Aiwei Tang

List of Publications by Year
in descending order

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110	3,137	136950	182427
papers	citations	32 h-index	51 g-index

113	113	113	4447
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Synthesis and Shape-Tailoring of Copper Sulfide/Indium Sulfide-Based Nanocrystals. Journal of the American Chemical Society, 2008, 130, 13152-13161.	13.7	246
2	Controlling the Cavity Structures of Twoâ€Photonâ€Pumped Perovskite Microlasers. Advanced Materials, 2016, 28, 4040-4046.	21.0	207
3	Synthesis of Lead-Free Cs₂AgBiX₆ (X = Cl, Br, I) Double Perovskite Nanoplatelets and Their Application in CO₂ Photocatalytic Reduction. Nano Letters, 2021, 21, 1620-1627.	9.1	140
4	Highâ€Efficiency Green InP Quantum Dotâ€Based Electroluminescent Device Comprising Thickâ€Shell Quantum Dots. Advanced Optical Materials, 2019, 7, 1801602.	7.3	137
5	Hybrid polymer-CdSe solar cells with a ZnO nanoparticle buffer layer for improved efficiency and lifetime. Journal of Materials Chemistry, 2011, 21, 3814.	6.7	94
6	One-pot synthesis and self-assembly of colloidal copper(I) sulfide nanocrystals. Nanotechnology, 2010, 21, 285602.	2.6	88
7	Key issues and recent progress of high efficient organic light-emitting diodes. Journal of Photochemistry and Photobiology C: Photochemistry Reviews, 2013, 17, 69-104.	11.6	83
8	Effects of nanocrystal size and device aging on performance of hybrid poly(3-hexylthiophene):CdSe nanocrystal solar cells. Solar Energy Materials and Solar Cells, 2011, 95, 476-482.	6.2	82
9	Seed-Mediated Growth of Anatase TiO₂ Nanocrystals with Coreâ€“Antenna Structures for Enhanced Photocatalytic Activity. Journal of the American Chemical Society, 2015, 137, 11327-11339.	13.7	77
10	Heating-up synthesis of cadimum-free and color-tunable quaternary and five-component Cuâ€“Inâ€“Znâ€“S-based semiconductor nanocrystals. Journal of Materials Chemistry C, 2015, 3, 10114-10120.	5.5	63
11	Compositional Tuning of Carrier Dynamics in Cs₂Na_{1â€“x}Ag_xBiCl₆ Double-Perovskite Nanocrystals. ACS Energy Letters, 2020, 5, 1840-1847.	17.4	63
12	Bright Blue Emitting Cu-Doped Cs₂ZnCl₄ Colloidal Nanocrystals. Chemistry of Materials, 2020, 32, 5897-5903.	6.7	63
13	Synthesis, optical properties, and superlattice structure of Cu(I)-doped CdS nanocrystals. Applied Physics Letters, 2010, 97, .	3.3	56
14	A novel luminescence probe based on layered double hydroxides loaded with quantum dots for simultaneous detection of heavy metal ions in water. Journal of Materials Chemistry C, 2017, 5, 5024-5030.	5.5	55
15	Synthesis and self-assembly of Cu1.94Sâ€“ZnS heterostructured nanorods. CrystEngComm, 2010, 12, 4124.	2.6	54
16	Size-controlled synthesis of highly luminescent organometal halide perovskite quantum dots. Journal of Alloys and Compounds, 2016, 687, 506-513.	5.5	52
17	Tuning the plasmonic resonance of Cu_{2â€“x}S nanocrystals: effects of the crystal phase, morphology and surface ligands. Journal of Materials Chemistry C, 2016, 4, 4880-4888.	5.5	50
18	Optical properties and electrical bistability of CdS nanoparticles synthesized in dodecanethiol. Applied Physics Letters, 2010, 96, .	3.3	46

