Dmitri V Talapin

List of Publications by Year
in descending order

186 papers	39,069 citations	7672 79 h-index	4853 174 g-index
195 all docs	195 docs citations	195 times ranked	34229 citing authors

#	Article	IF	Citations
1	Prospects of Colloidal Nanocrystals for Electronic and Optoelectronic Applications. Chemical Reviews, 2010, 110, 389-458.	23.0	3,708
2	Structural diversity in binary nanoparticle superlattices. Nature, 2006, 439, 55-59.	13.7	1,956
3	PbSe Nanocrystal Solids for n- and p-Channel Thin Film Field-Effect Transistors. Science, 2005, 310, 86-89.	6.0	1,551
4	Thiol-Capping of CdTe Nanocrystals:â€‰ An Alternative to Organometallic Synthetic Routes. Journal of Physical Chemistry B, 2002, 106, 7177-7185.	1.2	1,485
5	Self-Assembly of Colloidal Nanocrystals: From Intricate Structures to Functional Materials. Chemical Reviews, 2016, 116, 11220-11289.	23.0	1,485
6	Highly Luminescent Monodisperse CdSe and CdSe/ZnS Nanocrystals Synthesized in a Hexadecylamineâˆ’Trioctylphosphine Oxideâˆ’Trioctylphospine Mixture. Nano Letters, 2001, 1, 207-211.	4.5	1,423
7	The surface science of nanocrystals. Nature Materials, 2016, 15, 141-153.	13.3	1,293
8	Designing PbSe Nanowires and Nanorings through Oriented Attachment of Nanoparticles. Journal of the American Chemical Society, 2005, 127, 7140-7147.	6.6	1,195
9	Prospects of Nanoscience with Nanocrystals. ACS Nano, 2015, 9, 1012-1057.	7.3	1,005
10	Building devices from colloidal quantum dots. Science, 2016, 353, .	6.0	996
11	Colloidal Nanocrystals with Molecular Metal Chalcogenide Surface Ligands. Science, 2009, 324, 1417-1420.	6.0	962
12	Covalent surface modifications and superconductivity of two-dimensional metal carbide MXenes. Science, 2020, 369, 979-983.	6.0	870
13	Seeded Growth of Highly Luminescent CdSe/CdS Nanoheterostructures with Rod and Tetrapod Morphologies. Nano Letters, 2007, 7, 2951-2959.	4.5	717
14	CdSe/CdS/ZnS and CdSe/ZnSe/ZnS Coreâˆ’Shellâˆ’Shell Nanocrystals. Journal of Physical Chemistry B, 2004, 108, 18826-18831.	1.2	688
15	Band-like transport, high electron mobility and high photoconductivity in all-inorganic nanocrystal arrays. Nature Nanotechnology, 2011, 6, 348-352.	15.6	655
16	Metal-free Inorganic Ligands for Colloidal Nanocrystals: S^{2â€“}, HS^{â€“}, Se^{2â€“}, HSe^{â€“}, Te^{2â€“}, HTe^{â€“}, TeS₃^{2â€“}, OH^{â€“}, and NH₂^{â€“} as Surface Ligands. Journal of the American Chemical Society, 2011, 133, 10612-10620.	6.6	645
17	Non-blinking and photostable upconverted luminescence from single lanthanide-doped nanocrystals. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 10917-10921.	3.3	626
18	Semiconductor quantum dots: Technological progress and future challenges. Science, 2021, 373, .	6.0	600

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19	Highly Emissive Colloidal CdSe/CdS Heterostructures of Mixed Dimensionality. Nano Letters, 2003, 3, 1677-1681.	4.5	579
20	Quasicrystalline order in self-assembled binary nanoparticle superlattices. Nature, 2009, 461, 964-967.	13.7	551
21	Colloidal Synthesis and Self-Assembly of CoPt3 Nanocrystals. Journal of the American Chemical Society, 2002, 124, 11480-11485.	6.6	533
