

Zhenyu Yang

List of Publications by Citations

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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.

66 papers	7,435 citations	33 h-index	73 g-index
73 ext. papers	8,495 ext. citations	13.8 avg, IF	5.68 L-index

#	Paper	IF	Citations
66	Efficient and stable solution-processed planar perovskite solar cells via contact passivation. <i>Science</i> , 2017 , 355, 722-726	33.3	1667
65	Highly Efficient Perovskite-Quantum-Dot Light-Emitting Diodes by Surface Engineering. <i>Advanced Materials</i> , 2016 , 28, 8718-8725	24	700
64	Color-stable highly luminescent sky-blue perovskite light-emitting diodes. <i>Nature Communications</i> , 2018 , 9, 3541	17.4	370
63	Highly efficient quantum dot near-infrared light-emitting diodes. <i>Nature Photonics</i> , 2016 , 10, 253-257	33.9	295
62	Passivation Using Molecular Halides Increases Quantum Dot Solar Cell Performance. <i>Advanced Materials</i> , 2016 , 28, 299-304	24	279
61	10.6% Certified Colloidal Quantum Dot Solar Cells via Solvent-Polarity-Engineered Halide Passivation. <i>Nano Letters</i> , 2016 , 16, 4630-4	11.5	275
60	Amine-Free Synthesis of Cesium Lead Halide Perovskite Quantum Dots for Efficient Light-Emitting Diodes. <i>Advanced Functional Materials</i> , 2016 , 26, 8757-8763	15.6	265
59	Highly Emissive Green Perovskite Nanocrystals in a Solid State Crystalline Matrix. <i>Advanced Materials</i> , 2017 , 29, 1605945	24	252
58	Compositional and orientational control in metal halide perovskites of reduced dimensionality. <i>Nature Materials</i> , 2018 , 17, 900-907	27	252
57	Chemical insight into the origin of red and blue photoluminescence arising from freestanding silicon nanocrystals. <i>ACS Nano</i> , 2013 , 7, 2676-85	16.7	231
56	Perovskite seeding growth of formamidinium-lead-iodide-based perovskites for efficient and stable solar cells. <i>Nature Communications</i> , 2018 , 9, 1607	17.4	218
55	Bright colloidal quantum dot light-emitting diodes enabled by efficient chlorination. <i>Nature Photonics</i> , 2018 , 12, 159-164	33.9	206
54	Spin control in reduced-dimensional chiral perovskites. <i>Nature Photonics</i> , 2018 , 12, 528-533	33.9	205
53	High-Efficiency Colloidal Quantum Dot Photovoltaics via Robust Self-Assembled Monolayers. <i>Nano Letters</i> , 2015 , 15, 7691-6	11.5	175
52	Dipolar cations confer defect tolerance in wide-bandgap metal halide perovskites. <i>Nature Communications</i> , 2018 , 9, 3100	17.4	171
51	Pure Cubic-Phase Hybrid Iodobismuthates AgBi ₂ I ₇ for Thin-Film Photovoltaics. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 9586-90	16.4	156
50	Colloidal Quantum Dot Photovoltaics Enhanced by Perovskite Shelling. <i>Nano Letters</i> , 2015 , 15, 7539-43	11.5	155

