Kaifeng Wu

List of Publications by Year
in descending order

117 papers	9,404 citations	47006 47 h-index	39675 94 g-index
119 all docs	119 docs citations	119 times ranked	9713 citing authors

#	ARTICLE	IF	CITATIONS
1	Mn²⁺-Doped Lead Halide Perovskite Nanocrystals with Dual-Color Emission Controlled by Halide Content. Journal of the American Chemical Society, 2016, 138, 14954-14961.	13.7	725
2	Observation of Internal Photoinduced Electron and Hole Separation in Hybrid Two-Dimentional Perovskite Films. Journal of the American Chemical Society, 2017, 139, 1432-1435.	13.7	477
3	Ultrafast Charge Separation and Long-Lived Charge Separated State in Photocatalytic CdSâ€“Pt Nanorod Heterostructures. Journal of the American Chemical Society, 2012, 134, 10337-10340.	13.7	459
4	Ultrafast Interfacial Electron and Hole Transfer from CsPbBr₃ Perovskite Quantum Dots. Journal of the American Chemical Society, 2015, 137, 12792-12795.	13.7	459
5	Carbonâ€Quantumâ€Dotsâ€Loaded Ruthenium Nanoparticles as an Efficient Electrocatalyst for Hydrogen Production in Alkaline Media. Advanced Materials, 2018, 30, e1800676.	21.0	406
6	Hole Removal Rate Limits Photodriven H₂ Generation Efficiency in CdS-Pt and CdSe/CdS-Pt Semiconductor Nanorodâ€“Metal Tip Heterostructures. Journal of the American Chemical Society, 2014, 136, 7708-7716.	13.7	354
7	Plasmon-Induced Hot Electron Transfer from the Au Tip to CdS Rod in CdS-Au Nanoheterostructures. Nano Letters, 2013, 13, 5255-5263.	9.1	290
8	Tandem luminescent solar concentrators based on engineered quantum dots. Nature Photonics, 2018, 12, 105-110.	31.4	280
9	Quantum confined colloidal nanorod heterostructures for solar-to-fuel conversion. Chemical Society Reviews, 2016, 45, 3781-3810.	38.1	246
10	Doctor-blade deposition of quantum dots onto standard window glass for low-loss large-area luminescent solar concentrators. Nature Energy, 2016, 1, .	39.5	196
11	Droop-Free Colloidal Quantum Dot Light-Emitting Diodes. Nano Letters, 2018, 18, 6645-6653.	9.1	193
12	Thick-Shell CuInS₂/ZnS Quantum Dots with Suppressed â€œBlinkingâ€•and Narrow Single-Particle Emission Line Widths. Nano Letters, 2017, 17, 1787-1795.	9.1	179
13	Efficient Extraction of Trapped Holes from Colloidal CdS Nanorods. Journal of the American Chemical Society, 2015, 137, 10224-10230.	13.7	177
14	Ultrafast Exciton Dynamics and Light-Driven H₂ Evolution in Colloidal Semiconductor Nanorods and Pt-Tipped Nanorods. Accounts of Chemical Research, 2015, 48, 851-859.	15.6	169
15	Triplet Energy Transfer from CsPbBr₃ Nanocrystals Enabled by Quantum Confinement. Journal of the American Chemical Society, 2019, 141, 4186-4190.	13.7	169
16	Incorporating Transitionâ€Metal Phosphides Into Metalâ€Organic Frameworks for Enhanced Photocatalysis. Angewandte Chemie - International Edition, 2020, 59, 22749-22755.	13.8	166
17	Charge Transfer Dynamics from Photoexcited Semiconductor Quantum Dots. Annual Review of Physical Chemistry, 2016, 67, 259-281.	10.8	156
18	Covalent organic frameworks with high quantum efficiency in sacrificial photocatalytic hydrogen evolution. Nature Communications, 2022, 13, 2357.	12.8	156

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19	Quantum-Cutting Luminescent Solar Concentrators Using Ytterbium-Doped Perovskite Nanocrystals. Nano Letters, 2019, 19, 338-341.	9.1	153
