

# Todd D Krauss

## List of Publications by Citations

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73  
papers

6,468  
citations

37  
h-index

80  
g-index

83  
ext. papers

6,982  
ext. citations

10.9  
avg, IF

5.81  
L-index

#	Paper	IF	Citations
73	Robust photogeneration of H <sub>2</sub> in water using semiconductor nanocrystals and a nickel catalyst. <i>Science</i> , <b>2012</b> , 338, 1321-4	33.3	644
72	Non-blinking semiconductor nanocrystals. <i>Nature</i> , <b>2009</b> , 459, 686-9	50.4	533
71	Optical Properties of Colloidal PbSe Nanocrystals. <i>Nano Letters</i> , <b>2002</b> , 2, 1321-1324	11.5	416
70	Simultaneous fluorescence and Raman scattering from single carbon nanotubes. <i>Science</i> , <b>2003</b> , 301, 1354-6	33.3	357
69	Attachment of Single CdSe Nanocrystals to Individual Single-Walled Carbon Nanotubes. <i>Nano Letters</i> , <b>2002</b> , 2, 1253-1258	11.5	278
68	Hybridization-based unquenching of DNA hairpins on au surfaces: prototypical "molecular beacon" biosensors. <i>Journal of the American Chemical Society</i> , <b>2003</b> , 125, 4012-3	16.4	211
67	Comparison of the quality of aqueous dispersions of single wall carbon nanotubes using surfactants and biomolecules. <i>Langmuir</i> , <b>2008</b> , 24, 5070-8	4	206
66	Fluorescence spectroscopy of single lead sulfide quantum dots. <i>Nano Letters</i> , <b>2006</b> , 6, 510-4	11.5	205
65	Femtosecond measurement of nonlinear absorption and refraction in CdS, ZnSe, and ZnS. <i>Applied Physics Letters</i> , <b>1994</b> , 65, 1739-1741	3.4	202
64	Detection of single bacterial pathogens with semiconductor quantum dots. <i>Analytical Chemistry</i> , <b>2005</b> , 77, 4861-9	7.8	197
63	Sensitivity and specificity of metal surface-immobilized "molecular beacon" biosensors. <i>Journal of the American Chemical Society</i> , <b>2005</b> , 127, 7932-40	16.4	189
62	The structural basis for giant enhancement enabling single-molecule Raman scattering. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2003</b> , 100, 8638-43	11.5	188
61	Synthesis, Self-Assembly, and Nonlinear Optical Properties of Conjugated Helical Metal Phthalocyanine Derivatives. <i>Journal of the American Chemical Society</i> , <b>1999</b> , 121, 3453-3459	16.4	178
60	Mysteries of TOPSe revealed: insights into quantum dot nucleation. <i>Journal of the American Chemical Society</i> , <b>2010</b> , 132, 10973-5	16.4	168
59	Colloidal semiconductor quantum dots with tunable surface composition. <i>Nano Letters</i> , <b>2012</b> , 12, 4465-71	11.5	165
58	Ultrabright PbSe magic-sized clusters. <i>Nano Letters</i> , <b>2008</b> , 8, 2896-9	11.5	142
57	General and Efficient C-C Bond Forming Photoredox Catalysis with Semiconductor Quantum Dots. <i>Journal of the American Chemical Society</i> , <b>2017</b> , 139, 4250-4253	16.4	136

