

Xiaoyong Wang

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

91
papers

3,811
citations

26
h-index

61
g-index

98
ext. papers

4,665
ext. citations

9.2
avg, IF

5.5
L-index

#	Paper	IF	Citations
91	Nonblinking Colloidal Quantum Dots via Efficient Multiexciton Emission.. <i>Journal of Physical Chemistry Letters</i> , 2022 , 2371-2378	6.4	
90	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, 201601	3.4	2
89	Ultrafast dynamics of photoexcited carriers in perovskite semiconductor nanocrystals. <i>Nanophotonics</i> , 2021 , 10, 1943-1965	6.3	7
88	Thickness dependent properties of ultrathin perovskite nanosheets with Ruddlesden-Popper-like atomic stackings. <i>Nanoscale</i> , 2021 , 13, 18961-18966	7.7	
87	Universal Existence of Localized Single-Photon Emitters in the Perovskite Film of All-Inorganic CsPbBr Microcrystals. <i>Advanced Materials</i> , 2021 , e2106278	24	3
86	Nonradiative Triplet Loss Suppressed in Organic Photovoltaic Blends with Fluoridated Nonfullerene Acceptors. <i>Journal of the American Chemical Society</i> , 2021 , 143, 4359-4366	16.4	24
85	Elegant Construction of ZnInS/BiVO Hierarchical Heterostructures as Direct Z-Scheme Photocatalysts for Efficient CO Photoreduction. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 15092-15100 ³³	9.5	33
84	Free-triplet generation with improved efficiency in tetracene oligomers through spatially separated triplet pair states. <i>Nature Chemistry</i> , 2021 , 13, 559-567	17.6	16
83	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	3.5	4
82	Exciton-acoustic phonon coupling revealed by resonant excitation of single perovskite nanocrystals. <i>Nature Communications</i> , 2021 , 12, 2192	17.4	5
81	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	3.8	3
80	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	7.4	1
79	Exciton linewidth broadening induced by exciton-phonon interactions in CsPbBr nanocrystals. <i>Journal of Chemical Physics</i> , 2021 , 154, 214502	3.9	7
78	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	6.4	8
77	Bimetallic oxyhydroxide in situ derived from an Fe ₂ Co-MOF for efficient electrocatalytic oxygen evolution. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 13271-13278	13	10
76	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	13	6
75	Fe ₂ O ₃ /Ag/CdS ternary heterojunction photoanode for efficient solar water oxidation. <i>Catalysis Science and Technology</i> , 2021 , 11, 5859-5867	5.5	2

74	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	8.3	22
73	Vacancy-defect modulated pathway of photoreduction of CO on single atomically thin AgInPS sheets into olefiant gas. <i>Nature Communications</i> , 2021 , 12, 4747	17.4	28
72	Hollow InVO Nanocuboid Assemblies toward Promoting Photocatalytic N Conversion Performance. <i>Advanced Materials</i> , 2021 , 33, e2006780	24	9
71	Electrical Switching of Optical Gain in Perovskite Semiconductor Nanocrystals. <i>Nano Letters</i> , 2021 , 21, 7831-7838	11.5	0
70	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	2.8	6
69	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	6.1	32
68	Anchoring of black phosphorus quantum dots onto WO nanowires to boost photocatalytic CO conversion into solar fuels. <i>Chemical Communications</i> , 2020 , 56, 7777-7780	5.8	29
67	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	16.4	105
66	Transition from Doublet to Triplet Excitons in Single Perovskite Nanocrystals. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 5750-5755	6.4	6
65	Polarized emission from single perovskite FAPbBr ₃ nanocrystals. <i>Journal of Luminescence</i> , 2020 , 221, 117032	3.8	11
64	Hole Transfer Promoted by a Viscosity Additive in an All-Polymer Photovoltaic Blend. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 1384-1389	6.4	5
63	Optical studies of semiconductor perovskite nanocrystals for classical optoelectronic applications and quantum information technologies: a review. <i>Advanced Photonics</i> , 2020 , 2,	8.1	17
62	Trion-Facilitated Dexter-Type Energy Transfer in a Cluster of Single Perovskite CsPbBr ₃ Nanocrystals. <i>Chinese Physics Letters</i> , 2020 , 37, 127801	1.8	1
61	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	8.1	11
60	Engineering the Phases and Heterostructures of Ultrathin Hybrid Perovskite Nanosheets. <i>Advanced Materials</i> , 2020 , 32, e2002392	24	13
59	Inhomogeneous Biexciton Binding in Perovskite Semiconductor Nanocrystals Measured with Two-Dimensional Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 10173-10181	6.4	14
58	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	6.4	7
57	Tailoring exciton dynamics of monolayer transition metal dichalcogenides by interfacial electron-phonon coupling. <i>Communications Physics</i> , 2019 , 2,	5.4	19

