Todd D Krauss

List of Publications by Year
in descending order

80	7,440	87843 38	66879 78
papers	citations	h-index	g-index

83	83	83	9743
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Robust Photogeneration of H ₂ in Water Using Semiconductor Nanocrystals and a Nickel Catalyst. Science, 2012, 338, 1321-1324.	6.0	716
2	Non-blinking semiconductor nanocrystals. Nature, 2009, 459, 686-689.	13.7	570
3	Optical Properties of Colloidal PbSe Nanocrystals. Nano Letters, 2002, 2, 1321-1324.	4.5	443
4	Simultaneous Fluorescence and Raman Scattering from Single Carbon Nanotubes. Science, 2003, 301, 1354-1356.	6.0	391
5	Attachment of Single CdSe Nanocrystals to Individual Single-Walled Carbon Nanotubes. Nano Letters, 2002, 2, 1253-1258.	4.5	295
6	Femtosecond measurement of nonlinear absorption and refraction in CdS, ZnSe, and ZnS. Applied Physics Letters, 1994, 65, 1739-1741.	1.5	239
7	Fluorescence Spectroscopy of Single Lead Sulfide Quantum Dots. Nano Letters, 2006, 6, 510-514.	4.5	231
8	Hybridization-Based Unquenching of DNA Hairpins on Au Surfaces:Â Prototypical â€œMolecular Beaconâ€• Biosensors. Journal of the American Chemical Society, 2003, 125, 4012-4013.	6.6	229
9	Detection of Single Bacterial Pathogens with Semiconductor Quantum Dots. Analytical Chemistry, 2005, 77, 4861-4869.	3.2	227
10	Comparison of the Quality of Aqueous Dispersions of Single Wall Carbon Nanotubes Using Surfactants and Biomolecules. Langmuir, 2008, 24, 5070-5078.	1.6	225
11	The structural basis for giant enhancement enabling single-molecule Raman scattering. Proceedings of the National Academy of Sciences of the United States of America, 2003, 100, 8638-8643.	3.3	209
12	Sensitivity and Specificity of Metal Surface-Immobilized â€œMolecular Beaconâ€•Biosensors. Journal of the American Chemical Society, 2005, 127, 7932-7940.	6.6	208
13	Colloidal Semiconductor Quantum Dots with Tunable Surface Composition. Nano Letters, 2012, 12, 4465-4471.	4.5	201
14	Synthesis, Self-Assembly, and Nonlinear Optical Properties of Conjugated Helical Metal Phthalocyanine Derivatives. Journal of the American Chemical Society, 1999, 121, 3453-3459.	6.6	196
15	General and Efficient Câ€“C Bond Forming Photoredox Catalysis with Semiconductor Quantum Dots. Journal of the American Chemical Society, 2017, 139, 4250-4253.	6.6	194
16	Mysteries of TOPSe Revealed: Insights into Quantum Dot Nucleation. Journal of the American Chemical Society, 2010, 132, 10973-10975.	6.6	192
17	Photocatalytic Hydrogen Generation by CdSe/CdS Nanoparticles. Nano Letters, 2016, 16, 5347-5352.	4.5	162
18	Ultrabright PbSe Magic-sized Clusters. Nano Letters, 2008, 8, 2896-2899.	4.5	154

