James R Mcbride

List of Publications by Year
in descending order

95 papers	7,009 citations	66315 42 h-index	56687 83 g-index
99 all docs	99 docs citations	99 times ranked	9927 citing authors

#	Article	IF	Citations
1	Efficient hot-electron transfer by a plasmon-induced interfacial charge-transfer transition. Science, 2015, 349, 632-635.	6.0	951
2	White-Light Emission from Magic-Sized Cadmium Selenide Nanocrystals. Journal of the American Chemical Society, 2005, 127, 15378-15379.	6.6	620
3	Biocompatible Quantum Dots for Biological Applications. Chemistry and Biology, 2011, 18, 10-24.	6.2	476
4	Targeting Cell Surface Receptors with Ligand-Conjugated Nanocrystals. Journal of the American Chemical Society, 2002, 124, 4586-4594.	6.6	349
5	Continuous-wave lasing in colloidal quantum dot solids enabled by facet-selective epitaxy. Nature, 2017, 544, 75-79.	13.7	319
6	Homogeneously Alloyed CdSxSe1-xNanocrystals:Â Synthesis, Characterization, and Composition/Size-Dependent Band Gap. Journal of the American Chemical Society, 2006, 128, 12299-12306.	6.6	294
7	Structural Basis for Near Unity Quantum Yield Core/Shell Nanostructures. Nano Letters, 2006, 6, 1496-1501.	4.5	210
8	Synthesis, surface studies, composition and structural characterization of CdSe, core/shell and biologically active nanocrystals. Surface Science Reports, 2007, 62, 111-157.	3.8	205
9	Spectroscopy of Single- and Double-Wall Carbon Nanotubes in Different Environments. Nano Letters, 2005, 5, 511-514.	4.5	199
10	Bright White Light Emission from Ultrasmall Cadmium Selenide Nanocrystals. Journal of the American Chemical Society, 2012, 134, 8006-8009.	6.6	135
11	Nearâ€Unity Emitting Copperâ€Doped Colloidal Semiconductor Quantum Wells for Luminescent Solar Concentrators. Advanced Materials, 2017, 29, 1700821.	11.1	133
12	Synthesis of Ultrasmall and Magic-Sized CdSe Nanocrystals. Chemistry of Materials, 2013, 25, 1199-1210.	3.2	120
13	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.	7.3	106
14	Two-Dimensional Morphology Enhances Light-Driven H₂ Generation Efficiency in CdS Nanoplatelet-Pt Heterostructures. Journal of the American Chemical Society, 2018, 140, 11726-11734.	6.6	106
15	Synthesis of Magic-Sized CdSe and CdTe Nanocrystals with Diisooctylphosphinic Acid. Chemistry of Materials, 2010, 22, 6402-6408.	3.2	97
16	Dynamic Fluctuations in Ultrasmall Nanocrystals Induce White Light Emission. Nano Letters, 2012, 12, 3038-3042.	4.5	95
17	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.	7.3	92
18	Structure and Ultrafast Dynamics of White-Light-Emitting CdSe Nanocrystals. Journal of the American Chemical Society, 2009, 131, 5730-5731.	6.6	91