56	Ultrafast hole transfer mediated by polaron pairs in all-polymer photovoltaic blends. <i>Nature Communications</i> , 2019 , 10, 398	17.4	39
55	Quantum Interference in a Single Perovskite Nanocrystal. <i>Nano Letters</i> , 2019 , 19, 4442-4447	11.5	23
54	Quantum-confined stark effect in the ensemble of phase-pure CdSe/CdS quantum dots. <i>Nanoscale</i> , 2019 , 11, 12619-12625	7.7	13
53	Band Engineering: Band Structure Engineering of Interfacial Semiconductors Based on Atomically Thin Lead Iodide Crystals (Adv. Mater. 17/2019). <i>Advanced Materials</i> , 2019 , 31, 1970121	24	
52	Phase segregation due to ion migration in all-inorganic mixed-halide perovskite nanocrystals. <i>Nature Communications</i> , 2019 , 10, 1088	17.4	150
51	Efficient plasmon-hot electron conversion in Ag-CsPbBr hybrid nanocrystals. <i>Nature Communications</i> , 2019 , 10, 1163	17.4	54
50	Band Structure Engineering of Interfacial Semiconductors Based on Atomically Thin Lead Iodide Crystals. <i>Advanced Materials</i> , 2019 , 31, e1806562	24	49
49	Excitation-tailored dual-color emission of manganese(II)-doped perovskite nanocrystals. <i>Applied Physics Letters</i> , 2019 , 114, 041902	3.4	13
48	Two-photon excited photoluminescence of single perovskite nanocrystals. <i>Journal of Chemical Physics</i> , 2019 , 151, 154201	3.9	12
47	Weakly coupled triplet pair states probed by quantum beating in delayed fluorescence in tetracene crystals. <i>Journal of Chemical Physics</i> , 2019 , 151, 134309	3.9	6
46	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. <i>Catalysis Science and Technology</i> , 2019 , 9, 7045-7050	5.5	7
45	Few-Layer PbI Nanoparticle: A 2D Semiconductor with Lateral Quantum Confinement. <i>Journal of Physical Chemistry Letters</i> , 2019 , 10, 7863-7869	6.4	3
44	Composition-Dependent Energy Splitting between Bright and Dark Excitons in Lead Halide Perovskite Nanocrystals. <i>Nano Letters</i> , 2018 , 18, 2074-2080	11.5	59
43	Photon antibunching in a cluster of giant CdSe/CdS nanocrystals. <i>Nature Communications</i> , 2018 , 9, 1536	17.4	22
42	Transient electronic anisotropy in overdoped NaFe _{1-x} CoxAs superconductors. <i>Physical Review B</i> , 2018 , 97,	3.3	2
41	Multiple Dark Excitons in Semiconductor CdSe Nanocrystals. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 23758-23763	3.8	1
40	Realization of vertical and lateral van der Waals heterojunctions using two-dimensional layered organic semiconductors. <i>Nano Research</i> , 2017 , 10, 1336-1344	10	23
39	Series of ZnSn(OH) Polyhedra: Enhanced CO Dissociation Activation and Crystal Facet-Based Homojunction Boosting Solar Fuel Synthesis. <i>Inorganic Chemistry</i> , 2017 , 56, 5704-5709	5.1	23