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19	Facile One-Step Synthesis and Transformation of Cu(I)-Doped Zinc Sulfide Nanocrystals to Cu_{1.94}Sâ€“ZnS Heterostructured Nanocrystals. Langmuir, 2013, 29, 8728-8735.	3.5	45
20	Chloride-Passivated Mg-Doped ZnO Nanoparticles for Improving Performance of Cadmium-Free, Quantum-Dot Light-Emitting Diodes. ACS Photonics, 2018, 5, 3704-3711.	6.6	45
21	Solution-processed high-efficiency cadmium-free Cu-Zn-In-S-based quantum-dot light-emitting diodes with low turn-on voltage. Organic Electronics, 2016, 36, 97-102.	2.6	40
22	Blue quantum dot-based electroluminescent light-emitting diodes. Materials Chemistry Frontiers, 2020, 4, 1340-1365.	5.9	40
23	Photoluminescence and self-assembly of cesium lead halide perovskite nanocrystals: Effects of chain length of organic amines and reaction temperature. Applied Surface Science, 2017, 405, 280-288.	6.1	38
24	From one-dimensional to two-dimensional wurtzite CuGaS₂nanocrystals: non-injection synthesis and photocatalytic evolution. Nanoscale, 2019, 11, 158-169.	5.6	38
25	New Insights into the Formation and Colorâ€Tunable Optical Properties of Multinary Cuâ€Inâ€Znâ€Based Chalcogenide Semiconductor Nanocrystals. Advanced Optical Materials, 2018, 6, 1701389.	7.3	37
26	Investigation on Photovoltaic Performance based on Matchstick-Like Cu2Sâ€“In2S3 Heterostructure Nanocrystals and Polymer. Nanoscale Research Letters, 2008, 3, 502-507.	5.7	36
27	Separation of hot electrons and holes in Au/LaFeO3 to boost the photocatalytic activities both for water reduction and oxidation. International Journal of Hydrogen Energy, 2019, 44, 13242-13252.	7.1	36
28	Shape-Controlled Synthesis of PbS Nanocrystals via a Simple One-Step Process. Langmuir, 2012, 28, 16436-16443.	3.5	34
29	Controllable synthesis of silver and silver sulfide nanocrystals via selective cleavage of chemical bonds. Nanotechnology, 2013, 24, 355602.	2.6	33
30	Upconversion multicolor tuning: Red to green emission from Y2O3:Er, Yb nanoparticles by calcination. Applied Physics Letters, 2013, 102, .	3.3	33
31	Self-Assembled TiO₂ Nanorods as Electron Extraction Layer for High-Performance Inverted Polymer Solar Cells. Chemistry of Materials, 2015, 27, 44-52.	6.7	33
32	One-pot synthesis of CuInS₂ nanocrystals using different anions to engineer their morphology and crystal phase. Dalton Transactions, 2015, 44, 9251-9259.	3.3	32
33	Roles of Sulfur Sources in the Formation of Alloyed Cu_{2â€“x}S_ySe_{1â€“y} Nanocrystals: Controllable Synthesis and Tuning of Plasmonic Resonance Absorption. Journal of Physical Chemistry C, 2017, 121, 15922-15930.	3.1	32
34	Nanostructure and device architecture engineering for high-performance quantum-dot light-emitting diodes. Journal of Materials Chemistry C, 2018, 6, 10958-10981.	5.5	32
35	Synthesis and luminescence properties of water-dispersible ZnSe nanocrystals. Materials Letters, 2007, 61, 5091-5094.	2.6	31
36	Preparation of Spherical and Triangular Silver Nanoparticles by a Convenient Method. Integrated Ferroelectrics, 2012, 136, 9-14.	0.7	31

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37	Effects of alkanethiols chain length on the synthesis of Cu_{2â^'x}S nanocrystals: phase, morphology, plasmonic properties and electrical conductivity. RSC Advances, 2014, 4, 54547-54553.	3.6	27