56	Multiple exciton generation in single-walled carbon nanotubes. <i>Nano Letters</i> , <b>2010</b> , 10, 2381-6	11.5	131
55	Photocatalytic Hydrogen Generation by CdSe/CdS Nanoparticles. <i>Nano Letters</i> , <b>2016</b> , 16, 5347-52	11.5	117
54	Fluorescence efficiency of individual carbon nanotubes. <i>Nano Letters</i> , <b>2007</b> , 7, 3698-703	11.5	111
53	Bright fluorescence from individual single-walled carbon nanotubes. <i>Nano Letters</i> , <b>2011</b> , 11, 1636-40	11.5	107
52	Label-free DNA detection on nanostructured Ag surfaces. <i>ACS Nano</i> , <b>2009</b> , 3, 2265-73	16.7	93
51	Photophysics of individual single-walled carbon nanotubes. <i>Accounts of Chemical Research</i> , <b>2008</b> , 41, 235-43	24.3	92
50	Flow cytometric analysis to detect pathogens in bacterial cell mixtures using semiconductor quantum dots. <i>Analytical Chemistry</i> , <b>2008</b> , 80, 864-72	7.8	91
49	Chemical Mechanisms of Semiconductor Nanocrystal Synthesis. <i>Chemistry of Materials</i> , <b>2013</b> , 25, 1351-1362	13.6	87
48	Photobrightening and photodarkening in PbS quantum dots. <i>Physical Chemistry Chemical Physics</i> , <b>2006</b> , 8, 3851-6	3.6	86
47	Coming attractions for semiconductor quantum dots. <i>Materials Today</i> , <b>2011</b> , 14, 382-387	21.8	78
46	Single carbon nanotube optical spectroscopy. <i>ChemPhysChem</i> , <b>2005</b> , 6, 577-82	3.2	78
45	Shell distribution on colloidal CdSe/ZnS quantum dots. <i>Nano Letters</i> , <b>2005</b> , 5, 565-70	11.5	74
44	Bright Future for Fluorescence Blinking in Semiconductor Nanocrystals. <i>Journal of Physical Chemistry Letters</i> , <b>2010</b> , 1, 1377-1382	6.4	57
43	Photoluminescence enhancement of colloidal quantum dots embedded in a monolithic microcavity. <i>Applied Physics Letters</i> , <b>2003</b> , 82, 4032-4034	3.4	55
42	Polarization surface-charge density of single semiconductor quantum rods. <i>Physical Review Letters</i> , <b>2004</b> , 92, 216803	7.4	52
41	Polariton-Mediated Electron Transfer via Cavity Quantum Electrodynamics. <i>Journal of Physical Chemistry B</i> , <b>2020</b> , 124, 6321-6340	3.4	44
40	Fluorescent Quantum Dot-Polymer Nanocomposite Particles by Emulsification/Solvent Evaporation. <i>Chemistry of Materials</i> , <b>2007</b> , 19, 2930-2936	9.6	43
39	Distance-dependent energy transfer between CdSe/CdS quantum dots and a two-dimensional semiconductor. <i>Applied Physics Letters</i> , <b>2016</b> , 108, 021101	3.4	42

38	Uncovering forbidden optical transitions in PbSe nanocrystals. <i>Nano Letters</i> , <b>2007</b> , 7, 3827-31	11.5	41
37	Semiconductor quantum dot-sensitized rainbow photocathode for effective photoelectrochemical hydrogen generation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2017</b> , 114, 11297-11302	11.5	40
36	Zinc porphyrin: a fluorescent acceptor in studies of Zn-cytochrome c unfolding by fluorescence resonance energy transfer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2008</b> , 105, 10779-84	11.5	33
35	Photophysical Properties of CdSe/CdS core/shell quantum dots with tunable surface composition. <i>Chemical Physics</i> , <b>2016</b> , 471, 24-31	2.3	29
34	Zinc porphyrin as a donor for FRET in Zn(II)cytochrome c. <i>Journal of the American Chemical Society</i> , <b>2010</b> , 132, 1752-3	16.4	27
33	Aqueous Photogeneration of H <sub>2</sub> with CdSe Nanocrystals and Nickel Catalysts: Electron Transfer Dynamics. <i>Journal of Physical Chemistry B</i> , <b>2015</b> , 119, 7349-57	3.4	26
32	Electron conductive and proton permeable vertically aligned carbon nanotube membranes. <i>Nano Letters</i> , <b>2014</b> , 14, 1728-33	11.5	25
31	Uncovering Hot Hole Dynamics in CdSe Nanocrystals. <i>Journal of Physical Chemistry Letters</i> , <b>2014</b> , 5, 3032-64		24
30	Preparation and use of metal surface-immobilized DNA hairpins for the detection of oligonucleotides. <i>Nature Protocols</i> , <b>2007</b> , 2, 2105-10	18.8	24
29	Towards single-spot multianalyte molecular beacon biosensors. <i>Talanta</i> , <b>2005</b> , 67, 479-85	6.2	23
28	Spectroscopic investigation of electrochemically charged individual (6,5) single-walled carbon nanotubes. <i>Nano Letters</i> , <b>2014</b> , 14, 3138-44	11.5	22
27	Organic photonic bandgap microcavities doped with semiconductor nanocrystals for room-temperature on-demand single-photon sources. <i>Journal of Modern Optics</i> , <b>2009</b> , 56, 167-174	1.1	21
26	Effect of oxidation on charge localization and transport in a single layer of silicon nanocrystals. <i>Journal of Applied Physics</i> , <b>2004</b> , 96, 654-660	2.5	21
25	Measurements of the tensor properties of third-order nonlinearities in wide-gap semiconductors. <i>Optics Letters</i> , <b>1995</b> , 20, 1110-2	3	20
24	Uncovering active precursors in colloidal quantum dot synthesis. <i>Nature Communications</i> , <b>2017</b> , 8, 2082	17.4	19
23	Small-angle rotation in individual colloidal CdSe quantum rods. <i>ACS Nano</i> , <b>2008</b> , 2, 1179-88	16.7	19
22	Aging induced Ag nanoparticle rearrangement under ambient atmosphere and consequences for nanoparticle-enhanced DNA biosensing. <i>Analytical Chemistry</i> , <b>2010</b> , 82, 8664-70	7.8	15
21	Enhancing the activity of photocatalytic hydrogen evolution from CdSe quantum dots with a polyoxovanadate cluster. <i>Chemical Communications</i> , <b>2020</b> , 56, 8762-8765	5.8	14

