6	24
45	Band Engineering: Band Structure Engineering of Interfacial Semiconductors Based on Atomically Thin Lead Iodide Crystals (Adv. Mater. 17/2019). Advanced Materials, 2019, 31, 1970121.	21.0	0
46	Phase segregation due to ion migration in all-inorganic mixed-halide perovskite nanocrystals. Nature Communications, 2019, 10, 1088.	12.8	271
47	Efficient plasmon-hot electron conversion in Ag@CsPbBr ₃ hybrid nanocrystals. Nature Communications, 2019, 10, 1163.	12.8	97
48	Band Structure Engineering of Interfacial Semiconductors Based on Atomically Thin Lead Iodide Crystals. Advanced Materials, 2019, 31, e1806562.	21.0	79
49	Excitation-tailored dual-color emission of manganese(II)-doped perovskite nanocrystals. Applied Physics Letters, 2019, 114, .	3.3	15
50	Ultrathin nanosheet-anchored hexahedral prismatic Bi ₂ MoO ₆ arrays: one-step constructed and crystal facet-based homojunctions boosting photocatalytic CO ₂ reduction and N ₂ fixation. Catalysis Science and Technology, 2019, 9, 7045-7050.	4.1	11
51	Few-Layer PbI ₂ Nanoparticle: A 2D Semiconductor with Lateral Quantum Confinement. Journal of Physical Chemistry Letters, 2019, 10, 7863-7869.	4.6	6
52	Composition-Dependent Energy Splitting between Bright and Dark Excitons in Lead Halide Perovskite Nanocrystals. Nano Letters, 2018, 18, 2074-2080.	9.1	79
53	Photon antibunching in a cluster of giant CdSe/CdS nanocrystals. Nature Communications, 2018, 9, 1536.	12.8	28
54	Transient electronic anisotropy in overdoped $\text{NaF} \cdot \text{C}_x\text{O}_y$ superconductors. Physical Review B, 2018, 97, .	3.2	5

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55	Multiple Dark Excitons in Semiconductor CdSe Nanocrystals. <i>Journal of Physical Chemistry C</i> , 2018, 122, 23758-23763.	3.1	1
56	Realization of vertical and lateral van der Waals heterojunctions using two-dimensional layered organic semiconductors. <i>Nano Research</i> , 2017, 10, 1336-1344.	10.4	30
57	Series of ZnSn(OH) ₆ Polyhedra: Enhanced CO ₂ Dissociation Activation and Crystal Facet-Based Homojunction Boosting Solar Fuel Synthesis. <i>Inorganic Chemistry</i> , 2017, 56, 5704-5709.	4.0	27
58	Ultrafast Carrier Dynamics and Efficient Triplet Generation in Black Phosphorus Quantum Dots. <i>Journal of Physical Chemistry C</i> , 2017, 121, 12972-12978.	3.1	26
59	Single-Mode Lasing from “Giant” CdSe/CdS Core-Shell Quantum Dots in Distributed Feedback Structures. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 13293-13303.	8.0	23
60	Enhancing Optoelectronic Properties of Low-Dimensional Halide Perovskite via Ultrasonic-Assisted Template Refinement. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 39602-39609.	8.0	12
61	Synthesis of highly fluorescent InP/ZnS small-core/thick-shell tetrahedral-shaped quantum dots for blue light-emitting diodes. <i>Journal of Materials Chemistry C</i> , 2017, 5, 8243-8249.	5.5	93
62	Bright-Exciton Fine-Structure Splittings in Single Perovskite Nanocrystals. <i>Physical Review Letters</i> , 2017, 119, 026401.	7.8	129
63	Broadband two-dimensional electronic spectroscopy in an actively phase stabilized pump-probe configuration. <i>Optics Express</i> , 2017, 25, 21115.	3.4	26
64	Coherent optical phonon oscillation and possible electronic softening in WTe ₂ crystals. <i>Scientific Reports</i> , 2016, 6, 30487.	3.3	33
65	A near IR photosensitizer based on self-assembled CdSe quantum dot-aza-BODIPY conjugate coated with poly(ethylene glycol) and folic acid for concurrent fluorescence imaging and photodynamic therapy. <i>RSC Advances</i> , 2016, 6, 113991-113996.	3.6	21
66	Extended storage of multiple excitons in trap states of semiconductor nanocrystals. <i>Applied Physics Letters</i> , 2016, 108, .	3.3	3
67	Energy Transfer of Biexcitons in a Single Semiconductor Nanocrystal. <i>Nano Letters</i> , 2016, 16, 2492-2496.	9.1	20
68	High Color Rendering Index Hybrid III-Nitride/Nanocrystals White Light-Emitting Diodes. <i>Advanced Functional Materials</i> , 2016, 26, 36-43.	14.9	58
69	Two-Photon-Pumped Perovskite Semiconductor Nanocrystal Lasers. <i>Journal of the American Chemical Society</i> , 2016, 138, 3761-3768.	13.7	496
70	Efficient and Stable White LEDs with Silica-Coated Inorganic Perovskite Quantum Dots. <i>Advanced Materials</i> , 2016, 28, 10088-10094.	21.0	765
71	Slow Auger Recombination of Charged Excitons in Nonblinking Perovskite Nanocrystals without Spectral Diffusion. <i>Nano Letters</i> , 2016, 16, 6425-6430.	9.1	129
72	Construction and Nanoscale Detection of Interfacial Charge Transfer of Elegant Z-Scheme WO ₃ /Au/In ₂ S ₃ Nanowire Arrays. <i>Nano Letters</i> , 2016, 16, 5547-5552.	9.1	217