38	Synthesis of Cu_{2â^'x}S nanocrystals induced by foreign metal ions: phase and morphology transformation and localized surface plasmon resonance. CrystEngComm, 2014, 16, 8684-8690.	2.6	26
39	Three-dimensional hierarchical MoS2 nanosheet arrays/carbon cloth as flexible electrodes for high-performance hydrogen evolution reaction. Materials Letters, 2016, 177, 139-142.	2.6	26
40	Tunable near-infrared localized surface plasmon resonances of djurleite nanocrystals: effects of size, shape, surface-ligands and oxygen exposure time. Journal of Materials Chemistry C, 2015, 3, 6686-6691.	5.5	25
41	One-pot controllable synthesis of wurtzite CuInS2 nanoplates. Applied Surface Science, 2014, 307, 489-494.	6.1	24
42	Seeded-mediated growth of ternary Agâ€“Inâ€“S and quaternary Agâ€“Inâ€“Znâ€“S nanocrystals from binary Ag₂S seeds and the composition-tunable optical properties. Journal of Materials Chemistry C, 2019, 7, 1307-1315.	5.5	24
43	Luminescence and Stability Enhancement of CsPbBr₃ Perovskite Quantum Dots through Surface Sacrificial Coating. Advanced Optical Materials, 2021, 9, 2100474.	7.3	22
44	The optical properties of the blends of CdSe nanocrystals and poly(N-vinylcarbazole). Applied Surface Science, 2008, 254, 6341-6345.	6.1	21
45	Organic ultraviolet photodetector based on phosphorescent material. Optics Letters, 2013, 38, 3823.	3.3	21
46	Negative differential resistance and carrier transport of electrically bistable devices based on poly(N-vinylcarbazole)-silver sulfide composites. Nanoscale Research Letters, 2014, 9, 128.	5.7	21
47	Non-injection synthesis of L-shaped wurtzite Cuâ€“Gaâ€“Znâ€“S alloyed nanorods and their advantageous application in photocatalytic hydrogen evolution. Journal of Materials Chemistry A, 2018, 6, 18649-18659.	10.3	21
48	Seed-mediated growth of heterostructured Cu_{1.94}Sâ€“MS (M = Zn, Cd, Mn) and alloyed CuNS₂(N = In, Ga) nanocrystals for use in structure- and composition-dependent photocatalytic hydrogen evolution. Nanoscale, 2020, 12, 6111-6120.	5.6	21
49	Heating-up Synthesis of MoS2 Nanosheets and Their Electrical Bistability Performance. Nanoscale Research Letters, 2016, 11, 171.	5.7	20
50	Solution-processed planar white light-emitting diodes based on cadmium-free Cu-In-Zn-S/ZnS quantum dots and polymer. Organic Electronics, 2017, 45, 20-25.	2.6	20
51	Electrical bistability of copper (I) sulfide nanocrystals blending with a semiconducting polymer. Applied Physics Letters, 2009, 95, 143115.	3.3	19
52	Recent Developments of Hybrid Nanocrystal/Polymer Bulk Heterojunction Solar Cells. Journal of Nanoscience and Nanotechnology, 2011, 11, 9384-9394.	0.9	19
53	Multinary copper-based chalcogenide semiconductor nanocrystals: synthesis and applications in light-emitting diodes and bioimaging. Journal of Nanoparticle Research, 2020, 22, 1.	1.9	19
54	Synthesis and optical properties of composition-tunable and water-soluble Zn Cd1â^'Te alloyed nanocrystals. Journal of Crystal Growth, 2007, 308, 19-25.	1.5	17

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55	One-pot synthesis, optical property and self-assembly of monodisperse silver nanospheres. Journal of Solid State Chemistry, 2011, 184, 1956-1962.	2.9	17
56	Highly-efficient and all-solution-processed red-emitting InP/ZnS-based quantum-dot light-emitting diodes enabled by compositional engineering of electron transport layers. Journal of Materials Chemistry C, 2019, 7, 7636-7642.	5.5	17