20	Selective Suspension of Single-Walled Carbon Nanotubes Using Sheet Polypeptides. <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 5935-5944	3.8	13
19	Semiconductor nanocrystal photocatalysis for the production of solar fuels. <i>Journal of Chemical Physics</i> , <b>2021</b> , 154, 030901	3.9	12
18	Fabrication of Tapered Microtube Arrays and Their Application as a Microalgal Injection Platform. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2016</b> , 8, 34198-34208	9.5	10
17	Bright Fraction of Single-Walled Carbon Nanotubes through Correlated Fluorescence and Topography Measurements. <i>Journal of Physical Chemistry Letters</i> , <b>2015</b> , 6, 2816-21	6.4	9
16	Defects Enable Dark Exciton Photoluminescence in Single-Walled Carbon Nanotubes. <i>Journal of Physical Chemistry C</i> , <b>2018</b> , 122, 3599-3607	3.8	9
15	The influence of continuous vs. pulsed laser excitation on single quantum dot photophysics. <i>Physical Chemistry Chemical Physics</i> , <b>2014</b> , 16, 25723-8	3.6	9
14	Identification of high-stringency DNA hairpin probes by partial gene folding. <i>Biosensors and Bioelectronics</i> , <b>2007</b> , 23, 233-40	11.8	9
13	Multilayer film preparation of poly(4-vinylphenol) from aqueous media. <i>Surface and Coatings Technology</i> , <b>2008</b> , 202, 6109-6112	4.4	9
12	Size dependence of photocatalytic hydrogen generation for CdTe quantum dots. <i>Journal of Chemical Physics</i> , <b>2019</b> , 151, 174707	3.9	8
11	Photoluminescence Brightening of Isolated Single-Walled Carbon Nanotubes. <i>Journal of Physical Chemistry Letters</i> , <b>2017</b> , 8, 4954-4959	6.4	7
10	Large-Scale Programmable Synthesis of PbS Quantum Dots. <i>ChemPhysChem</i> , <b>2016</b> , 17, 681-6	3.2	7
9	Carbon Nanotube-Based Membrane for Light-Driven, Simultaneous Proton and Electron Transport. <i>ACS Energy Letters</i> , <b>2017</b> , 2, 129-133	20.1	6
8	Recovery of Active and Efficient Photocatalytic H <sub>2</sub> Production for CdSe Quantum Dots. <i>Journal of Physical Chemistry C</i> , <b>2018</b> , 122, 14099-14106	3.8	6
7	Molecular Polaritons Generated from Strong Coupling between CdSe Nanoplatelets and a Dielectric Optical Cavity. <i>Journal of Physical Chemistry Letters</i> , <b>2021</b> , 12, 5030-5038	6.4	6
6	Size-Programmed Synthesis of PbSe Quantum Dots via Secondary Phosphine Chalcogenides. <i>Chemistry of Materials</i> , <b>2019</b> , 31, 8301-8307	9.6	4
5	Quantum Dots for Improved Single-Molecule Localization Microscopy. <i>Journal of Physical Chemistry B</i> , <b>2021</b> , 125, 2566-2576	3.4	4
4	Spatially resolved photoluminescence brightening in individual single-walled carbon nanotubes. <i>Journal of Applied Physics</i> , <b>2021</b> , 129, 014305	2.5	4
3	Light-driven hydrogen production with CdSe quantum dots and a cobalt glutathione catalyst. <i>Chemical Communications</i> , <b>2021</b> , 57, 2053-2056	5.8	3

- 2 Photoinduced charge separation in single-walled carbon nanotube/protein integrated systems. *Nanoscale Horizons*, **2017**, 2, 163-166 10.8 2
- 1 Explaining the Unusual Photoluminescence of Semiconductor Nanocrystals Doped via Cation Exchange. *Nano Letters*, **2019**, 19, 4797-4803 11.5 2