20	Unraveling the Interfacial Charge Migration Pathway at the Atomic Level in a Highly Efficient Zâ€Scheme Photocatalyst. Angewandte Chemie - International Edition, 2019, 58, 11329-11334.	13.8	152
21	Dimension control of in situ fabricated CsPbClBr2 nanocrystal films toward efficient blue light-emitting diodes. Nature Communications, 2020, 11, 6428.	12.8	147
22	Promoting Photocatalytic H₂ Evolution on Organicâ€"Inorganic Hybrid Perovskite Nanocrystals by Simultaneous Dual-Charge Transportation Modulation. ACS Energy Letters, 2019, 4, 40-47.	17.4	127
23	Mechanisms of triplet energy transfer across the inorganic nanocrystal/organic molecule interface. Nature Communications, 2020, 11, 28.	12.8	127
24	Towards zero-threshold optical gain using charged semiconductor quantum dots. Nature Nanotechnology, 2017, 12, 1140-1147.	31.5	122
25	Isomerism in Titaniumâ€Oxo Clusters: Molecular Anatase Model with Atomic Structure and Improved Photocatalytic Activity. Angewandte Chemie - International Edition, 2019, 58, 1320-1323.	13.8	121
26	Efficient and Ultrafast Formation of Long-Lived Charge-Transfer Exciton State in Atomically Thin Cadmium Selenide/Cadmium Telluride Type-II Heteronanosheets. ACS Nano, 2015, 9, 961-968.	14.6	106
27	Postsynthesis Phase Transformation for CsPbBr₃/Rb₄PbBr₆ Core/Shell Nanocrystals with Exceptional Photostability. ACS Applied Materials & Interfaces, 2018, 10, 23303-23310.	8.0	98
28	Beyond Band Alignment: Hole Localization Driven Formation of Three Spatially Separated Long-Lived Exciton States in CdSe/CdS Nanorods. ACS Nano, 2013, 7, 7173-7185.	14.6	95
29	Visible-to-Ultraviolet Upconversion Efficiency above 10% Sensitized by Quantum-Confined Perovskite Nanocrystals. Journal of Physical Chemistry Letters, 2019, 10, 5036-5040.	4.6	94
30	Universal Length Dependence of Rod-to-Seed Exciton Localization Efficiency in Type I and Quasi-Type II CdSe@CdS Nanorods. ACS Nano, 2015, 9, 4591-4599.	14.6	92
31	Ultrafast exciton quenching by energy and electron transfer in colloidal CdSe nanosheetâ€"Pt heterostructures. Chemical Science, 2015, 6, 1049-1054.	7.4	88
32	Triplet Energy Transfer from Perovskite Nanocrystals Mediated by Electron Transfer. Journal of the American Chemical Society, 2020, 142, 11270-11278.	13.7	82
33	Triplet Sensitization by â€œSelf-Trappedâ€•Excitons of Nontoxic CuInS₂ Nanocrystals for Efficient Photon Upconversion. Journal of the American Chemical Society, 2019, 141, 13033-13037.	13.7	79
34	Boosting the Electrocatalysis of MXenes by Plasmonâ€Induced Thermalization and Hotâ€Electron Injection. Angewandte Chemie - International Edition, 2021, 60, 9416-9420.	13.8	78
35	Interfacial Charge Separation and Recombination in InP and Quasi-Type II InP/CdS Core/Shell Quantum Dot-Molecular Acceptor Complexes. Journal of Physical Chemistry A, 2013, 117, 7561-7570.	2.5	76
36	On the absence of a phonon bottleneck in strongly confined CsPbBr₃ perovskite nanocrystals. Chemical Science, 2019, 10, 5983-5989.	7.4	71

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37	Size-Independent Exciton Localization Efficiency in Colloidal CdSe/CdS Core/Crown Nanosheet Type-I Heterostructures. ACS Nano, 2016, 10, 3843-3851.	14.6	70
38	Reverseâ€Graded 2D Ruddlesdenâ€"Popper Perovskites for Efficient Airâ€Stable Solar Cells. Advanced Energy Materials, 2019, 9, 1900612.	19.5	69