57	Investigation on Nanocrystals/Polymer Light-Emitting Diodes with Different-Sized Water-Sol CdSe Nanocrystals. Journal of the Electrochemical Society, 2008, 155, K190.	2.9	16
58	Controlled synthesis and defect dependent upconversion luminescence of Y2O3: Yb, Er nanoparticles. Journal of Applied Physics, 2014, 115, .	2.5	16
59	Low-voltage polymer-stabilised blue-phase liquid crystals with oleic acid (OA)-modified LaF₃ nanoparticles. Liquid Crystals, 2018, 45, 1654-1660.	2.2	16
60	Progress on the controllable synthesis of all-inorganic halide perovskite nanocrystals and their optoelectronic applications. Journal of Semiconductors, 2020, 41, 011201.	3.7	16
61	Effects of surface ligands on localized surface plasmon resonance and stabilization of Cu2â˜xSe nanocrystals. Applied Surface Science, 2020, 509, 145327.	6.1	16
62	Optical properties and self-assembly of Ag2S nanoparticles synthesized by a one-pot method. Materials Letters, 2012, 88, 108-111.	2.6	15
63	Rational Design and Synthesis of Highly Luminescent Multinary Cuâ€Inâ€Znâ€S Semiconductor Nanocrystals with Tailored Nanostructures. Advanced Optical Materials, 2020, 8, 1901555.	7.3	14
64	Electrical bistability and negative differential resistance in diodes based on silver nanoparticle-poly(N-vinylcarbazole) composites. Journal of Applied Physics, 2010, 108, 094320.	2.5	13
65	Tunable crystal structure of Cuâ€“Znâ€“Snâ€“S nanocrystals for improving photocatalytic hydrogen evolution enabled by copper element regulation. Journal of Semiconductors, 2022, 43, 032701.	3.7	13
66	Shape-controlled synthesis of Cu₃₁S₁₆â€“metal sulfide heteronanostructures via a two-phase approach. Chemical Communications, 2016, 52, 2039-2042.	4.1	12
67	A General One-Pot Approach to Synthesize Binary and Ternary Metal Sulfide Nanocrystals. Nanoscale Research Letters, 2019, 14, 19.	5.7	12
68	Compositional engineering of multinary Cuâ€“Inâ€“Zn-based semiconductor nanocrystals for efficient and solution-processed red-emitting quantum-dot light-emitting diodes. Organic Electronics, 2019, 74, 46-51.	2.6	12
69	Unraveling the Phase Transition and Luminescence Tuning of Pb-Free Csâ€“Cuâ€“I Perovskites Enabled by Reaction Temperature and Polar Solvent. Journal of Physical Chemistry Letters, 2022, 13, 4856-4863.	4.6	12
70	Synthesis of porous Y2O3:Er plates with enhanced upconversion luminescence properties. Materials Letters, 2013, 99, 115-117.	2.6	11
71	Characterization of nanoscale clusters fabricated by pulsed laser irradiation of thin Au films. Applied Surface Science, 2013, 273, 625-631.	6.1	11
72	Tunable near-infrared localized surface plasmon resonances of heterostructured Cu_194S-ZnS nanocrystals. Optical Materials Express, 2014, 4, 220.	3.0	11

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73	Hydrothermal Synthesis and Luminescent Properties of Eu³⁺ Doped Sr₃Al₂O₆ Phosphor for White LED. Journal of Nanoscience and Nanotechnology, 2016, 16, 3474-3479.	0.9	10
74	Investigation on Thermal Degradation Process of Polymer Solar Cells Based on Blend of PBDTTT-C and<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" id="M1"><mml:mrow><mml:msub><mml:mrow><mml:mtext>PC</mml:mtext></mml:mrow><mml:mrow><mml:mn mathvariant="bold">70</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math>BM. International Journal of Photoenergy, 2014, 2014, 1-9.	2.5	9