22	Synergism in binary nanocrystal superlattices leads to enhanced p-type conductivity in self-assembled PbTe/Ag2Te thin films. Nature Materials, 2007, 6, 115-121.	13.3	498
23	Study of Nucleation and Growth in the Organometallic Synthesis of Magnetic Alloy Nanocrystals:â€‰ The Role of Nucleation Rate in Size Control of CoPt3 Nanocrystals. Journal of the American Chemical Society, 2003, 125, 9090-9101.	6.6	484
24	Dynamic Distribution of Growth Rates within the Ensembles of Colloidal IIâˆ'VI and IIIâˆ'V Semiconductor Nanocrystals as a Factor Governing Their Photoluminescence Efficiency. Journal of the American Chemical Society, 2002, 124, 5782-5790.	6.6	471
25	Evolution of an Ensemble of Nanoparticles in a Colloidal Solution:Â Theoretical Study. Journal of Physical Chemistry B, 2001, 105, 12278-12285.	1.2	463
26	Structural Characterization of Self-Assembled Multifunctional Binary Nanoparticle Superlattices. Journal of the American Chemical Society, 2006, 128, 3620-3637.	6.6	452
27	One-Pot Synthesis of Highly Luminescent CdSe/CdS Coreâˆ'Shell Nanocrystals via Organometallic and â€œGreenerâ€•Chemical Approachesâ€. Journal of Physical Chemistry B, 2003, 107, 7454-7462.	1.2	357
28	A Novel Organometallic Synthesis of Highly Luminescent CdTe Nanocrystals. Journal of Physical Chemistry B, 2001, 105, 2260-2263.	1.2	339
29	Low-Threshold Stimulated Emission Using Colloidal Quantum Wells. Nano Letters, 2014, 14, 2772-2777.	4.5	338
30	Auâˆ'PbS Coreâˆ'Shell Nanocrystals: Plasmonic Absorption Enhancement and Electrical Doping via Intra-particle Charge Transfer. Journal of the American Chemical Society, 2008, 130, 9673-9675.	6.6	337
31	Dipoleâˆ'Dipole Interactions in Nanoparticle Superlattices. Nano Letters, 2007, 7, 1213-1219.	4.5	316
32	Self-Assembly of PbTe Quantum Dots into Nanocrystal Superlattices and Glassy Films. Journal of the American Chemical Society, 2006, 128, 3248-3255.	6.6	310
33	Gold/Iron Oxide Core/Hollowâ€Shell Nanoparticles. Advanced Materials, 2008, 20, 4323-4329.	11.1	308
34	Colloidal Atomic Layer Deposition (c-ALD) using Self-Limiting Reactions at Nanocrystal Surface Coupled to Phase Transfer between Polar and Nonpolar Media. Journal of the American Chemical Society, 2012, 134, 18585-18590.	6.6	297
35	CdSe and CdSe/CdS Nanorod Solids. Journal of the American Chemical Society, 2004, 126, 12984-12988.	6.6	279
36	Quantum Dot Chemiluminescence. Nano Letters, 2004, 4, 693-698.	4.5	275

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37	Expanding the Chemical Versatility of Colloidal Nanocrystals Capped with Molecular Metal Chalcogenide Ligands. Journal of the American Chemical Society, 2010, 132, 10085-10092.	6.6	263
38	Efficient Phase Transfer of Luminescent Thiol-Capped Nanocrystals:â€‰ From Water to Nonpolar Organic Solvents. Nano Letters, 2002, 2, 803-806.	4.5	247
39	Enhanced Thermopower in PbSe Nanocrystal Quantum Dot Superlattices. Nano Letters, 2008, 8, 2283-2288.	4.5	244
40	Red, Yellow, Green, and Blue Amplified Spontaneous Emission and Lasing Using Colloidal CdSe Nanoplatelets. ACS Nano, 2015, 9, 9475-9485.	7.3	240
41	Direct optical lithography of functional inorganic nanomaterials. Science, 2017, 357, 385-388.	6.0	224
42	Surface chemistry mediates thermal transport in three-dimensional nanocrystal arrays. Nature Materials, 2013, 12, 410-415.	13.3	218
