

# Jonathan S Owen

## List of Publications by Citations

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64  
papers

6,583  
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38  
h-index

74  
g-index

74  
ext. papers

7,439  
ext. citations

11.5  
avg, IF

6.29  
L-index

#	Paper	IF	Citations
64	Trap states in lead iodide perovskites. <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 2089-96	16.4	672
63	Ligand exchange and the stoichiometry of metal chalcogenide nanocrystals: spectroscopic observation of facile metal-carboxylate displacement and binding. <i>Journal of the American Chemical Society</i> , <b>2013</b> , 135, 18536-48	16.4	591
62	Local Polar Fluctuations in Lead Halide Perovskite Crystals. <i>Physical Review Letters</i> , <b>2017</b> , 118, 136001	7.4	374
61	Mechanistic study of precursor evolution in colloidal group II-VI semiconductor nanocrystal synthesis. <i>Journal of the American Chemical Society</i> , <b>2007</b> , 129, 305-12	16.4	346
60	Reaction chemistry and ligand exchange at cadmium-selenide nanocrystal surfaces. <i>Journal of the American Chemical Society</i> , <b>2008</b> , 130, 12279-81	16.4	316
59	NANOMATERIALS. A tunable library of substituted thiourea precursors to metal sulfide nanocrystals. <i>Science</i> , <b>2015</b> , 348, 1226-30	33.3	260
58	Structure of methylammonium lead iodide within mesoporous titanium dioxide: active material in high-performance perovskite solar cells. <i>Nano Letters</i> , <b>2014</b> , 14, 127-33	11.5	258
57	Nanocrystal structure. The coordination chemistry of nanocrystal surfaces. <i>Science</i> , <b>2015</b> , 347, 615-6	33.3	252
56	Infrared Spectroscopic Study of Vibrational Modes in Methylammonium Lead Halide Perovskites. <i>Journal of Physical Chemistry Letters</i> , <b>2015</b> , 6, 2913-8	6.4	231
55	Chemical Synthesis and Luminescence Applications of Colloidal Semiconductor Quantum Dots. <i>Journal of the American Chemical Society</i> , <b>2017</b> , 139, 10939-10943	16.4	218
54	Excitons in ultrathin organic-inorganic perovskite crystals. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	206
53	Precursor conversion kinetics and the nucleation of cadmium selenide nanocrystals. <i>Journal of the American Chemical Society</i> , <b>2010</b> , 132, 18206-13	16.4	194
52	Direct Observation of Dynamic Symmetry Breaking above Room Temperature in Methylammonium Lead Iodide Perovskite. <i>ACS Energy Letters</i> , <b>2016</b> , 1, 880-887	20.1	177
51	Reproducible, high-throughput synthesis of colloidal nanocrystals for optimization in multidimensional parameter space. <i>Nano Letters</i> , <b>2010</b> , 10, 1874-85	11.5	162
50	On the Origin of Surface Traps in Colloidal II-VI Semiconductor Nanocrystals. <i>Chemistry of Materials</i> , <b>2017</b> , 29, 752-761	9.6	160
49	Conversion Reactions of Cadmium Chalcogenide Nanocrystal Precursors. <i>Chemistry of Materials</i> , <b>2013</b> , 25, 1233-1249	9.6	146
48	Atomic structures and gram scale synthesis of three tetrahedral quantum dots. <i>Journal of the American Chemical Society</i> , <b>2014</b> , 136, 10645-53	16.4	139

