

Jonathan S Owen

List of Publications by Year in descending order

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70
papers

8,293
citations

71061

41
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95218

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74
docs citations

74
times ranked

11025
citing authors

#	ARTICLE	IF	CITATIONS
1	Size Dependent Optical Properties and Structure of ZnS Nanocrystals Prepared from a Library of Thioureas. <i>Chemistry of Materials</i> , 2022, 34, 706-717.	3.2	14
2	Persistent nucleation and size dependent attachment kinetics produce monodisperse PbS nanocrystals. <i>Chemical Science</i> , 2022, 13, 4977-4983.	3.7	12
3	Growth kinetics determine the polydispersity and size of PbS and PbSe nanocrystals. <i>Chemical Science</i> , 2022, 13, 4555-4565.	3.7	18
4	Free Trions with Near-Unity Quantum Yield in Monolayer MoSe ₂ . <i>ACS Nano</i> , 2022, 16, 140-147.	7.3	19
5	Au/TiO ₂ -Catalyzed Benzyl Alcohol Oxidation on Morphologically Precise Anatase Nanoparticles. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 11793-11804.	4.0	20
6	Performance of Spherical Quantum Well Down Converters in Solid State Lighting. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 12191-12197.	4.0	6
7	Relations between absorption, emission, and excited state chemical potentials from nanocrystal 2D spectra. <i>Science Advances</i> , 2021, 7, .	4.7	10
8	Continuous Nucleation and Size Dependent Growth Kinetics of Indium Phosphide Nanocrystals. <i>Chemistry of Materials</i> , 2020, 32, 4358-4368.	3.2	48
9	Anthracene Diphosphate Ligands for CdSe Quantum Dots; Molecular Design for Efficient Upconversion. <i>Chemistry of Materials</i> , 2020, 32, 1461-1466.	3.2	46
10	Precursor reaction kinetics control compositional grading and size of CdSe _{1-x} S _x nanocrystal heterostructures. <i>Chemical Science</i> , 2019, 10, 6539-6552.	3.7	18
11	Dynamic emission Stokes shift and liquid-like dielectric solvation of band edge carriers in lead-halide perovskites. <i>Nature Communications</i> , 2019, 10, 1175.	5.8	111
12	Size-Dependent Lattice Dynamics of Atomically Precise Cadmium Selenide Quantum Dots. <i>Physical Review Letters</i> , 2019, 122, 026101.	2.9	12
13	Flexible Nanopipettes for Minimally Invasive Intracellular Electrophysiology In Vivo. <i>Cell Reports</i> , 2019, 26, 266-278.e5.	2.9	52
14	Anthracene as a Launchpad for a Phosphinidene Sulfide and for Generation of a Phosphorus-Sulfur Material Having the Composition P ₂ S, a Vulcanized Red Phosphorus That Is Yellow. <i>Journal of the American Chemical Society</i> , 2019, 141, 431-440.	6.6	26
15	Localizing Seizure Activity in the Brain Using Implantable MicroLEDs with Quantum Dot Downconversion. <i>Advanced Materials Technologies</i> , 2018, 3, 1700366.	3.0	14
16	Two-Dimensional Fullerene Assembly from an Exfoliated van der Waals Template. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 6125-6129.	7.2	18
17	Two-Dimensional Fullerene Assembly from an Exfoliated van der Waals Template. <i>Angewandte Chemie</i> , 2018, 130, 6233-6237.	1.6	6
18	Synthesis of Phosphonic Acid Ligands for Nanocrystal Surface Functionalization and Solution Processed Memristors. <i>Chemistry of Materials</i> , 2018, 30, 8034-8039.	3.2	30