43	Picosecond energy transfer and multiexciton transfer outpaces Auger recombination in binaryÂCdSe nanoplatelet solids. Nature Materials, 2015, 14, 484-489.	13.3	211
44	Energetic and Entropic Contributions to Self-Assembly of Binary Nanocrystal Superlattices: Temperature as the Structure-Directing Factor. Journal of the American Chemical Society, 2010, 132, 11967-11977.	6.6	210
45	Etching of Colloidal InP Nanocrystals with Fluorides:â€‰ Photochemical Nature of the Process Resulting in High Photoluminescence Efficiency. Journal of Physical Chemistry B, 2002, 106, 12659-12663.	1.2	209
46	Colloidal Nanocrystals with Inorganic Halide, Pseudohalide, and Halometallate Ligands. ACS Nano, 2014, 8, 7359-7369.	7.3	204
47	Assessment of Anisotropic Semiconductor Nanorod and Nanoplatelet Heterostructures with Polarized Emission for Liquid Crystal Display Technology. ACS Nano, 2016, 10, 5769-5781.	7.3	195
48	Relations between the Photoluminescence Efficiency of CdTe Nanocrystals and Their Surface Properties Revealed by Synchrotron XPS. Journal of Physical Chemistry B, 2003, 107, 9662-9668.	1.2	191
49	The Role of Particle Morphology in Interfacial Energy Transfer in CdSe/CdS Heterostructure Nanocrystals. Science, 2010, 330, 1371-1374.	6.0	177
50	Composition-matched molecular â€œsoldersâ€•for semiconductors. Science, 2015, 347, 425-428.	6.0	172
51	IIIâ€"V Nanocrystals Capped with Molecular Metal Chalcogenide Ligands: High Electron Mobility and Ambipolar Photoresponse. Journal of the American Chemical Society, 2013, 135, 1349-1357.	6.6	161
52	Many-Body Effects in Nanocrystal Superlattices: Departure from Sphere Packing Explains Stability of Binary Phases. Journal of the American Chemical Society, 2015, 137, 4494-4502.	6.6	158
53	The Role of Order, Nanocrystal Size, and Capping Ligands in the Collective Mechanical Response of Three-Dimensional Nanocrystal Solids. Journal of the American Chemical Society, 2010, 132, 8953-8960.	6.6	157
54	SnTe Nanocrystals:â€‰ A New Example of Narrow-Gap Semiconductor Quantum Dots. Journal of the American Chemical Society, 2007, 129, 11354-11355.	6.6	156

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55	Effect of Metal Ions on Photoluminescence, Charge Transport, Magnetic and Catalytic Properties of All-Inorganic Colloidal Nanocrystals and Nanocrystal Solids. Journal of the American Chemical Society, 2012, 134, 13604-13615.	6.6	156
56	Semiconductor Nanocrystals Functionalized with Antimony Telluride Zintl Ions for Nanostructured Thermoelectrics. Journal of the American Chemical Society, 2010, 132, 6686-6695.	6.6	149
57	High Efficiency Solution Processed Sintered CdTe Nanocrystal Solar Cells: The Role of Interfaces. Nano Letters, 2014, 14, 670-675.	4.5	148
58	Stable colloids in molten inorganic salts. Nature, 2017, 542, 328-331.	13.7	148
59	Inorganically Functionalized PbSâ€“CdS Colloidal Nanocrystals: Integration into Amorphous Chalcogenide Glass and Luminescent Properties. Journal of the American Chemical Society, 2012, 134, 2457-2460.	6.6	142
60	Electrical control of FÃ¶rster energy transfer. Nature Materials, 2006, 5, 777-781.	13.3	141