39	Trap-Enabled Long-Distance Carrier Transport in Perovskite Quantum Wells. Journal of the American Chemical Society, 2020, 142, 15091-15097.	13.7	66
40	Superposition Principle in Auger Recombination of Charged and Neutral Multicarrier States in Semiconductor Quantum Dots. ACS Nano, 2017, 11, 8437-8447.	14.6	63
41	Biexciton Auger recombination in mono-dispersed, quantum-confined CsPbBr3 perovskite nanocrystals obeys universal volume-scaling. Nano Research, 2019, 12, 619-623.	10.4	63
42	Sizeâ€•and Halideâ€Dependent Auger Recombination in Lead Halide Perovskite Nanocrystals. Angewandte Chemie - International Edition, 2020, 59, 14292-14295.	13.8	63
43	Visible-Light-Driven Sensitization of Naphthalene Triplets Using Quantum-Confined CsPbBr₃ Nanocrystals. Journal of Physical Chemistry Letters, 2019, 10, 1457-1463.	4.6	62
44	Graphene Oxides Used as a New â€œDual Roleâ€•Binder for Stabilizing Silicon Nanoparticles in Lithium-Ion Battery. ACS Applied Materials & Interfaces, 2018, 10, 15665-15672.	8.0	56
45	Ultrafast Photoinduced Interfacial Proton Coupled Electron Transfer from CdSe Quantum Dots to 4,4â€²-Bipyridine. Journal of the American Chemical Society, 2016, 138, 884-892.	13.7	52
46	Observation of a phonon bottleneck in copper-doped colloidal quantum dots. Nature Communications, 2019, 10, 4532.	12.8	52
47	Quasi-type II CuInS₂/CdS core/shell quantum dots. Chemical Science, 2016, 7, 1238-1244.	7.4	49
48	Synthesis of all-inorganic CsPb₂Br₅ perovskite and determination of its luminescence mechanism. RSC Advances, 2017, 7, 54002-54007.	3.6	49
49	Triplet Sensitization and Photon Upconversion Using InP-Based Quantum Dots. Journal of the American Chemical Society, 2020, 142, 19825-19829.	13.7	48
50	Mechanistic Understanding of Efficient Photocatalytic H₂ Evolution on Twoâ€Dimensional Layered Lead Iodide Hybrid Perovskites. Angewandte Chemie - International Edition, 2021, 60, 7376-7381.	13.8	48
51	Shell-Thickness-Dependent Biexciton Lifetime in Type I and Quasi-Type II CdSe@CdS Core/Shell Quantum Dots. Journal of Physical Chemistry C, 2018, 122, 14091-14098.	3.1	47
52	Size- and Composition-Dependent Exciton Spin Relaxation in Lead Halide Perovskite Quantum Dots. ACS Energy Letters, 2020, 5, 1701-1708.	17.4	47
53	Exciton Localization and Dissociation Dynamics in CdS and CdSâ€"Pt Quantum Confined Nanorods: Effect of Nonuniform Rod Diameters. Journal of Physical Chemistry B, 2014, 118, 14062-14069.	2.6	44
54	Low-Threshold Blue Quasi-2D Perovskite Laser through Domain Distribution Control. Nano Letters, 2022, 22, 1338-1344.	9.1	44

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55	â€œIntactâ€•Carrier Doping by Pumpâ€“Pumpâ€“Probe Spectroscopy in Combination with Interfacial Charge Transfer: A Case Study of CsPbBr₃ Nanocrystals. Journal of Physical Chemistry Letters, 2018, 9, 3372-3377.	4.6	42
56	Molecular Triplet Sensitization and Photon Upconversion Using Colloidal Semiconductor Nanocrystals. ACS Energy Letters, 2021, 6, 3151-3166.	17.4	41
57	Synthesis and Spectroscopy of Monodispersed, Quantum-Confined FAPbBr₃ Perovskite Nanocrystals. Chemistry of Materials, 2020, 32, 549-556.	6.7	39
58	Engineered Directional Charge Flow in Mixed Two-Dimensional Perovskites Enabled by Facile Cation-Exchange. Journal of Physical Chemistry C, 2017, 121, 21281-21289.	3.1	38