38	Ultrafast Carrier Dynamics and Efficient Triplet Generation in Black Phosphorus Quantum Dots. <i>Journal of Physical Chemistry C</i> , 2017 , 121, 12972-12978	3.8	21
37	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	9.5	16
36	Enhancing Optoelectronic Properties of Low-Dimensional Halide Perovskite via Ultrasonic-Assisted Template Refinement. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 39602-39609	9.5	12
35	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	7.1	73
34	Bright-Exciton Fine-Structure Splittings in Single Perovskite Nanocrystals. <i>Physical Review Letters</i> , 2017 , 119, 026401	7.4	90
33	Broadband two-dimensional electronic spectroscopy in an actively phase stabilized pump-probe configuration. <i>Optics Express</i> , 2017 , 25, 21115-21126	3.3	20
32	Photoisomerization and optical behavior study of a subphthalocyanine-bisazobenzene-subphthalocyanine triad with visible-light response. <i>Journal of Materials Chemistry C</i> , 2016 , 4, 7783-7789	7.1	7
31	Probing Carrier Transport and Structure-Property Relationship of Highly Ordered Organic Semiconductors at the Two-Dimensional Limit. <i>Physical Review Letters</i> , 2016 , 116, 016602	7.4	180
30	Carrier Multiplication in a Single Semiconductor Nanocrystal. <i>Physical Review Letters</i> , 2016 , 116, 106404	7.4	34
29	Photoisomerization and optical properties of a subphthalocyanine-bisazobenzene-subphthalocyanine triad. <i>RSC Advances</i> , 2016 , 6, 71199-71205	3.7	6
28	Core-shell amorphous cobalt phosphide/cadmium sulfide semiconductor nanorods for exceptional photocatalytic hydrogen production under visible light. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 1598-1602	13.2	94
27	Light-Emitting Diodes: High Color Rendering Index Hybrid III-Nitride/Nanocrystals White Light-Emitting Diodes (Adv. Funct. Mater. 1/2016). <i>Advanced Functional Materials</i> , 2016 , 26, 156-156	15.6	
26	Coherent optical phonon oscillation and possible electronic softening in WTe ₂ crystals. <i>Scientific Reports</i> , 2016 , 6, 30487	4.9	24
25	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	3.7	15
24	Extended storage of multiple excitons in trap states of semiconductor nanocrystals. <i>Applied Physics Letters</i> , 2016 , 108, 093110	3.4	2
23	Energy Transfer of Biexcitons in a Single Semiconductor Nanocrystal. <i>Nano Letters</i> , 2016 , 16, 2492-6	11.5	17
22	High Color Rendering Index Hybrid III-Nitride/Nanocrystals White Light-Emitting Diodes. <i>Advanced Functional Materials</i> , 2016 , 26, 36-43	15.6	41
21	Two-Photon-Pumped Perovskite Semiconductor Nanocrystal Lasers. <i>Journal of the American Chemical Society</i> , 2016 , 138, 3761-8	16.4	407

20	Efficient and Stable White LEDs with Silica-Coated Inorganic Perovskite Quantum Dots. <i>Advanced Materials</i> , 2016 , 28, 10088-10094	24	613
19	Slow Auger Recombination of Charged Excitons in Nonblinking Perovskite Nanocrystals without Spectral Diffusion. <i>Nano Letters</i> , 2016 , 16, 6425-6430	11.5	104
18	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, 5547-52	11.5	171
17	Hollow spheres consisting of Ti _{0.91} O ₂ /CdS nanohybrids for CO ₂ photofixation. <i>Chemical Communications</i> , 2015 , 51, 13354-7	5.8	55
16	Defect-induced photoluminescence blinking of single epitaxial InGaAs quantum dots. <i>Scientific Reports</i> , 2015 , 5, 8898	4.9	10
15	Large optical nonlinearity induced by singlet fission in pentacene films. <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 6222-6	16.4	21
14	Superior Optical Properties of Perovskite Nanocrystals as Single Photon Emitters. <i>ACS Nano</i> , 2015 , 9, 12410-6	16.7	234
13	Charged two-exciton emission from a single semiconductor nanocrystal. <i>Applied Physics Letters</i> , 2015 , 106, 133106	3.4	3
12	Rational construction of a CdS/reduced graphene oxide/TiO ₂ core-shell nanostructure as an all-solid-state Z-scheme system for CO ₂ photoreduction into solar fuels. <i>RSC Advances</i> , 2015 , 5, 88409-88413	3.7	61
11	Magnetic dipolar interaction between correlated triplets created by singlet fission in tetracene crystals. <i>Nature Communications</i> , 2015 , 6, 8602	17.4	45
10	Large Optical Nonlinearity Induced by Singlet Fission in Pentacene Films. <i>Angewandte Chemie</i> , 2015 , 127, 6320-6324	3.6	1
9	Mott behavior in KxFe _{2-y} Se ₂ superconductors studied by pump-probe spectroscopy. <i>Physical Review B</i> , 2014 , 89,	3.3	23
8	Mo-O bond doping and related-defect assisted enhancement of photoluminescence in monolayer MoS ₂ . <i>AIP Advances</i> , 2014 , 4, 123004	1.5	52
7	Giant up-conversion efficiency of InGaAs quantum dots in a planar microcavity. <i>Scientific Reports</i> , 2014 , 4, 3953	4.9	4
6	Polarization-dependent exciton dynamics in tetracene single crystals. <i>Journal of Chemical Physics</i> , 2014 , 141, 244303	3.9	23
5	Defect recombination induced by density-activated carrier diffusion in nonpolar InGaN quantum wells. <i>Applied Physics Letters</i> , 2013 , 103, 123506	3.4	4
4	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. <i>Advanced Functional Materials</i> , 2013 , 23, 1743-1749	15.6	318
3	Ultrafast pump-probe spectroscopic signatures of superconducting and pseudogap phases in YBa ₂ Cu ₃ O _{7-x} films. <i>Journal of Applied Physics</i> , 2013 , 113, 083901	2.5	5

2 Two-photon-pumped optical gain in dye-polymer composite materials. *Applied Physics Letters*, **2012**, 100, 133305 3.4 5

1 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^{15.6} 16