75	Effects of photo-induced defects on the performance of PBDTTT-C/PC₇₀ BM solar cells. Physica Status Solidi - Rapid Research Letters, 2015, 9, 120-124.	2.4	9
76	Fluoride-assisted synthesis of anatase TiO2 nanocrystals with tunable shape and band gap via a solvothermal approach. Chinese Chemical Letters, 2016, 27, 1801-1804.	9.0	9
77	Cathodoluminescence nanoscopy of open single-crystal aluminum plasmonic nanocavities. Nanoscale, 2018, 10, 22357-22361.	5.6	9
78	Ultrastrong coupling of CdZnS/ZnS quantum dots to bonding breathing plasmons of aluminum metalâ€“insulatorâ€“metal nanocavities in near-ultraviolet spectrum. Nanoscale, 2020, 12, 3112-3120.	5.6	9
79	Chlorobis[2-(2-pyridyl)phenyl-Î²2N,C1](triphenylphosphine-Î²P)iridium(III) dichloromethane sesquisolvate. Acta Crystallographica Section E: Structure Reports Online, 2005, 61, m778-m780.	0.2	8
80	Surface plasmonic effect and scattering effect of Au nanorods on the performance of polymer bulk heterojunction solar cells. Science China Technological Sciences, 2013, 56, 1865-1869.	4.0	8
81	Rational design of multinary copper chalcogenide nanocrystals for photocatalytic hydrogen evolution. Journal of Semiconductors, 2020, 41, 091706.	3.7	8
82	Structural Engineering toward High Monochromaticity of Carbon Dots-Based Light-Emitting Diodes. Journal of Physical Chemistry Letters, 2021, 12, 12107-12113.	4.6	8
83	Electrical bistability of CdS nanoparticles sandwiched between aluminum tris (8-hydroxyquinoline) layers. Solid State Communications, 2009, 149, 107-110.	1.9	7
84	Fluorine-assisted structural engineering of colloidal anatase TiO2 hierarchical nanocrystals for enhanced photocatalytic hydrogen production. Nanoscale, 2019, 11, 22575-22584.	5.6	7
85	Solution-processed double-layered hole transport layers for highly-efficient cadmium-free quantum-dot light-emitting diodes. Optics Express, 2020, 28, 6134.	3.4	7
86	Spectral studies of thin films based on poly(N-vinylcarzole) and red dopant. Applied Surface Science, 2008, 254, 2043-2047.	6.1	6
87	Synthesis and Characterization of Y₂O₃:Er³⁺ Upconversion Materials with Nanoporous Structures. Journal of Nanoscience and Nanotechnology, 2011, 11, 9671-9675.	0.9	6
88	The Solid-State Electrochemistry of CdS and Cu(I)-Doped CdS Nanocrystals. Journal of the Electrochemical Society, 2013, 160, H121-H125.	2.9	6
89	Understanding the roles of metal sources and dodecanethiols in the formation of metal sulfide nanocrystals via a two-phase approach. CrystEngComm, 2015, 17, 6598-6606.	2.6	6
90	Improved device performance of solution-processed red-colored Cuâ€“Inâ€“Znâ€“S-based quantum dot light-emitting diodes enabled by doping TCTA into the emitting layer. Organic Electronics, 2020, 84, 105790.	2.6	6

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91	Effect of ZnCdTe-Alloyed Nanocrystals on Polymerâ€“Fullerene Bulk Heterojunction Solar Cells. Nanoscale Research Letters, 2009, 4, 674-679.	5.7	5
92	Electrical bistability and charge-transport mechanisms in cuprous sulfide nanosphere-poly(N-vinylcarbazole) composite films. Journal of Nanoparticle Research, 2011, 13, 7263-7269.	1.9	5