47	CdSe Clusters: At the Interface of Small Molecules and Quantum Dots. <i>Chemistry of Materials</i> , <b>2011</b> , 23, 3114-3119	9.6	137
46	Soluble, Chloride-Terminated CdSe Nanocrystals: Ligand Exchange Monitored by <sup>1</sup> H and <sup>31</sup> P NMR Spectroscopy. <i>Chemistry of Materials</i> , <b>2013</b> , 25, 69-76	9.6	135
45	Pyridinium-derived N-heterocyclic carbene complexes of platinum: synthesis, structure and ligand substitution kinetics. <i>Journal of the American Chemical Society</i> , <b>2004</b> , 126, 8247-55	16.4	109
44	Kinetics and mechanism of methane, methanol, and dimethyl ether C-H activation with electrophilic platinum complexes. <i>Journal of the American Chemical Society</i> , <b>2006</b> , 128, 2005-16	16.4	93
43	Focusing nanocrystal size distributions via production control. <i>Nano Letters</i> , <b>2011</b> , 11, 1976-80	11.5	83
42	Unbalanced Hole and Electron Diffusion in Lead Bromide Perovskites. <i>Nano Letters</i> , <b>2017</b> , 17, 1727-1732	11.5	75
41	Targeted intracellular voltage recordings from dendritic spines using quantum-dot-coated nanopipettes. <i>Nature Nanotechnology</i> , <b>2017</b> , 12, 335-342	28.7	75
40	Probing Solvent-Ligand Interactions in Colloidal Nanocrystals by the NMR Line Broadening. <i>Chemistry of Materials</i> , <b>2018</b> , 30, 5485-5492	9.6	72
39	Limits of Carrier Diffusion in n-Type and p-Type CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Perovskite Single Crystals. <i>Journal of Physical Chemistry Letters</i> , <b>2016</b> , 7, 3510-8	6.4	69
38	A Library of Selenourea Precursors to PbSe Nanocrystals with Size Distributions near the Homogeneous Limit. <i>Journal of the American Chemical Society</i> , <b>2017</b> , 139, 2296-2305	16.4	68
37	Dynamic emission Stokes shift and liquid-like dielectric solvation of band edge carriers in lead-halide perovskites. <i>Nature Communications</i> , <b>2019</b> , 10, 1175	17.4	68
36	Interplay between organic cations and inorganic framework and incommensurability in hybrid lead-halide perovskite CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> . <i>Physical Review Materials</i> , <b>2017</b> , 1,	3.2	67
35	Tight Binding of Carboxylate, Phosphonate, and Carbamate Anions to Stoichiometric CdSe Nanocrystals. <i>Journal of the American Chemical Society</i> , <b>2017</b> , 139, 3227-3236	16.4	59
34	Tuning the Surface Structure and Optical Properties of CdSe Clusters Using Coordination Chemistry. <i>Journal of Physical Chemistry Letters</i> , <b>2011</b> , 2, 3075-3080	6.4	56
33	Modulation of nitrogen vacancy charge state and fluorescence in nanodiamonds using electrochemical potential. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2016</b> , 113, 3938-43	11.5	50
32	A hot electron-hole pair breaks the symmetry of a semiconductor quantum dot. <i>Nano Letters</i> , <b>2013</b> , 13, 6091-7	11.5	47
31	Effect of Surface Stoichiometry on Blinking and Hole Trapping Dynamics in CdSe Nanocrystals. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 27797-27803	3.8	47
30	Surface Structure of Aerobically Oxidized Diamond Nanocrystals. <i>Journal of Physical Chemistry C</i> , <b>2014</b> , 118, 26695-26702	3.8	44