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19	Multiple Exciton Generation in Single-Walled Carbon Nanotubes. Nano Letters, 2010, 10, 2381-2386.	4.5	142
20	Bright Fluorescence from Individual Single-Walled Carbon Nanotubes. Nano Letters, 2011, 11, 1636-1640.	4.5	121
21	Fluorescence Efficiency of Individual Carbon Nanotubes. Nano Letters, 2007, 7, 3698-3703.	4.5	116
22	Flow Cytometric Analysis To Detect Pathogens in Bacterial Cell Mixtures Using Semiconductor Quantum Dots. Analytical Chemistry, 2008, 80, 864-872.	3.2	108
23	Photophysics of Individual Single-Walled Carbon Nanotubes. Accounts of Chemical Research, 2008, 41, 235-243.	7.6	108
24	Chemical Mechanisms of Semiconductor Nanocrystal Synthesis. Chemistry of Materials, 2013, 25, 1351-1362.	3.2	108
25	Label-Free DNA Detection on Nanostructured Ag Surfaces. ACS Nano, 2009, 3, 2265-2273.	7.3	98
26	Photobrightening and photodarkening in PbS quantum dots. Physical Chemistry Chemical Physics, 2006, 8, 3851.	1.3	96
27	Polariton-Mediated Electron Transfer via Cavity Quantum Electrodynamics. Journal of Physical Chemistry B, 2020, 124, 6321-6340.	1.2	90
28	Coming attractions for semiconductor quantum dots. Materials Today, 2011, 14, 382-387.	8.3	86
29	Single Carbon Nanotube Optical Spectroscopy. ChemPhysChem, 2005, 6, 577-582.	1.0	82
30	Shell Distribution on Colloidal CdSe/ZnS Quantum Dots. Nano Letters, 2005, 5, 565-570.	4.5	80
31	Photoluminescence enhancement of colloidal quantum dots embedded in a monolithic microcavity. Applied Physics Letters, 2003, 82, 4032-4034.	1.5	65
32	Bright Future for Fluorescence Blinking in Semiconductor Nanocrystals. Journal of Physical Chemistry Letters, 2010, 1, 1377-1382.	2.1	64
33	Polarization Surface-Charge Density of Single Semiconductor Quantum Rods. Physical Review Letters, 2004, 92, 216803.	2.9	54
34	Distance-dependent energy transfer between CdSe/CdS quantum dots and a two-dimensional semiconductor. Applied Physics Letters, 2016, 108, .	1.5	54
35	Semiconductor quantum dot-sensitized rainbow photocathode for effective photoelectrochemical hydrogen generation. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 11297-11302.	3.3	53
36	Uncovering Forbidden Optical Transitions in PbSe Nanocrystals. Nano Letters, 2007, 7, 3827-3831.	4.5	51

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37	Fluorescent Quantum Dotâ^'Polymer Nanocomposite Particles by Emulsification/Solvent Evaporation. Chemistry of Materials, 2007, 19, 2930-2936.	3.2	47
38	Photophysical Properties of CdSe/CdS core/shell quantum dots with tunable surface composition. Chemical Physics, 2016, 471, 24-31.	0.9	40
39	Zinc porphyrin: A fluorescent acceptor in studies of Zn-cytochromecunfolding by fluorescence resonance energy transfer. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 10779-10784.	3.3	37
40	CdS Quantum Dots as Potent Photoreductants for Organic Chemistry Enabled by Auger Processes. Journal of the American Chemical Society, 2022, 144, 12229-12246.	6.6	35
41	Aqueous Photogeneration of H₂ with CdSe Nanocrystals and Nickel Catalysts: Electron Transfer Dynamics. Journal of Physical Chemistry B, 2015, 119, 7349-7357.	1.2	33
42	Semiconductor nanocrystal photocatalysis for the production of solar fuels. Journal of Chemical Physics, 2021, 154, 030901.	1.2	32
43	Organic photonic bandgap microcavities doped with semiconductor nanocrystals for room-temperature on-demand single-photon sources. Journal of Modern Optics, 2009, 56, 167-174.	0.6	28
44	Zinc Porphyrin as a Donor for FRET in Zn(II)cytochrome c. Journal of the American Chemical Society, 2010, 132, 1752-1753.	6.6	28
45	Electron Conductive and Proton Permeable Vertically Aligned Carbon Nanotube Membranes. Nano Letters, 2014, 14, 1728-1733.	4.5	28
46	Towards single-spot multianalyte molecular beacon biosensors. Talanta, 2005, 67, 479-485.	2.9	27
47	Uncovering Hot Hole Dynamics in CdSe Nanocrystals. Journal of Physical Chemistry Letters, 2014, 5, 3032-3036.	2.1	27
48	Preparation and use of metal surface-immobilized DNA hairpins for the detection of oligonucleotides. Nature Protocols, 2007, 2, 2105-2110.	5.5	26
49	Uncovering active precursors in colloidal quantum dot synthesis. Nature Communications, 2017, 8, 2082.	5.8	26
50	Measurements of the tensor properties of third-order nonlinearities in wide-gap semiconductors. Optics Letters, 1995, 20, 1110.	1.7	23
51	Effect of oxidation on charge localization and transport in a single layer of silicon nanocrystals. Journal of Applied Physics, 2004, 96, 654-660.	1.1	23
52	Spectroscopic Investigation of Electrochemically Charged Individual (6,5) Single-Walled Carbon Nanotubes. Nano Letters, 2014, 14, 3138-3144.	4.5	23
53	Nanotubes light up cells. Nature Nanotechnology, 2009, 4, 85-86.	15.6	22
54	Enhancing the activity of photocatalytic hydrogen evolution from CdSe quantum dots with a polyoxovanadate cluster. Chemical Communications, 2020, 56, 8762-8765.	2.2	21