59	Charge Transfer from n-Doped Nanocrystals: Mimicking Intermediate Events in Multielectron Photocatalysis. Journal of the American Chemical Society, 2018, 140, 7791-7794.	13.7	37
60	The Holeâ€Tunneling Heterojunction of Hematiteâ€Based Photoanodes Accelerates Photosynthetic Reaction. Angewandte Chemie - International Edition, 2021, 60, 16009-16018.	13.8	37
61	Enhancing photo-reduction quantum efficiency using quasi-type II core/shell quantum dots. Chemical Science, 2016, 7, 4125-4133.	7.4	35
62	Incorporating Transitionâ€Metal Phosphides Into Metalâ€Organic Frameworks for Enhanced Photocatalysis. Angewandte Chemie, 2020, 132, 22937-22943.	2.0	34
63	Auger-Assisted Electron Transfer between Adjacent Quantum Wells in Two-Dimensional Layered Perovskites. Journal of the American Chemical Society, 2021, 143, 4725-4731.	13.7	34
64	Picosecond multi-hole transfer and microsecond charge-separated states at the perovskite nanocrystal/tetracene interface. Chemical Science, 2019, 10, 2459-2464.	7.4	33
65	Ultrafast Dopant-Induced Exciton Auger-like Recombination in Mn-Doped Perovskite Nanocrystals. ACS Energy Letters, 2020, 5, 328-334.	17.4	33
66	Sensitized Molecular Triplet and Triplet Excimer Emission in Two-Dimensional Hybrid Perovskites. Journal of Physical Chemistry Letters, 2020, 11, 2247-2255.	4.6	33
67	Electricâ€Fieldâ€Mediated Electron Tunneling of Supramolecular Naphthalimide Nanostructures for Biomimetic H₂ Production. Angewandte Chemie - International Edition, 2021, 60, 1235-1243.	13.8	33
68	Shallow distance-dependent triplet energy migration mediated by endothermic charge-transfer. Nature Communications, 2021, 12, 1532.	12.8	33
69	Long-Lived Delayed Emission from CsPbBr₃ Perovskite Nanocrystals for Enhanced Photochemical Reactivity. ACS Energy Letters, 2021, 6, 2786-2791.	17.4	33
70	Hydroxylated non-fullerene acceptor for highly efficient inverted perovskite solar cells. Energy and Environmental Science, 2021, 14, 6536-6545.	30.8	33
71	Exciton Annihilation and Dissociation Dynamics in Group IIâ€“V Cd₃P₂ Quantum Dots. Journal of Physical Chemistry A, 2013, 117, 6362-6372.	2.5	32
72	Molecular Dipoleâ€Induced Photoredox Catalysis for Hydrogen Evolution over Selfâ€Assembled Naphthalimide Nanoribbons. Angewandte Chemie - International Edition, 2022, 61, .	13.8	31

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73	A supramolecular polymeric heterojunction composed of an all-carbon conjugated polymer and fullerenes. Chemical Science, 2021, 12, 10506-10513.	7.4	27
74	Marcus inverted region of charge transfer from low-dimensional semiconductor materials. Nature Communications, 2021, 12, 6333.	12.8	27
75	Wavelength dependent efficient photoreduction of redox mediators using type II ZnSe/CdS nanorod heterostructures. Chemical Science, 2014, 5, 3905-3914.	7.4	26
76	Picosecond electron trapping limits the emissivity of CsPbCl3 perovskite nanocrystals. Journal of Chemical Physics, 2019, 151, 194701.	3.0	26
77	Spin-Controlled Charge-Recombination Pathways across the Inorganic/Organic Interface. Journal of the American Chemical Society, 2020, 142, 4723-4731.	13.7	25
78	Hostâ€“Guest and Photophysical Behavior of Ti₈L₁₂ Cube with Encapsulated [Ti(H₂O)₆] Species. Chemistry - A European Journal, 2018, 24, 14358-14362.	3.3	24