61	Low Voltage, Hysteresis Free, and High Mobility Transistors from All-Inorganic Colloidal Nanocrystals. Nano Letters, 2012, 12, 1813-1820.	4.5	137
62	Quantum dot solids showing state-resolved band-like transport. Nature Materials, 2020, 19, 323-329.	13.3	136
63	Introduction: Nanoparticle Chemistry. Chemical Reviews, 2016, 116, 10343-10345.	23.0	131
64	Quantum dot light-emitting devices. MRS Bulletin, 2013, 38, 685-691.	1.7	127
65	Origin of Broad Emission Spectra in InP Quantum Dots: Contributions from Structural and Electronic Disorder. Journal of the American Chemical Society, 2018, 140, 15791-15803.	6.6	123
66	Soluble Precursors for CuInSe₂, CuIn_{1â€“<i>x</i>}Ga_{<i>x</i>}Se₂, and Cu₂ZnSn(S,Se)₄ Based on Colloidal Nanocrystals and Molecular Metal Chalcogenide Surface Ligands. Journal of the American Chemical Society, 2012, 134, 5010-5013.	6.6	119
67	A room temperature continuous-wave nanolaser using colloidal quantum wells. Nature Communications, 2017, 8, 143.	5.8	119
68	Alkyl Chains of Surface Ligands Affect Polytypism of CdSe Nanocrystals and Play an Important Role in the Synthesis of Anisotropic Nanoheterostructures. Journal of the American Chemical Society, 2010, 132, 15866-15868.	6.6	113
69	Colloidal InSb Nanocrystals. Journal of the American Chemical Society, 2012, 134, 20258-20261.	6.6	111
70	Carrier Cooling in Colloidal Quantum Wells. Nano Letters, 2012, 12, 6158-6163.	4.5	105
71	Quasiâ€Seeded Growth of Ligandâ€Tailored PbSe Nanocrystals through Cationâ€Exchangeâ€Mediated Nucleation. Angewandte Chemie - International Edition, 2008, 47, 3029-3033.	7.2	103
72	Synthesis and Search for Design Principles of New Electron Accepting Polymers for All-Polymer Solar Cells. Chemistry of Materials, 2014, 26, 3450-3459.	3.2	100

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73	Multiexcitonic Dual Emission in CdSe/CdS Tetrapods and Nanorods. Nano Letters, 2010, 10, 4646-4650.	4.5	94
74	Surface Functionalization of Semiconductor and Oxide Nanocrystals with Small Inorganic Oxoanions (PO₄^{3â€"}, MoO₄^{2â€"}) and Polyoxometalate Ligands. ACS Nano, 2014, 8, 9388-9402.	7.3	92
75	Highly Monodisperse Bismuth Nanoparticles and Their Three-Dimensional Superlattices. Journal of the American Chemical Society, 2010, 132, 15158-15159.	6.6	91
76	Solution-Processed Transistors Using Colloidal Nanocrystals with Composition-Matched Molecular â€œSoldersâ€ Approaching Single Crystal Mobility. Nano Letters, 2015, 15, 6309-6317.	4.5	88
77	Excitonâ€"Exciton Interaction and Optical Gain in Colloidal CdSe/CdS Dot/Rod Nanocrystals. Advanced Materials, 2009, 21, 4942-4946.	11.1	82
78	â€œMagnet-in-the-Semiconductorâ€•FePtâ^'PbS and FePtâ^'PbSe Nanostructures: Magnetic Properties, Charge Transport, and Magnetoresistance. Journal of the American Chemical Society, 2010, 132, 6382-6391.	6.6	80
79	Self-Assembly of Tetrahedral CdSe Nanocrystals: Effective â€œPatchinessâ€•via Anisotropic Steric Interaction. Journal of the American Chemical Society, 2014, 136, 5868-5871.	6.6	80
80	LEGO Materials. ACS Nano, 2008, 2, 1097-1100.	7.3	79
81	Direct Synthesis of Six-Monolayer (1.9 nm) Thick Zinc-Blende CdSe Nanoplatelets Emitting at 585 nm. Chemistry of Materials, 2018, 30, 6957-6960.	3.2	77