29	Nucleation and Growth Kinetics from LaMer Burst Data. <i>Journal of Physical Chemistry A</i> , <b>2017</b> , 121, 7511-7517	16.7	42
28	The importance of nanocrystal precursor conversion kinetics: mechanism of the reaction between cadmium carboxylate and cadmium bis(diphenyldithiophosphate). <i>ACS Nano</i> , <b>2012</b> , 6, 10054-62	16.7	41
27	Electrical transport and grain growth in solution-cast, chloride-terminated cadmium selenide nanocrystal thin films. <i>ACS Nano</i> , <b>2014</b> , 8, 7513-21	16.7	38
26	Flexible Nanopipettes for Minimally Invasive Intracellular Electrophysiology In Vivo. <i>Cell Reports</i> , <b>2019</b> , 26, 266-278.e5	10.6	37
25	Anthracene Diphosphate Ligands for CdSe Quantum Dots; Molecular Design for Efficient Upconversion. <i>Chemistry of Materials</i> , <b>2020</b> , 32, 1461-1466	9.6	34
24	Pyridinium-derived N-heterocyclic carbene ligands: syntheses, structures and reactivity of N-(2-pyridyl)pyridin-2-ylidene complexes of nickel(II), palladium(II) and platinum(II). <i>Polyhedron</i> , <b>2004</b> , 23, 2797-2804	2.7	34
23	Stabilization of Colloidal Ti, Zr, and Hf Oxide Nanocrystals by Protonated Tri-n-octylphosphine Oxide (TOPO) and Its Decomposition Products. <i>Chemistry of Materials</i> , <b>2017</b> , 29, 10233-10242	9.6	30
22	Transition from Molecular Vibrations to Phonons in Atomically Precise Cadmium Selenide Quantum Dots. <i>Journal of the American Chemical Society</i> , <b>2016</b> , 138, 16754-16763	16.4	27
21	Rapid Access to Diverse Arrays of Chiral 3,4-Diazaphospholanes We thank the Department of Energy, Office of Basic Energy Sciences for financial support of this work. All crystal-structure determinations were performed by Dr. Doug Powell or Dr. Ilyea Guzei. The cone-angle measurements were made with the gracious assistance of Dr. David White of the UNC-Wilmington..	16.4	23
20	Kinetic Control over CdS Nanocrystal Nucleation Using a Library of Thiocarbonates, Thiocarbamates, and Thioureas. <i>Chemistry of Materials</i> , <b>2017</b> , 29, 8711-8719	9.6	21
19	Continuous Nucleation and Size Dependent Growth Kinetics of Indium Phosphide Nanocrystals. <i>Chemistry of Materials</i> , <b>2020</b> , 32, 4358-4368	9.6	21
18	Stereoelectronic Effects on the Binding of Neutral Lewis Bases to CdSe Nanocrystals. <i>Journal of the American Chemical Society</i> , <b>2018</b> , 140, 7199-7205	16.4	17
17	Anthracene as a Launchpad for a Phosphinidene Sulfide and for Generation of a Phosphorus-Sulfur Material Having the Composition PS, a Vulcanized Red Phosphorus That Is Yellow. <i>Journal of the American Chemical Society</i> , <b>2019</b> , 141, 431-440	16.4	17
16	Molecular structures of tris(2-mercapto-1-tert-butylimidazolyl)hydroborato and tris(2-mercapto-1-adamantylimidazolyl)hydroborato sodium complexes: analysis of [Tm(R)] ligand coordination modes and conformations. <i>Dalton Transactions</i> , <b>2014</b> , 43, 10852-65	4.3	16
15	Synthesis of Phosphonic Acid Ligands for Nanocrystal Surface Functionalization and Solution Processed Memristors. <i>Chemistry of Materials</i> , <b>2018</b> , 30, 8034-8039	9.6	16
14	Synthesis and structures of cadmium carboxylate and thiocarboxylate compounds with a sulfur-rich coordination environment: carboxylate exchange kinetics involving tris(2-mercapto-1-t-butylimidazolyl)hydroborato cadmium complexes, [Tm(Bu(t))] <sub>3</sub> Cd(O <sub>2</sub> CR). <i>Inorganic Chemistry</i> , <b>2015</b> , 54, 3835-50	5.1	15
13	Two-Dimensional Fullerene Assembly from an Exfoliated van der Waals Template. <i>Angewandte Chemie - International Edition</i> , <b>2018</b> , 57, 6125-6129	16.4	14
12	Synthesis, structure and reactivity of [Tm(Bu(t))] <sub>2</sub> ZnH, a monomeric terminal zinc hydride compound in a sulfur-rich coordination environment: access to a heterobimetallic compound. <i>Chemical Communications</i> , <b>2016</b> , 52, 2358-61	5.8	14

11	Precursor reaction kinetics control compositional grading and size of CdSe S nanocrystal heterostructures. <i>Chemical Science</i> , <b>2019</b> , 10, 6539-6552	9.4	12
10	Synthesis and Surface Chemistry of Cadmium Carboxylate Passivated CdTe Nanocrystals from Cadmium bis(Phenyltellurolate). <i>Chemistry of Materials</i> , <b>2016</b> , 28, 227-233	9.6	10
9	Tris(2-mercaptoimidazolyl)hydroborato Cadmium Thiolate Complexes, [Tm]CdSAr: Thiolate Exchange at Cadmium in a Sulfur-Rich Coordination Environment. <i>Inorganic Chemistry</i> , <b>2017</b> , 56, 4644-4654	5.1	8
8	Localizing Seizure Activity in the Brain Using Implantable Micro-LEDs with Quantum Dot Downconversion. <i>Advanced Materials Technologies</i> , <b>2018</b> , 3, 1700366	6.8	7
7	Size-Dependent Lattice Dynamics of Atomically Precise Cadmium Selenide Quantum Dots. <i>Physical Review Letters</i> , <b>2019</b> , 122, 026101	7.4	6
6	Exchange of Alkyl and Tris(2-mercapto-1-butylimidazolyl)hydroborato Ligands Between Zinc, Cadmium and Mercury. <i>Journal of Organometallic Chemistry</i> , <b>2015</b> , 792, 177-183	2.3	5
5	Two-Dimensional Fullerene Assembly from an Exfoliated van der Waals Template. <i>Angewandte Chemie</i> , <b>2018</b> , 130, 6233-6237	3.6	4
4	Au/TiO-Catalyzed Benzyl Alcohol Oxidation on Morphologically Precise Anatase Nanoparticles. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 11793-11804	9.5	4
3	Performance of Spherical Quantum Well Down Converters in Solid State Lighting. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 12191-12197	9.5	2
2	Relations between absorption, emission, and excited state chemical potentials from nanocrystal 2D spectra. <i>Science Advances</i> , <b>2021</b> , 7,	14.3	2
1	Electrochemical potential control of charge state and fluorescence of nitrogen vacancy centers in nanodiamonds <b>2015</b> ,		1