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19	Probing Solvent-Ligand Interactions in Colloidal Nanocrystals by the NMR Line Broadening. <i>Chemistry of Materials</i> , 2018, 30, 5485-5492.	3.2	117
20	Stereoelectronic Effects on the Binding of Neutral Lewis Bases to CdSe Nanocrystals. <i>Journal of the American Chemical Society</i> , 2018, 140, 7199-7205.	6.6	32
21	A Library of Selenourea Precursors to PbSe Nanocrystals with Size Distributions near the Homogeneous Limit. <i>Journal of the American Chemical Society</i> , 2017, 139, 2296-2305.	6.6	96
22	Tight Binding of Carboxylate, Phosphonate, and Carbamate Anions to Stoichiometric CdSe Nanocrystals. <i>Journal of the American Chemical Society</i> , 2017, 139, 3227-3236.	6.6	84
23	Unbalanced Hole and Electron Diffusion in Lead Bromide Perovskites. <i>Nano Letters</i> , 2017, 17, 1727-1732.	4.5	100
24	Local Polar Fluctuations in Lead Halide Perovskite Crystals. <i>Physical Review Letters</i> , 2017, 118, 136001.	2.9	489
25	Tris(2-mercaptoimidazolyl)hydroborato Cadmium Thiolate Complexes, [Tm ^{sup} Bu ^{sup} t ^{sup}]/sup></sup>]CdSAr: Thiolate Exchange at Cadmium in a Sulfur-Rich Coordination Environment. <i>Inorganic Chemistry</i> , 2017, 56, 4643-4653.	1.9	11
26	On the Origin of Surface Traps in Colloidal II-VI Semiconductor Nanocrystals. <i>Chemistry of Materials</i> , 2017, 29, 752-761.	3.2	231
27	Targeted intracellular voltage recordings from dendritic spines using quantum-dot-coated nanopipettes. <i>Nature Nanotechnology</i> , 2017, 12, 335-342.	15.6	107
28	Kinetic Control over CdS Nanocrystal Nucleation Using a Library of Thiocarbonates, Thiocarbamates, and Thioureas. <i>Chemistry of Materials</i> , 2017, 29, 8711-8719.	3.2	41
29	Nucleation and Growth Kinetics from LaMer Burst Data. <i>Journal of Physical Chemistry A</i> , 2017, 121, 7511-7517.	1.1	67
30	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> , 2017, 29, 10233-10242.	3.2	47
31	Chemical Synthesis and Luminescence Applications of Colloidal Semiconductor Quantum Dots. <i>Journal of the American Chemical Society</i> , 2017, 139, 10939-10943.	6.6	286
32	Interplay between organic cations and inorganic framework and incommensurability in hybrid lead-halide perovskite $\text{CH}_3\text{NH}_3\text{PbI}_3$. <i>Physical Review Materials</i> , 2017, 1, .	0.9	87
33	Transition from Molecular Vibrations to Phonons in Atomically Precise Cadmium Selenide Quantum Dots. <i>Journal of the American Chemical Society</i> , 2016, 138, 16754-16763.	6.6	36
34	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> , 2016, 113, 3938-3943.	3.3	77
35	Direct Observation of Dynamic Symmetry Breaking above Room Temperature in Methylammonium Lead Iodide Perovskite. <i>ACS Energy Letters</i> , 2016, 1, 880-887.	8.8	221
36	Limits of Carrier Diffusion in n-Type and p-Type $\text{CH}_3\text{NH}_3\text{PbI}_3$ Perovskite Single Crystals. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 3510-3518.	2.1	86

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37	Synthesis and Surface Chemistry of Cadmium Carboxylate Passivated CdTe Nanocrystals from Cadmium <i>bis</i> (Phenyltellurolate). <i>Chemistry of Materials</i> , 2016, 28, 227-233.	3.2	10
38	Synthesis, structure and reactivity of [Tm ^{But}]ZnH, a monomeric terminal zinc hydride compound in a sulfur-rich coordination environment: access to a heterobimetallic compound. <i>Chemical Communications</i> , 2016, 52, 2358-2361.	2.2	20
39	A tunable library of substituted thiourea precursors to metal sulfide nanocrystals. <i>Science</i> , 2015, 348, 1226-1230.	6.0	343
40	Effect of Surface Stoichiometry on Blinking and Hole Trapping Dynamics in CdSe Nanocrystals. <i>Journal of Physical Chemistry C</i> , 2015, 119, 27797-27803.	1.5	55
41	Trap States in Lead Iodide Perovskites. <i>Journal of the American Chemical Society</i> , 2015, 137, 2089-2096.	6.6	813
42	The coordination chemistry of nanocrystal surfaces. <i>Science</i> , 2015, 347, 615-616.	6.0	322
43	Infrared Spectroscopic Study of Vibrational Modes in Methylammonium Lead Halide Perovskites. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 2913-2918.	2.1	289
44	Excitons in ultrathin organic-inorganic perovskite crystals. <i>Physical Review B</i> , 2015, 92, .	1.1	263
45	Synthesis and Structures of Cadmium Carboxylate and Thiocarboxylate Compounds with a Sulfur-Rich Coordination Environment: Carboxylate Exchange Kinetics Involving Tris(2-mercapto-1- <i>t</i> -butylimidazolyl)hydroborato Cadmium Complexes, [Tm ^{But}]Cd(O ₂ CR). <i>Inorganic Chemistry</i> , 2015, 54, 3835-3850.	1.9	20
46	Exchange of alkyl and tris(2-mercapto-1- <i>t</i> -butylimidazolyl)hydroborato ligands between zinc, cadmium and mercury. <i>Journal of Organometallic Chemistry</i> , 2015, 792, 177-183.	0.8	5
47	Electrochemical potential control of charge state and fluorescence of nitrogen vacancy centers in nanodiamonds. , 2015, , .		1
48	Surface Structure of Aerobically Oxidized Diamond Nanocrystals. <i>Journal of Physical Chemistry C</i> , 2014, 118, 26695-26702.	1.5	54
49	Structure of Methylammonium Lead Iodide Within Mesoporous Titanium Dioxide: Active Material in High-Performance Perovskite Solar Cells. <i>Nano Letters</i> , 2014, 14, 127-133.	4.5	282
50	Atomic Structures and Gram Scale Synthesis of Three Tetrahedral Quantum Dots. <i>Journal of the American Chemical Society</i> , 2014, 136, 10645-10653.	6.6	182
51	Molecular structures of tris(2-mercapto-1- <i>tert</i> -butylimidazolyl)hydroborato and tris(2-mercapto-1-adamantylimidazolyl)hydroborato sodium complexes: analysis of [TmR] ligand coordination modes and conformations. <i>Dalton Transactions</i> , 2014, 43, 10852.	1.6	19
52	Electrical Transport and Grain Growth in Solution-Cast, Chloride-Terminated Cadmium Selenide Nanocrystal Thin Films. <i>ACS Nano</i> , 2014, 8, 7513-7521.	7.3	41
53	A Hot Electron "Hole Pair Breaks the Symmetry of a Semiconductor Quantum Dot. <i>Nano Letters</i> , 2013, 13, 6091-6097.	4.5	51
54	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> , 2013, 135, 18536-18548.	6.6	714