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19	Reviewâ€”Quantum Dots and Their Application in Lighting, Displays, and Biology. ECS Journal of Solid State Science and Technology, 2016, 5, R3019-R3031.	0.9	88
20	Band Edge Recombination in CdSe, CdS and CdS_{<i>x</i>}Se_{1âˆ’<i>x</i>} Alloy Nanocrystals Observed by Ultrafast Fluorescence Upconversion: The Effect of Surface Trap States. Journal of Physical Chemistry C, 2008, 112, 12736-12746.	1.5	79
21	Chemical Structure, Ensemble and Single-Particle Spectroscopy of Thick-Shell InPâ€“ZnSe Quantum Dots. Nano Letters, 2018, 18, 709-716.	4.5	76
22	Whereâ€™s the Silver? Imaging Trace Silver Coverage on the Surface of Gold Nanorods. Journal of the American Chemical Society, 2014, 136, 5261-5263.	6.6	74
23	Novel Synthesis of Chalcopyrite Cu_{<i>x</i>}In_{<i>y</i>}S₂ Quantum Dots with Tunable Localized Surface Plasmon Resonances. Chemistry of Materials, 2012, 24, 3294-3298.	3.2	73
24	On ultrasmall nanocrystals. Chemical Physics Letters, 2010, 498, 1-9.	1.2	71
25	Confirmation of disordered structure of ultrasmall CdSe nanoparticles from X-ray atomic pair distribution function analysis. Physical Chemistry Chemical Physics, 2013, 15, 8480.	1.3	71
26	Site-Selective Passivation of Defects in NiO Solar Photocathodes by Targeted Atomic Deposition. ACS Applied Materials & Interfaces, 2016, 8, 4754-4761.	4.0	71
27	Size-Independent Exciton Localization Efficiency in Colloidal CdSe/CdS Core/Crown Nanosheet Type-I Heterostructures. ACS Nano, 2016, 10, 3843-3851.	7.3	70
28	Synthesis of SnS nanocrystals by the solvothermal decomposition of a single source precursor. Nanoscale Research Letters, 2007, 2, 144-148.	3.1	68
29	Control of Surface State Emission via Phosphonic Acid Modulation in Ultrasmall CdSe Nanocrystals: The Role of Ligand Electronegativity. Journal of Physical Chemistry C, 2009, 113, 8169-8176.	1.5	66
30	Plasmonic Cu_{<i>x</i>}In_{<i>y</i>}S₂ Quantum Dots Make Better Photovoltaics Than Their Nonplasmonic Counterparts. Nano Letters, 2014, 14, 3262-3269.	4.5	65
31	Low Threshold Multiexciton Optical Gain in Colloidal CdSe/CdTe Core/Crown Type-II Nanoplatelet Heterostructures. ACS Nano, 2017, 11, 2545-2553.	7.3	65
32	Elimination of Holeâ€“Surface Overlap in Graded CdS_{<i>x</i>}Se_{1â€“<i>x</i>} Nanocrystals Revealed by Ultrafast Fluorescence Upconversion Spectroscopy. ACS Nano, 2014, 8, 10665-10673.	7.3	61
33	Aberration-Corrected Z-Contrast Scanning Transmission Electron Microscopy of CdSe Nanocrystals. Nano Letters, 2004, 4, 1279-1283.	4.5	60
34	Correlation of Atomic Structure and Photoluminescence of the Same Quantum Dot: Pinpointing Surface and Internal Defects That Inhibit Photoluminescence. ACS Nano, 2015, 9, 831-839.	7.3	57
35	Eu³⁺-Doped ZnB₂O₄ (B = Al³⁺, Ga³⁺) Nanospinels: An Efficient Red Phosphor. Chemistry of Materials, 2015, 27, 8362-8374.	3.2	54
36	Understanding the Journey of Dopant Copper Ions in Atomically Flat Colloidal Nanocrystals of CdSe Nanoplatelets Using Partial Cation Exchange Reactions. Chemistry of Materials, 2018, 30, 3265-3275.	3.2	51

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37	Quantum Yield Heterogeneity among Single Nonblinking Quantum Dots Revealed by Atomic Structure-Quantum Optics Correlation. ACS Nano, 2016, 10, 1960-1968.	7.3	50
38	Quasi-type II CuInS₂/CdS core/shell quantum dots. Chemical Science, 2016, 7, 1238-1244.	3.7	49
39	Surface passivation extends single and biexciton lifetimes of InP quantum dots. Chemical Science, 2020, 11, 5779-5789.	3.7	47
40	Encoding Abrupt and Uniform Dopant Profiles in Vaporâ€"Liquidâ€"Solid Nanowires by Suppressing the Reservoir Effect of the Liquid Catalyst. ACS Nano, 2014, 8, 11790-11798.	7.3	46
41	Designing Morphology in Epitaxial Silicon Nanowires: The Role of Gold, Surface Chemistry, and Phosphorus Doping. ACS Nano, 2017, 11, 4453-4462.	7.3	46
42	Effects of surface passivation on the exciton dynamics of CdSe nanocrystals as observed by ultrafast fluorescence upconversion spectroscopy. Journal of Chemical Physics, 2008, 128, 084713.	1.2	45
43	The Possibility and Implications of Dynamic Nanoparticle Surfaces. ACS Nano, 2013, 7, 8358-8365.	7.3	44
44	Effects of impurities on the optical properties of poly-3-hexylthiophene thin films. Thin Solid Films, 2002, 409, 198-205.	0.8	39
45	Pinned emission from ultrasmall cadmium selenide nanocrystals. Journal of Chemical Physics, 2008, 129, 121102.	1.2	38
46	Efficient Diffusive Transport of Hot and Cold Excitons in Colloidal Type II CdSe/CdTe Core/Crown Nanoplatelet Heterostructures. ACS Energy Letters, 2017, 2, 174-181.	8.8	37
47	Self-Catalyzed Vaporâ€"Liquidâ€"Solid Growth of Lead Halide Nanowires and Conversion to Hybrid Perovskites. Nano Letters, 2017, 17, 7561-7568.	4.5	37
48	Capillarity-Driven Welding of Semiconductor Nanowires for Crystalline and Electrically Ohmic Junctions. Nano Letters, 2016, 16, 5241-5246.	4.5	36
49	Remarkable optical and magnetic properties of ultra-thin europium oxysulfide nanorods. Journal of Materials Chemistry, 2012, 22, 16728.	6.7	33
50	Band Edge Dynamics in CdSe Nanocrystals Observed by Ultrafast Fluorescence Upconversion. Journal of Physical Chemistry C, 2008, 112, 436-442.	1.5	32
51	A stable dye-sensitized photoelectrosynthesis cell mediated by a NiO overlayer for water oxidation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 12564-12571.	3.3	32
52	Photophysics of Thermally-Assisted Photobleaching in â€œGiantâ€• Quantum Dots Revealed in Single Nanocrystals. ACS Nano, 2018, 12, 4206-4217.	7.3	31
53	Highly Efficient Plasmon Induced Hot-Electron Transfer at Ag/TiO₂ Interface. ACS Photonics, 2021, 8, 1497-1504.	3.2	30
54	Few-Layer Graphene as a Support Film for Transmission Electron Microscopy Imaging of Nanoparticles. ACS Applied Materials & Interfaces, 2009, 1, 2886-2892.	4.0	28