82	Direct Wavelength-Selective Optical and Electron-Beam Lithography of Functional Inorganic Nanomaterials. ACS Nano, 2019, 13, 13917-13931.	7.3	77
83	High Carrier Mobility in HgTe Quantum Dot Solids Improves Mid-IR Photodetectors. ACS Photonics, 2019, 6, 2358-2365.	3.2	77
84	Nanocrystal Superlattices with Thermally Degradable Hybrid Inorganicâ^'Organic Capping Ligands. Journal of the American Chemical Society, 2010, 132, 15124-15126.	6.6	75
85	Violet-to-Blue Gain and Lasing from Colloidal CdS Nanoplatelets: Low-Threshold Stimulated Emission Despite Low Photoluminescence Quantum Yield. ACS Photonics, 2017, 4, 576-583.	3.2	74
86	Semiconductor Nanocrystals Photosensitize C60Crystals. Nano Letters, 2006, 6, 1559-1563.	4.5	71
87	Temperature-Dependent Hall and Field-Effect Mobility in Strongly Coupled All-Inorganic Nanocrystal Arrays. Nano Letters, 2014, 14, 653-662.	4.5	71
88	Tandem Solar Cells from Solution-Processed CdTe and PbS Quantum Dots Using a ZnTeâ€"ZnO Tunnel Junction. Nano Letters, 2017, 17, 1020-1027.	4.5	71
89	Nanocrystal Grain Growth and Device Architectures for High-Efficiency CdTe Ink-Based Photovoltaics. ACS Nano, 2014, 8, 9063-9072.	7.3	67
90	Three-Dimensional Nanocrystal Superlattices Grown in Nanoliter Microfluidic Plugs. Journal of the American Chemical Society, 2011, 133, 8956-8960.	6.6	66

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91	Size-Dependent Biexciton Quantum Yields and Carrier Dynamics of Quasi-Two-Dimensional Core/Shell Nanoplatelets. ACS Nano, 2017, 11, 9119-9127.	7.3	66
92	Persistent Interexcitonic Quantum Coherence in CdSe Quantum Dots. Journal of Physical Chemistry Letters, 2014, 5, 196-204.	2.1	64
93	Solution-Processed, Ultrathin Solar Cells from CdCl₃^{â€“}-Capped CdTe Nanocrystals: The Multiple Roles of CdCl₃^{â€“} Ligands. Journal of the American Chemical Society, 2016, 138, 7464-7467.	6.6	64
94	Exploring size and state dynamics in CdSe quantum dots using two-dimensional electronic spectroscopy. Journal of Chemical Physics, 2014, 140, 084701.	1.2	62
95	Direct Optical Patterning of Quantum Dot Lightâ€Emitting Diodes via In Situ Ligand Exchange. Advanced Materials, 2020, 32, e2003805.	11.1	62
96	Comparison of Structural Behavior of Nanocrystals in Randomly Packed Films and Long-Range Ordered Superlattices by Time-Resolved Small Angle X-ray Scattering. Journal of the American Chemical Society, 2009, 131, 16386-16388.	6.6	61
97	Auger-Limited Carrier Recombination and Relaxation in CdSe Colloidal Quantum Wells. Journal of Physical Chemistry Letters, 2015, 6, 1032-1036.	2.1	61
98	Colloidal Chemistry in Molten Salts: Synthesis of Luminescent In_{1â€“<i>x</i>}Ga_{<i>x</i>}P and In_{1â€“<i>x</i>}Ga_{<i>x</i>}As Quantum Dots. Journal of the American Chemical Society, 2018, 140, 12144-12151.	6.6	60
99	Colloidal Atomic Layer Deposition with Stationary Reactant Phases Enables Precise Synthesis of â€œDigitalâ€•IIâ€“VI Nano-heterostructures with Exquisite Control of Confinement and Strain. Journal of the American Chemical Society, 2019, 141, 13487-13496.	6.6	58
100	Thermal Stability of Colloidal InP Nanocrystals: Small Inorganic Ligands Boost High-Temperature Photoluminescence. ACS Nano, 2014, 8, 977-985.	7.3	57