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73	Photoisomerization and optical behavior study of a subphthalocyanine-bisazobenzene-subphthalocyanine triad with visible-light response. Journal of Materials Chemistry C, 2016, 4, 7783-7789.	5.5	9
74	Probing Carrier Transport and Structure-Property Relationship of Highly Ordered Organic Semiconductors at the Two-Dimensional Limit. Physical Review Letters, 2016, 116, 016602.	7.8	220
75	Carrier Multiplication in a Single Semiconductor Nanocrystal. Physical Review Letters, 2016, 116, 106404.	7.8	41
76	Photoisomerization and optical properties of a subphthalocyanine-azobenzene-subphthalocyanine triad. RSC Advances, 2016, 6, 71199-71205.	3.6	9
77	Core-shell amorphous cobalt phosphide/cadmium sulfide semiconductor nanorods for exceptional photocatalytic hydrogen production under visible light. Journal of Materials Chemistry A, 2016, 4, 1598-1602.	10.3	108
78	Light-Emitting Diodes: High Color Rendering Index Hybrid III-Nitride/Nanocrystals White Light-Emitting Diodes (Adv. Funct. Mater. 1/2016). Advanced Functional Materials, 2016, 26, 156-156.	14.9	0
79	Magnetic dipolar interaction between correlated triplets created by singlet fission in tetracene crystals. Nature Communications, 2015, 6, 8602.	12.8	56
80	Giant Up-Conversion Efficiency of InGaAs Quantum Dots in a Planar Microcavity. Scientific Reports, 2015, 4, 3953.	3.3	4
81	Hollow spheres consisting of $Ti_{0.91}O_2/CdS$ nanohybrids for CO_2 photofixation. Chemical Communications, 2015, 51, 13354-13357.	4.1	71
82	Defect-Induced Photoluminescence Blinking of Single Epitaxial InGaAs Quantum Dots. Scientific Reports, 2015, 5, 8898.	3.3	11
83	Large Optical Nonlinearity Induced by Singlet Fission in Pentacene Films. Angewandte Chemie - International Edition, 2015, 54, 6222-6226.	13.8	24
84	Superior Optical Properties of Perovskite Nanocrystals as Single Photon Emitters. ACS Nano, 2015, 9, 12410-12416.	14.6	297
85	Charged two-exciton emission from a single semiconductor nanocrystal. Applied Physics Letters, 2015, 106, 133106.	3.3	4
86	Rational construction of a CdS/reduced graphene oxide/ TiO_2 -shell nanostructure as an all-solid-state Z-scheme system for CO_2 photoreduction into solar fuels. RSC Advances, 2015, 5, 88409-88413.	3.6	71
87	Polarization-dependent exciton dynamics in tetracene single crystals. Journal of Chemical Physics, 2014, 141, 244303.	3.0	26
88	Mott behavior in $KxFe_2Se_2$ superconductors studied by pump-probe spectroscopy. Physical Review B, 2014, 89, .	3.2	26
89	Mo-O bond doping and related-defect assisted enhancement of photoluminescence in monolayer MoS_2 . AIP Advances, 2014, 4, 123004.	1.3	69
90	Defect recombination induced by density-activated carrier diffusion in nonpolar InGaN quantum wells. Applied Physics Letters, 2013, 103, 123506.	3.3	4

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91	An In Situ Simultaneous Reduction&Hydrolysis Technique for Fabrication of TiO ₂ &Graphene 2D Sandwich&Like Hybrid Nanosheets: Graphene&Promoted Selectivity of Photocatalytic&Driven Hydrogenation and Coupling of CO ₂ into Methane and Ethane. Advanced Functional Materials, 2013, 23, 1743-1749.	14.9	357
92	Ultrafast pump-probe spectroscopic signatures of superconducting and pseudogap phases in YBa ₂ Cu ₃ O _{7-δ} films. Journal of Applied Physics, 2013, 113, 083901.	2.5	5
93	Two-photon-pumped optical gain in dye-polymer composite materials. Applied Physics Letters, 2012, 100, 133305.	3.3	5
94	The Impact of Carrier Transport Confinement on the Energy Transfer Between InGaN/GaN Quantum&Well Nanorods and Colloidal Nanocrystals. Advanced Functional Materials, 2012, 22, 3146-3152.	14.9	17
95	Single&Photon Emission from Single Microplate MAPbI ₃ Nanocrystals with Ultranarrow Photoluminescence Linewidths and Exciton Fine Structures. Advanced Optical Materials, 0, , 2200606.	7.3	2