49	Mixed-quantum-dot solar cells. <i>Nature Communications</i> , 2017 , 8, 1325	17.4	113
48	Chemically Addressable Perovskite Nanocrystals for Light-Emitting Applications. <i>Advanced Materials</i> , 2017 , 29, 1701153	24	106
47	Near-Unity Internal Quantum Efficiency of Luminescent Silicon Nanocrystals with Ligand Passivation. <i>ACS Nano</i> , 2015 , 9, 7097-104	16.7	104
46	Combining Efficiency and Stability in Mixed Tin-Lead Perovskite Solar Cells by Capping Grains with an Ultrathin 2D Layer. <i>Advanced Materials</i> , 2020 , 32, e1907058	24	92
45	Efficient near-infrared light-emitting diodes based on quantum dots in layered perovskite. <i>Nature Photonics</i> , 2020 , 14, 227-233	33.9	91
44	Ultrafast narrowband exciton routing within layered perovskite nanoplatelets enables low-loss luminescent solar concentrators. <i>Nature Energy</i> , 2019 , 4, 197-205	62.3	87
43	Doping and quantum confinement effects in single Si nanocrystals observed by scanning tunneling spectroscopy. <i>Nano Letters</i> , 2013 , 13, 2516-21	11.5	86
42	Surface-induced alkene oligomerization: does thermal hydrosilylation really lead to monolayer protected silicon nanocrystals?. <i>Journal of the American Chemical Society</i> , 2013 , 135, 17595-601	16.4	69
41	Amide-Catalyzed Phase-Selective Crystallization Reduces Defect Density in Wide-Bandgap Perovskites. <i>Advanced Materials</i> , 2018 , 30, e1706275	24	62
40	Ultrannarrow Luminescence Linewidth of Silicon Nanocrystals and Influence of Matrix. <i>ACS Photonics</i> , 2014 , 1, 998-1005	6.3	57
39	Evolution of the Ultrafast Photoluminescence of Colloidal Silicon Nanocrystals with Changing Surface Chemistry. <i>ACS Photonics</i> , 2015 , 2, 595-605	6.3	50
38	All-Quantum-Dot Infrared Light-Emitting Diodes. <i>ACS Nano</i> , 2015 , 9, 12327-33	16.7	48
37	Highly Luminescent Covalently Linked Silicon Nanocrystal/Polystyrene Hybrid Functional Materials: Synthesis, Properties, and Processability. <i>Advanced Functional Materials</i> , 2014 , 24, 1345-1353	15.6	47
36	Radical Initiated Hydrosilylation on Silicon Nanocrystal Surfaces: An Evaluation of Functional Group Tolerance and Mechanistic Study. <i>Langmuir</i> , 2015 , 31, 10540-8	4	40
35	pH and Thermo Dual-Responsive Fluorescent Hydrogel Actuator. <i>Macromolecular Rapid Communications</i> , 2019 , 40, e1800648	4.8	39
34	Pure Cubic-Phase Hybrid Iodobismuthates AgBi ₂ I ₇ for Thin-Film Photovoltaics. <i>Angewandte Chemie</i> , 2016 , 128, 9738-9742	3.6	35
33	Cellulose Nanocrystal:Polymer Hybrid Optical Diffusers for Index-Matching-Free Light Management in Optoelectronic Devices. <i>Advanced Optical Materials</i> , 2017 , 5, 1700430	8.1	33
32	Anchored Ligands Facilitate Efficient B-Site Doping in Metal Halide Perovskites. <i>Journal of the American Chemical Society</i> , 2019 , 141, 8296-8305	16.4	32

31	A convenient method for preparing alkyl-functionalized silicon nanocubes. <i>Journal of the American Chemical Society</i> , 2012 , 134, 13958-61	16.4	30
30	Quantum Dots in Two-Dimensional Perovskite Matrices for Efficient Near-Infrared Light Emission. <i>ACS Photonics</i> , 2017 , 4, 830-836	6.3	28
29	Size-controlled solid state synthesis of luminescent silicon nanocrystals using Stober silica particles. <i>CrystEngComm</i> , 2012 , 14, 7576	3.3	28
28	Quantitative Analysis of Trap-State-Mediated Exciton Transport in Perovskite-Shelled PbS Quantum Dot Thin Films Using Photocarrier Diffusion-Wave Nondestructive Evaluation and Imaging. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 14416-14427	3.8	22
27	Diazonium salts as grafting agents and efficient radical-hydrosilylation initiators for freestanding photoluminescent silicon nanocrystals. <i>Chemistry - A European Journal</i> , 2014 , 20, 4212-6	4.8	22
26	Surfactant-free synthesis of GeO ₂ nanocrystals with controlled morphologies. <i>Chemical Communications</i> , 2014 , 50, 6101-4	5.8	20
25	Synthesis of SixGe10 Nanocrystals Using Hydrogen Silsesquioxane and Soluble Germanium Diiodide Complexes. <i>Chemistry of Materials</i> , 2011 , 23, 5096-5103	9.6	20
24	Photostable Polymer/Si Nanocrystal Bulk Hybrids with Tunable Photoluminescence. <i>ACS Photonics</i> , 2016 , 3, 1575-1580	6.3	19
23	Temperature- and ligand-dependent carrier transport dynamics in photovoltaic PbS colloidal quantum dot thin films using diffusion-wave methods. <i>Solar Energy Materials and Solar Cells</i> , 2017 , 164, 135-145	6.4	18
22	Size-controlled template synthesis of metal-free germanium nanowires. <i>Journal of Materials Chemistry</i> , 2011 , 21, 16505		17
21	Thiophene Cation Intercalation to Improve Band-Edge Integrity in Reduced-Dimensional Perovskites. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 13977-13983	16.4	16
20	Computational investigation on structural and physical properties of AlN nanosheets and nanoribbons. <i>Journal of Nanoscience and Nanotechnology</i> , 2010 , 10, 7200-3	1.3	15
19	Thermoresponsive and Photoluminescent Hybrid Silicon Nanoparticles by Surface-Initiated Group Transfer Polymerization of Diethyl Vinylphosphonate. <i>Angewandte Chemie</i> , 2014 , 126, 12702-12705	3.6	13
18	Ligand cleavage enables formation of 1,2-ethanedithiol capped colloidal quantum dot solids. <i>Nanoscale</i> , 2019 , 11, 10774-10781	7.7	12
17	Thermoresponsive and photoluminescent hybrid silicon nanoparticles by surface-initiated group transfer polymerization of diethyl vinylphosphonate. <i>Angewandte Chemie - International Edition</i> , 2014 , 53, 12494-7	16.4	11
16	Self-Assembled PbSe Nanowire:Perovskite Hybrids. <i>Journal of the American Chemical Society</i> , 2015 , 137, 14869-72	16.4	10
15	Identification of the physical origin behind disorder, heterogeneity, and reconstruction and their correlation with the photoluminescence lifetime in hybrid perovskite thin films. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 21002-21015	13	9
14	Naphthalenediimide Cations Inhibit 2D Perovskite Formation and Facilitate Subpicosecond Electron Transfer. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 24379-24390	3.8	9