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55	Incorporation of fluorescent quantum dots for 3D printing and additive manufacturing applications. Journal of Materials Chemistry C, 2018, 6, 7584-7593.	2.7	28
56	Facile route to SnS nanocrystals and their characterization. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2010, 170, 117-122.	1.7	23
57	Ultrafast and Long-Lived Transient Heating of Surface Adsorbates on Plasmonic Semiconductor Nanocrystals. Nano Letters, 2021, 21, 453-461.	4.5	23
58	Bright Cool White Emission from Ultrasmall CdSe Quantum Dots. Chemistry of Materials, 2019, 31, 8558-8562.	3.2	22
59	Ratcheting quasi-ballistic electrons in silicon geometric diodes at room temperature. Science, 2020, 368, 177-180.	6.0	22
60	Interplay of structural and compositional effects on carrier recombination in mixed-halide perovskites. RSC Advances, 2016, 6, 86947-86954.	1.7	20
61	Role of shell composition and morphology in achieving single-emitter photostability for green-emitting â€œgiantâ€•quantum dots. Journal of Chemical Physics, 2020, 152, 124713.	1.2	20
62	Harvesting Sub-Bandgap IR Photons by Photothermionic Hot Electron Transfer in a Plasmonic pâ€“n Junction. Nano Letters, 2021, 21, 4036-4043.	4.5	20
63	Multifunctional nanobeacon for imaging Thomsenâ€Friedenreich antigenâ€associated colorectal cancer. International Journal of Cancer, 2013, 132, 2107-2117.	2.3	18
64	Lowâ€Threshold Lasing from Copperâ€Doped CdSe Colloidal Quantum Wells. Laser and Photonics Reviews, 2021, 15, 2100034.	4.4	18
65	Transformation of the Anion Sublattice in the Cation-Exchange Synthesis of Au2S from Cu2â€“xS Nanocrystals. Chemistry of Materials, 2018, 30, 8843-8851.	3.2	17
66	Synthesis of FeS₂â€“CoS₂ Coreâ€“Frame and Coreâ€“Shell Hybrid Nanocubes. Chemistry of Materials, 2018, 30, 8121-8125.	3.2	17
67	Ligand-mediated shape control in the solvothermal synthesis of titanium dioxide nanospheres, nanorods and nanowires. Nanoscale, 2011, 3, 3799.	2.8	16
68	Role of Surface Morphology on Exciton Recombination in Single Quantum Dot-in-Rods Revealed by Optical and Atomic Structure Correlation. ACS Nano, 2018, 12, 11434-11445.	7.3	16
69	Effect of indium alloying on the charge carrier dynamics of thick-shell InP/ZnSe quantum dots. Journal of Chemical Physics, 2020, 152, 161104.	1.2	16
70	Ligand-conjugated quantum dots for fast sub-diffraction protein tracking in acute brain slices. Biomaterials Science, 2020, 8, 837-845.	2.6	15
71	Tuning Composition of Polymer and Porous Silicon Composite Nanoparticles for Early Endosome Escape of Anti-microRNA Peptide Nucleic Acids. ACS Applied Materials & Interfaces, 2020, 12, 39602-39611.	4.0	15
72	Structureâ€“Function Correlation: Engineering High Quantum Yields in Down-Shifting Nanophosphors. Journal of the American Chemical Society, 2019, 141, 20416-20423.	6.6	14