101	Self-assembly of nanocrystals into strongly electronically coupled all-inorganic supercrystals. Science, 2022, 375, 1422-1426.	6.0	57
102	Conduction Band Fine Structure in Colloidal HgTe Quantum Dots. ACS Nano, 2018, 12, 9397-9404.	7.3	56
103	Alignment, Electronic Properties, Doping, and On-Chip Growth of Colloidal PbSe Nanowires. Journal of Physical Chemistry C, 2007, 111, 13244-13249.	1.5	53
104	Structural Defects in Periodic and Quasicrystalline Binary Nanocrystal Superlattices. Journal of the American Chemical Society, 2011, 133, 20837-20849.	6.6	53
105	Two-dimensional electronic spectroscopy of CdSe nanoparticles at very low pulse power. Journal of Chemical Physics, 2013, 138, 014705.	1.2	53
106	Quantized Reaction Pathways for Solution Synthesis of Colloidal ZnSe Nanostructures: A Connection between Clusters, Nanowires, and Two-Dimensional Nanoplatelets. ACS Nano, 2020, 14, 3847-3857.	7.3	51
107	Monodisperse InAs Quantum Dots from Aminoarsine Precursors: Understanding the Role of Reducing Agent. Chemistry of Materials, 2018, 30, 3623-3627.	3.2	48
108	Nanocrystals in Molten Salts and Ionic Liquids: Experimental Observation of Ionic Correlations Extending beyond the Debye Length. ACS Nano, 2019, 13, 5760-5770.	7.3	48

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109	Allâ€Inorganic Nanocrystals as a Glue for BiSbTe Grains: Design of Interfaces in Mesostructured Thermoelectric Materials. Angewandte Chemie - International Edition, 2014, 53, 7466-7470.	7.2	47
110	Inorganic Surface Ligands for Colloidal Nanomaterials. Zeitschrift Fur Physikalische Chemie, 2015, 229, 85-107.	1.4	47
111	Semiconductor Nanoplatelet Excimers. Nano Letters, 2018, 18, 6948-6953.	4.5	46
112	CdS Nanoparticles Capped with 1-Substituted 5-Thiotetrazoles: Synthesis, Characterization, and Thermolysis of the Surfactant. Chemistry of Materials, 2008, 20, 4545-4547.	3.2	45
113	Measurement of electronic splitting in PbS quantum dots by two-dimensional nonlinear spectroscopy. Physical Review B, 2012, 86, .	1.1	44
114	Light-Induced Charged and Trap States in Colloidal Nanocrystals Detected by Variable Pulse Rate Photoluminescence Spectroscopy. ACS Nano, 2013, 7, 229-238.	7.3	44
115	Thermoelectric Tin Selenide: The Beauty of Simplicity. Angewandte Chemie - International Edition, 2014, 53, 9126-9127.	7.2	44
116	Nonmonotonic Dependence of Auger Recombination Rate on Shell Thickness for CdSe/CdS Core/Shell Nanoplatelets. Nano Letters, 2017, 17, 6900-6906.	4.5	44
117	Advanced Materials for Energy-Water Systems: The Central Role of Water/Solid Interfaces in Adsorption, Reactivity, and Transport. Chemical Reviews, 2021, 121, 9450-9501.	23.0	43
118	Colloidal CdSe Quantum Rings. Journal of the American Chemical Society, 2016, 138, 9771-9774.	6.6	42
119	Charged excitons, Auger recombination and optical gain in CdSe/CdS nanocrystals. Nanotechnology, 2012, 23, 015201.	1.3	41
120	Colloidal Gelation in Liquid Metals Enables Functional Nanocomposites of 2D Metal Carbides (MXenes) and Lightweight Metals. ACS Nano, 2019, 13, 12415-12424.	7.3	41
121	Direct Optical Lithography of CsPbX₃ Nanocrystals via Photoinduced Ligand Cleavage with Postpatterning Chemical Modification and Electronic Coupling. Nano Letters, 2021, 21, 7609-7616.	4.5	41