13	Low-dimensionality perovskites yield high electroluminescence. <i>Science Bulletin</i> , 2020 , 65, 1057-1060	10.6	8
12	Size-independent organosilane functionalization of silicon nanocrystals using Wilkinson's catalyst. <i>Canadian Journal of Chemistry</i> , 2014 , 92, 951-957	0.9	8
11	Light-Induced Evolution of Silicon Quantum Dot Surface Chemistry: Implications for Photoluminescence, Sensing, and Reactivity. <i>Chemistry of Materials</i> , 2014 , 26, 5467-5474	9.6	7
10	Thiophene Cation Intercalation to Improve Band-Edge Integrity in Reduced-Dimensional Perovskites. <i>Angewandte Chemie</i> , 2020 , 132, 14081-14087	3.6	5
9	Functionalization of BN nanotubes with free radicals: electroaffinity-independent configuration and band structure engineering. <i>Frontiers of Physics in China</i> , 2009 , 4, 378-382		5
8	Light-Driven Halide Exchange Facilitates Complete Crystal Transformation in Nanostructured Perovskites. <i>Langmuir</i> , 2020 , 36, 3064-3071	4	4
7	Ligand passivation yields long-life perovskite light-emitting diodes. <i>Science Bulletin</i> , 2020 , 65, 1691-1693	10.6	2
6	Low-Cost Synthesis of Silicon Quantum Dots with Near-Unity Internal Quantum Efficiency. <i>Journal of Physical Chemistry Letters</i> , 2021 , 12, 8909-8916	6.4	2
5	Shape Evolution of Faceted Silicon Nanocrystals upon Thermal Annealing in an Oxide Matrix. <i>Materials Research Society Symposia Proceedings</i> , 2013 , 1536, 207-212		1
4	Structural characterization of cystathionine lyase smCSE enables aqueous metal quantum dot biosynthesis. <i>International Journal of Biological Macromolecules</i> , 2021 , 174, 42-51	7.9	1
3	Hybrid Materials: Highly Luminescent Covalently Linked Silicon Nanocrystal/Polystyrene Hybrid Functional Materials: Synthesis, Properties, and Processability (Adv. Funct. Mater. 10/2014). <i>Advanced Functional Materials</i> , 2014 , 24, 1344-1344	15.6	0
2	Electrochemical synthesis of colloidal lead- and bismuth-based perovskite nanocrystals. <i>Chemical Communications</i> , 2021 , 57, 11553-11556	5.8	0
1	Postsynthetic Crystalline Transformation in Two-Dimensional Perovskites via Organothiols-Based Chemistry. <i>CCS Chemistry</i> , 1276-1284	7.2	0