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55	Soluble, Chloride-Terminated CdSe Nanocrystals: Ligand Exchange Monitored by ^1H and ^{31}P NMR Spectroscopy. <i>Chemistry of Materials</i> , 2013, 25, 69-76.	3.2	154
56	Preface to the Chemistry of Materials Special Issue: Synthetic and Mechanistic Advances in Nanocrystal Growth. <i>Chemistry of Materials</i> , 2013, 25, 1153-1154.	3.2	1
57	Conversion Reactions of Cadmium Chalcogenide Nanocrystal Precursors. <i>Chemistry of Materials</i> , 2013, 25, 1233-1249.	3.2	184
58	The Importance of Nanocrystal Precursor Conversion Kinetics: Mechanism of the Reaction between Cadmium Carboxylate and Cadmium Bis(diphenyldithiophosphinate). <i>ACS Nano</i> , 2012, 6, 10054-10062.	7.3	47
59	Focusing Nanocrystal Size Distributions via Production Control. <i>Nano Letters</i> , 2011, 11, 1976-1980.	4.5	86
60	Tuning the Surface Structure and Optical Properties of CdSe Clusters Using Coordination Chemistry. <i>Journal of Physical Chemistry Letters</i> , 2011, 2, 3075-3080.	2.1	62
61	CdSe Clusters: At the Interface of Small Molecules and Quantum Dots. <i>Chemistry of Materials</i> , 2011, 23, 3114-3119.	3.2	155
62	Precursor Conversion Kinetics and the Nucleation of Cadmium Selenide Nanocrystals. <i>Journal of the American Chemical Society</i> , 2010, 132, 18206-18213.	6.6	230
63	Reproducible, High-Throughput Synthesis of Colloidal Nanocrystals for Optimization in Multidimensional Parameter Space. <i>Nano Letters</i> , 2010, 10, 1874-1885.	4.5	201
64	Reaction Chemistry and Ligand Exchange at Cadmium Selenide Nanocrystal Surfaces. <i>Journal of the American Chemical Society</i> , 2008, 130, 12279-12281.	6.6	351
65	Mechanistic Study of Precursor Evolution in Colloidal Group II-VI Semiconductor Nanocrystal Synthesis. <i>Journal of the American Chemical Society</i> , 2007, 129, 305-312.	6.6	375
66	Kinetics and Mechanism of Methane, Methanol, and Dimethyl Ether C-H Activation with Electrophilic Platinum Complexes. <i>Journal of the American Chemical Society</i> , 2006, 128, 2005-2016.	6.6	95
67	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> , 2004, 23, 2797-2804.	1.0	36
68	Pyridinium-Derived N-Heterocyclic Carbene Complexes of Platinum: Synthesis, Structure and Ligand Substitution Kinetics. <i>Journal of the American Chemical Society</i> , 2004, 126, 8247-8255.	6.6	112
69	Rapid Access to Diverse Arrays of Chiral 3,4-Diazaphospholanes. <i>Angewandte Chemie - International Edition</i> , 2001, 40, 3432-3434.	7.2	25
70	Persistent Nucleation and Size Dependent Attachment Kinetics Produce Monodisperse PbS Nanocrystals. , 0, , .		0