122	Soft epitaxy of nanocrystal superlattices. Nature Communications, 2014, 5, 5045.	5.8	40
123	Facile, Economic and Size-Tunable Synthesis of Metal Arsenide Nanocrystals. Chemistry of Materials, 2016, 28, 6797-6802.	3.2	40
124	Systematic Mapping of Binary Nanocrystal Superlattices: The Role of Topology in Phase Selection. Journal of the American Chemical Society, 2019, 141, 5728-5740.	6.6	40
125	Dispersion-free continuum two-dimensional electronic spectrometer. Applied Optics, 2014, 53, 1909.	0.9	39
126	Anisotropic Photoluminescence from Isotropic Optical Transition Dipoles in Semiconductor Nanoplatelets. Nano Letters, 2018, 18, 4647-4652.	4.5	38

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127	Nanocrystal solids: A modular approach to materials design. MRS Bulletin, 2012, 37, 63-71.	1.7	37
128	Bi_{1â€“<i>x</i>}Sb_{<i>x</i>} Alloy Nanocrystals: Colloidal Synthesis, Charge Transport, and Thermoelectric Properties. ACS Nano, 2013, 7, 10296-10306.	7.3	36
129	Surface-Area-Dependent Electron Transfer Between Isoenergetic 2D Quantum Wells and a Molecular Acceptor. Journal of the American Chemical Society, 2016, 138, 11109-11112.	6.6	35
130	Understanding and Curing Structural Defects in Colloidal GaAs Nanocrystals. Nano Letters, 2017, 17, 2094-2101.	4.5	34
131	Polarized near-infrared intersubband absorptions in CdSe colloidal quantum wells. Nature Communications, 2019, 10, 4511.	5.8	34
132	Binary Assembly of PbS and Au Nanocrystals: Patchy PbS Surface Ligand Coverage Stabilizes the CuAu Superlattice. ACS Nano, 2019, 13, 5375-5384.	7.3	33
133	Transparent Ohmic Contacts for Solution-Processed, Ultrathin CdTe Solar Cells. ACS Energy Letters, 2017, 2, 270-278.	8.8	32
134	Evaluation of Ordering in Single-Component and Binary Nanocrystal Superlattices by Analysis of Their Autocorrelation Functions. ACS Nano, 2011, 5, 1703-1712.	7.3	30
135	Surface chemistry and buried interfaces in all-inorganic nanocrystalline solids. Nature Nanotechnology, 2018, 13, 841-848.	15.6	30
136	Role of Precursor Reactivity in Crystallization of Solution-Processed Semiconductors: The Case of Cu₂ZnSnS₄. Chemistry of Materials, 2014, 26, 4038-4043.	3.2	28
137	Carrier Dynamics in Highly Quantum-Confined, Colloidal Indium Antimonide Nanocrystals. ACS Nano, 2014, 8, 8513-8519.	7.3	27
138	Elevated Temperature Photophysical Properties and Morphological Stability of CdSe and CdSe/CdS Nanoplatelets. Journal of Physical Chemistry Letters, 2018, 9, 286-293.	2.1	27
139	Functional materials and devices by self-assembly. MRS Bulletin, 2020, 45, 799-806.	1.7	27
140	Area and thickness dependence of Auger recombination in nanoplatelets. Journal of Chemical Physics, 2020, 153, 054104.	1.2	25
141	Exciton storage in CdSe/CdS tetrapod semiconductor nanocrystals: Electric field effects on exciton and multiexciton states. Physical Review B, 2012, 86, .	1.1	24
142	Bright trion emission from semiconductor nanoplatelets. Physical Review Materials, 2020, 4, .	0.9	24
143	Connecting the dots. Science, 2014, 344, 1340-1341.	6.0	21
144	Direct Optical Lithography of Colloidal Metal Oxide Nanomaterials for Diffractive Optical Elements with 2Ï€ Phase Control. Journal of the American Chemical Society, 2021, 143, 2372-2383.	6.6	21