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55	Small-Angle Rotation in Individual Colloidal CdSe Quantum Rods. ACS Nano, 2008, 2, 1179-1188.	7.3	19
56	Aging Induced Ag Nanoparticle Rearrangement under Ambient Atmosphere and Consequences for Nanoparticle-Enhanced DNA Biosensing. Analytical Chemistry, 2010, 82, 8664-8670.	3.2	18
57	Molecular Polaritons Generated from Strong Coupling between CdSe Nanoplatelets and a Dielectric Optical Cavity. Journal of Physical Chemistry Letters, 2021, 12, 5030-5038.	2.1	18
58	Defects Enable Dark Exciton Photoluminescence in Single-Walled Carbon Nanotubes. Journal of Physical Chemistry C, 2018, 122, 3599-3607.	1.5	15
59	Selective Suspension of Single-Walled Carbon Nanotubes Using Î²-Sheet Polypeptides. Journal of Physical Chemistry C, 2014, 118, 5935-5944.	1.5	14
60	Size dependence of photocatalytic hydrogen generation for CdTe quantum dots. Journal of Chemical Physics, 2019, 151, 174707.	1.2	14
61	The influence of continuous vs. pulsed laser excitation on single quantum dot photophysics. Physical Chemistry Chemical Physics, 2014, 16, 25723-25728.	1.3	13
62	Largeâ€Scale Programmable Synthesis of PbS Quantum Dots. ChemPhysChem, 2016, 17, 681-686.	1.0	12
63	Light-driven hydrogen production with CdSe quantum dots and a cobalt glutathione catalyst. Chemical Communications, 2021, 57, 2053-2056.	2.2	12
64	Quantum Dots for Improved Single-Molecule Localization Microscopy. Journal of Physical Chemistry B, 2021, 125, 2566-2576.	1.2	12
65	Fabrication of Tapered Microtube Arrays and Their Application as a Microalgal Injection Platform. ACS Applied Materials & Interfaces, 2016, 8, 34198-34208.	4.0	11
66	Identification of high-stringency DNA hairpin probes by partial gene folding. Biosensors and Bioelectronics, 2007, 23, 233-240.	5.3	10
67	Photoluminescence Brightening of Isolated Single-Walled Carbon Nanotubes. Journal of Physical Chemistry Letters, 2017, 8, 4954-4959.	2.1	10
68	Recovery of Active and Efficient Photocatalytic H₂ Production for CdSe Quantum Dots. Journal of Physical Chemistry C, 2018, 122, 14099-14106.	1.5	10
69	Multilayer film preparation of poly(4-vinylphenol) from aqueous media. Surface and Coatings Technology, 2008, 202, 6109-6112.	2.2	9
70	Bright Fraction of Single-Walled Carbon Nanotubes through Correlated Fluorescence and Topography Measurements. Journal of Physical Chemistry Letters, 2015, 6, 2816-2821.	2.1	9
71	Size-Programmed Synthesis of PbSe Quantum Dots via Secondary Phosphine Chalcogenides. Chemistry of Materials, 2019, 31, 8301-8307.	3.2	9
72	Less excitement for more gain. Nature, 2007, 447, 385-386.	13.7	7

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73	Spatially resolved photoluminescence brightening in individual single-walled carbon nanotubes. Journal of Applied Physics, 2021, 129, 014305.	1.1	7
74	Photoinduced charge separation in single-walled carbon nanotube/protein integrated systems. Nanoscale Horizons, 2017, 2, 163-166.	4.1	6
75	Carbon Nanotube-Based Membrane for Light-Driven, Simultaneous Proton and Electron Transport. ACS Energy Letters, 2017, 2, 129-133.	8.8	6
76	Single-Walled Carbon Nanotube Dark Exciton Photoluminescence Dynamics. Journal of Physical Chemistry C, 2021, 125, 25022-25029.	1.5	6
77	Explaining the Unusual Photoluminescence of Semiconductor Nanocrystals Doped via Cation Exchange. Nano Letters, 2019, 19, 4797-4803.	4.5	5
78	Synthetic Mechanisms in the Formation of SnTe Nanocrystals. Journal of the American Chemical Society, 2022, 144, 6251-6260.	6.6	4
79	(Invited) Photoluminescnece Brightening in Single Walled Carbon Nanotubes. ECS Meeting Abstracts, 2017, , .	0.0	0
80	(Invited) Colloidal Semiconductor Nanocrystal Photocatalysts: Teaching an Old Dot New Tricks. ECS Meeting Abstracts, 2019, , .	0.0	0