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73	Examining the Effect of Dopant Ionic Radius on Plasmonic M:ZnO Nanocrystals (M = Al³⁺,) Tj ETQq1 1 0.784314 rgBT /Ove	1.5	14
74	Bidirectional Modulation of Contact Thermal Resistance between Boron Nitride Nanotubes from a Polymer Interlayer. Nano Letters, 2021, 21, 7317-7324.	4.5	14
75	PbS/PbSe structures with coreâ€“shell type morphology synthesized from PbS nanocrystals. Nanotechnology, 2007, 18, 495607.	1.3	13
76	Breaking Latvaâ€™s Rule by Energy Hopping in a Tb(III):ZnAl₂O₄ Nanospinel. Journal of Physical Chemistry C, 2019, 123, 31175-31182.	1.5	13
77	Surface-plasmon mediated photoluminescence from Ag-coated ZnO/MgO coreâ€“shell nanowires. Thin Solid Films, 2014, 553, 132-137.	0.8	11
78	Electrocatalytic Activity and Stability Enhancement through Preferential Deposition of Phosphide on Carbide. ChemCatChem, 2017, 9, 1054-1061.	1.8	11
79	Material characterization of a nanocrystal based photovoltaic device. European Physical Journal D, 2001, 16, 275-277.	0.6	10
80	Synthesis and characterization of porous TiO2 with wormhole-like framework structure. Journal of Porous Materials, 2008, 15, 21-27.	1.3	10
81	Nondestructive Evaluation and Detection of Defects in 3D Printed Materials Using the Optical Properties of Gold Nanoparticles. ACS Applied Nano Materials, 2018, 1, 1377-1384.	2.4	10
82	Real colloidal quantum dot structures revealed by high resolution analytical electron microscopy. Journal of Chemical Physics, 2019, 151, 160903.	1.2	8
83	Barrierless Switching between a Liquid and Superheated Solid Catalyst during Nanowire Growth. Journal of Physical Chemistry Letters, 2016, 7, 4236-4242.	2.1	7
84	Ferroelectric Particles Generated through a Simple, Room-Temperature Treatment of CdSe Quantum Dots. Chemistry of Materials, 2015, 27, 3817-3820.	3.2	5
85	Effect of Material Structure on Photoluminescence of ZnO/MgO Coreâ€Shell Nanowires. ChemNanoMat, 2018, 4, 291-300.	1.5	5
86	Ultrafast spectroscopy studies of carrier dynamics in semiconductor nanocrystals. IScience, 2022, 25, 103831.	1.9	5
87	Putting the squeeze on nanocrystals. Nature Nanotechnology, 2009, 4, 16-17.	15.6	3
88	Luminescent Quantum Dots. ECS Transactions, 2010, 33, 3-16.	0.3	3
89	Visualization of Current and Mapping of Elements in Quantum Dot Solar Cells. Advanced Functional Materials, 2016, 26, 895-902.	7.8	3
90	Modulating Ferroelectric Response in Colloidal Semiconductor Nanocrystals through Cation Exchange. Chemistry of Materials, 2019, 31, 4275-4281.	3.2	3

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91	Spherical Aberration Corrected Z-STEM Characterization of CdSe and CdSe/ZnS Nanocrystals. Materials Research Society Symposia Proceedings, 2004, 818, 342.	0.1	1
92	White-Light Emission from Magic-Sized Cadmium Selenide Nanocrystals.. ChemInform, 2006, 37, no.	0.1	1
93	Fluorescent Colloidal Ferroelectric Nanocrystals. Journal of the American Chemical Society, 2022, 144, 1509-1512.	6.6	1
94	Has the Sun Set on Quantum Dot-Sensitized Solar Cells?. Nanomaterials and Nanotechnology, 2015, 5, 16.	1.2	0
95	Aberration-Corrected Z-Contrast STEM. , 2008, , 1-21.		0