79	ZnSe/ZnS Core/Shell Quantum Dots as Triplet Sensitizers toward Visible-to-Ultraviolet B Photon Upconversion. ACS Energy Letters, 2022, 7, 914-919.	17.4	24
80	Macroscopic assembled graphene nanofilms based room temperature ultrafast midâ€infrared photodetectors. InformaÃnÃ-MateriÃ¡ly, 2022, 4, .	17.3	24
81	Spin blockade and phonon bottleneck for hot electron relaxation observed in n-doped colloidal quantum dots. Nature Communications, 2021, 12, 550.	12.8	23
82	Efficient Optical Orientation and Slow Spin Relaxation in Lead-Free CsSnBr₃ Perovskite Nanocrystals. ACS Energy Letters, 2021, 6, 1670-1676.	17.4	23
83	Unraveling the Interfacial Charge Migration Pathway at the Atomic Level in a Highly Efficient Zâ€Scheme Photocatalyst. Angewandte Chemie, 2019, 131, 11451-11456.	2.0	22
84	Zone-Folded Longitudinal Acoustic Phonons Driving Self-Trapped State Emission in Colloidal CdSe Nanoplatelet Superlattices. Nano Letters, 2021, 21, 4137-4144.	9.1	22
85	Isomerism in Titaniumâ€Oxo Clusters: Molecular Anatase Model with Atomic Structure and Improved Photocatalytic Activity. Angewandte Chemie, 2019, 131, 1334-1337.	2.0	21
86	Strong Spin-Selective Optical Stark Effect in Lead Halide Perovskite Quantum Dots. Journal of Physical Chemistry Letters, 2020, 11, 3594-3600.	4.6	21
87	Electron Transfer into Electron-Accumulated Nanocrystals: Mimicking Intermediate Events in Multielectron Photocatalysis II. Journal of the American Chemical Society, 2018, 140, 10117-10120.	13.7	20
88	Engineering Sensitized Photon Upconversion Efficiency via Nanocrystal Wavefunction and Molecular Geometry. Angewandte Chemie - International Edition, 2020, 59, 17726-17731.	13.8	20
89	Coulomb Barrier for Sequential Two-Electron Transfer in a Nanoengineered Photocatalyst. Journal of the American Chemical Society, 2020, 142, 13934-13940.	13.7	19
90	Direct Observation of Photoexcited Hole Localization in CdSe Nanorods. ACS Energy Letters, 2016, 1, 76-81.	17.4	17

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91	Entropy-Gated Thermally Activated Delayed Emission Lifetime in Phenanthrene-Functionalized CsPbBr₃ Perovskite Nanocrystals. Journal of Physical Chemistry Letters, 2021, 12, 8598-8604.	4.6	16
92	Entropy-Powered Endothermic Energy Transfer from CsPbBr₃ Nanocrystals for Photon Upconversion. Journal of Physical Chemistry Letters, 2022, 13, 1713-1718.	4.6	16
93	Quantum Confinement Theory of Auger-Assisted Biexciton Recombination Dynamics in Type-I and Quasi Type-II Quantum Dots. Journal of Physical Chemistry C, 2018, 122, 18742-18750.	3.1	13
94	Tuning Intermediate-Band Cu₃VS₄ Nanocrystals from Plasmonic-like to Excitonic via Shell-Coating. Chemistry of Materials, 2020, 32, 224-233.	6.7	13
95	Red-to-blue photon upconversion based on a triplet energy transfer process not retarded but enabled by shell-coated quantum dots. Journal of Chemical Physics, 2020, 153, 114701.	3.0	13
96	Electron and Hole Spin Relaxation in CdSe Colloidal Nanoplatelets. Journal of Physical Chemistry Letters, 2021, 12, 86-93.	4.6	13
97	Photo-Induced Cluster-to-Cluster Transformation of [Au_{37â€“<i>x</i>}Ag_{<i>x</i>}(PPh₃)₁₃Cl₁₀]³⁺ into [Au_{25â€“<i>y</i>}Ag_{<i>y</i>}(PPh₃)₁₀Cl₈]⁺: Fragmentation of a Trimer of 8-Electron Superatoms by Light. Journal of Physical Chemistry Letters, 2021, 12, 10920-10926.	4.6	13