93	Electrochemical evaluation of the frontier orbitals of organic dyes in aqueous electrolyte. Electrochimica Acta, 2013, 102, 108-112.	5.2	5
94	Formation of uniform carrot-like Cu31S16â€“CuInS2 heteronanostructures assisted by citric acid at the oil/aqueous interface. Dalton Transactions, 2018, 47, 67-73.	3.3	5
95	Construction of Robust Cadmium-Free Cuâ€“Inâ€“Znâ€“S Nanocrystals and Polyfluorene Derivatives Hybrid Emissive Layer for Stable Electroluminescent White Light-Emitting Devices. Journal of Physical Chemistry Letters, 2021, 12, 7113-7119.	4.6	5
96	Determination of HOMO levels of organic dyes in solid-state electrochemistry. Journal of Solid State Electrochemistry, 2015, 19, 883-890.	2.5	4
97	Doping of Cu(<scp>i</scp>) ions into CdS/ZnS core/shell nanocrystals through a cation exchange strategy. Journal of Materials Chemistry C, 2019, 7, 15285-15291.	5.5	4
98	The formation process of five-component Cuâ€“Inâ€“Znâ€“Seâ€“S nanocrystals from ternary Cuâ€“Inâ€“S and quaternary Cuâ€“Inâ€“Seâ€“S nanocrystals via gradually induced synthesis. Journal of Materials Chemistry C, 2021, 9, 8537-8544.	5.5	4
99	Oxygen vacancy substitution tuning photoluminescence of self-activated LiGaSi(1-)Ge O4 phosphors. Journal of Alloys and Compounds, 2022, 903, 163911.	5.5	4
100	Synthesis and Luminescent Properties of Eu²⁺ Doped Sr₅SiO₄Cl₆ Phosphor by Solâ€“Gel Method. Journal of Nanoscience and Nanotechnology, 2016, 16, 3468-3473.	0.9	3
101	Electrochemistry of Cu(I) doped CdS nanoparticles hosted by DNAâ€“CTMA in aqueous electrolyte. Materials Chemistry and Physics, 2014, 147, 1074-1078.	4.0	2
102	Facile synthesis of ternary AgInS2 nanowires and their self-assembly of fingerprint-like nanostructures. Chinese Chemical Letters, 2021, 32, 1507-1510.	9.0	2
103	Electrochemistry of deoxyribonucleic acidâ€“cetyltrimethylammonium complex with considering O2 effect. Thin Solid Films, 2014, 550, 630-634.	1.8	1
104	Effects of buffer layer and thermal annealing on the performance of hybrid Cu2S/PVK electrically bistable devices. Solid-State Electronics, 2016, 123, 101-105.	1.4	1
105	Oxygen Effects on Performance of Electrically Bistable Devices Based on Hybrid Silver Sulfide Poly(N-vinylcarbazole) Nanocomposites. Nanoscale Research Letters, 2016, 11, 63.	5.7	1
106	DFT investigation on organic dyes with cross-conjugated cyano groups. Journal of Theoretical and Computational Chemistry, 2014, 13, 1450008.	1.8	0
107	37.2: Invited Paper: Interfacial Engineering for Improving the Device Performance of Cadmiumâ€Free Quantum Dotâ€based Electroluminescent Device. Digest of Technical Papers SID International Symposium, 2021, 52, 478-478.	0.3	0
108	A Single Molecule Electromer Emitting Compound with Enhanced Hole Transporting Property for Organic Light Emitting Devices. Science of Advanced Materials, 2015, 7, 2436-2440.	0.7	0

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109	Optoelectronic characteristics of inorganic/organic hybrid device based on poly(N-vinylcarbazole)/ cadmium selenide thin films. Journal of Nanoscience and Nanotechnology, 2008, 8, 1330-5.	0.9	0
110	Electroluminescence from light-emitting diodes by using water-dispersed ZnSe nanocrystals and polymer. Journal of Nanoscience and Nanotechnology, 2008, 8, 1341-5.	0.9	0