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145	Describing screening in dense ionic fluids with a charge-frustrated Ising model. Journal of Chemical Physics, 2018, 149, 164505.	1.2	20
146	Nonequilibrium Thermodynamics of Colloidal Gold Nanocrystals Monitored by Ultrafast Electron Diffraction and Optical Scattering Microscopy. ACS Nano, 2020, 14, 4792-4804.	7.3	20
147	Indirect Exciton Formation due to Inhibited Carrier Thermalization in Single CdSe/CdS Nanocrystals. Journal of Physical Chemistry Letters, 2013, 4, 691-697.	2.1	19
148	Magnet-in-the-Semiconductor Nanomaterials: High Electron Mobility in All-Inorganic Arrays of FePt/CdSe and FePt/CdS Coreâ€“Shell Heterostructures. Journal of Physical Chemistry Letters, 2013, 4, 1918-1923.	2.1	19
149	Photoconductivity of CdTe Nanocrystal-Based Thin Films: Te^{2â€“} Ligands Lead To Charge Carrier Diffusion Lengths Over 2 Î¼m. Journal of Physical Chemistry Letters, 2015, 6, 4815-4821.	2.1	19
150	Uniaxial transition dipole moments in semiconductor quantum rings caused by broken rotational symmetry. Nature Communications, 2019, 10, 3253.	5.8	19
151	Dynamic lattice distortions driven by surface trapping in semiconductor nanocrystals. Nature Communications, 2021, 12, 1860.	5.8	19
152	Spin-Dependent Exciton Quenching and Spin Coherence in CdSe/CdS Nanocrystals. Nano Letters, 2013, 13, 65-71.	4.5	16
153	New Forms of CdSe: Molecular Wires, Gels, and Ordered Mesoporous Assemblies. Journal of the American Chemical Society, 2017, 139, 3368-3377.	6.6	16
154	Probing the Surface of Colloidal Nanomaterials with Potentiometry <i>in Situ</i>. Journal of the American Chemical Society, 2014, 136, 11228-11231.	6.6	15
155	Soluble Lead and Bismuth Chalcogenidometallates: Versatile Solders for Thermoelectric Materials. Chemistry of Materials, 2017, 29, 6396-6404.	3.2	14
156	Stoichiometry of the Core Determines the Electronic Structure of Coreâ€“Shell IIIâ€“V/IIâ€“VI Nanoparticles. Chemistry of Materials, 2020, 32, 9798-9804.	3.2	14
157	Energetic disorder limits energy transfer in semiconductor nanocrystalâ€“DNAâ€“dye conjugates. Applied Physics Letters, 2009, 95, 143101.	1.5	11
158	Self-assembly of semiconductor nanocrystals into ordered superstructures. , 2008, , 119-169.		10
159	<scp>SAS</scp>PDF: pair distribution function analysis of nanoparticle assemblies from small-angle scattering data. Journal of Applied Crystallography, 2020, 53, 699-709.	1.9	10
160	Hot-Carrier Relaxation in CdSe/CdS Core/Shell Nanoplatelets. Journal of Physical Chemistry C, 2020, 124, 1020-1026.	1.5	9
161	Orbitals, Occupation Numbers, and Band Structure of Short One-Dimensional Cadmium Telluride Polymers. Journal of Physical Chemistry A, 2017, 121, 3142-3147.	1.1	8
162	Direct Heat-Induced Patterning of Inorganic Nanomaterials. Journal of the American Chemical Society, 2022, 144, 10495-10506.	6.6	8

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163	Seeded Synthesis of CdSe/CdS Rod and Tetrapod Nanocrystals. Journal of Visualized Experiments, 2013, , e50731.	0.2	7
164	Titanium Nitride Modified Photoluminescence from Single Semiconductor Nanoplatelets. Advanced Functional Materials, 2020, 30, 1904179.	7.8	7
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