98	Unraveling the Excitonic Transition and Associated Dynamics in Confined Long Linear Carbon Chains with Timeâ€Resolved Resonance Raman Scattering. Laser and Photonics Reviews, 2021, 15, 2100259.	8.7	10
99	Sacrificial oxidation of a self-metal source for the rapid growth of metal oxides on quantum dots towards improving photostability. Chemical Science, 2019, 10, 6683-6688.	7.4	9
100	Mechanistic Understanding of Efficient Photocatalytic H₂ Evolution on Twoâ€Dimensional Layered Lead Iodide Hybrid Perovskites. Angewandte Chemie, 2021, 133, 7452-7457.	2.0	9
101	Colloidal <i>n</i>-Doped CdSe and CdSe/ZnS Nanoplatelets. Journal of Physical Chemistry Letters, 2021, 12, 11259-11266.	4.6	9
102	Sizeâ€•and Halideâ€Dependent Auger Recombination in Lead Halide Perovskite Nanocrystals. Angewandte Chemie, 2020, 132, 14398-14401.	2.0	8
103	Spin-enabled photochemistry using nanocrystal-molecule hybrids. CheM, 2022, , .	11.7	8
104	Molecular Dipoleâ€Induced Photoredox Catalysis for Hydrogen Evolution over Selfâ€Assembled Naphthalimide Nanoribbons. Angewandte Chemie, 2022, 134, .	2.0	7
105	Carrier-doping as a tool to probe the electronic structure and multi-carrier recombination dynamics in heterostructured colloidal nanocrystals. Chemical Science, 2018, 9, 7253-7260.	7.4	6
106	Electricâ€Fieldâ€Mediated Electron Tunneling of Supramolecular Naphthalimide Nanostructures for Biomimetic H 2 Production. Angewandte Chemie, 2021, 133, 1255-1263.	2.0	6
107	Lighting Up AIEgen Emission in Solution by Grafting onto Colloidal Nanocrystal Surfaces. Journal of Physical Chemistry Letters, 2018, 9, 6334-6338.	4.6	5
108	Triplet energy migration pathways from PbS quantum dots to surface-anchored polyacenes controlled by charge transfer. Nanoscale, 2021, 13, 1303-1310.	5.6	5

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109	Coupled Double Optical Stark Effect in CdSe Colloidal Nanoplatelets. ACS Photonics, 2021, 8, 745-751.	6.6	5
110	Energyâ€Transfer Photocatalysis Using Lead Halide Perovskite Nanocrystals: Sensitizing Molecular Isomerization and Cycloaddition. Angewandte Chemie, 2022, 134, .	2.0	5
111	Boosting the Electrocatalysis of MXenes by Plasmonâ€Induced Thermalization and Hotâ€Electron Injection. Angewandte Chemie, 2021, 133, 9502-9506.	2.0	4
112	Semiconductor nanoparticles photocatalyze precise organic cycloaddition. CheM, 2021, 7, 842-844.	11.7	4
113	Probing molecular orientation at bulk heterojunctions by polarization-selective transient absorption spectroscopy. Science China Chemistry, 2021, 64, 1569-1576.	8.2	2
114	The Holeâ€Tunneling Heterojunction of Hematiteâ€Based Photoanodes Accelerates Photosynthetic Reaction. Angewandte Chemie, 2021, 133, 16145-16154.	2.0	2
115	Sensitizing phosphorescent and radical emitters <i>via</i> triplet energy translation from CsPbBr₃ nanocrystals. Journal of Materials Chemistry C, 2022, 10, 4697-4704.	5.5	2
116	Perovskite Solar Cells: Reverseâ€Graded 2D Ruddlesdenâ€"Popper Perovskites for Efficient Airâ€Stable Solar Cells (Adv. Energy Mater. 21/2019). Advanced Energy Materials, 2019, 9, 1970075.	19.5	1
117	Engineering Sensitized Photon Upconversion Efficiency via Nanocrystal Wavefunction and Molecular Geometry. Angewandte Chemie, 2020, 132, 17879-17884.	2.0	0