Jonathan De Roo

List of Publications by Year
in descending order

62 papers	4,148 citations	172386 29 h-index	149623 56 g-index
73 all docs	73 docs citations	73 times ranked	5487 citing authors

#	Article	IF	Citations
1	Growth kinetics determine the polydispersity and size of PbS and PbSe nanocrystals. Chemical Science, 2022, 13, 4555-4565.	3.7	18
2	Mapping out the Aqueous Surface Chemistry of Metal Oxide Nanocrystals: Carboxylate, Phosphonate, and Catecholate Ligands. Jacs Au, 2022, 2, 711-722.	3.6	18
3	Mechanistic Insight into the Precursor Chemistry of ZrO₂and HfO₂Nanocrystals; towards Size-Tunable Syntheses. Jacs Au, 2022, 2, 827-838.	3.6	6
4	Nonaqueous Chemistry of Group 4 Oxo Clusters and Colloidal Metal Oxide Nanocrystals. Chemical Reviews, 2022, 122, 10538-10572.	23.0	20
5	Monoalkyl Phosphinic Acids as Ligands in Nanocrystal Synthesis. ACS Nano, 2022, 16, 7361-7372.	7.3	5
6	The Chemistry of Cu₃N and Cu₃PdN Nanocrystals**. Angewandte Chemie - International Edition, 2022, 61, .	7.2	12
7	Chemical Considerations for Colloidal Nanocrystal Synthesis. Chemistry of Materials, 2022, 34, 5766-5779.	3.2	17
8	Resorcin[4]arene-based multidentate phosphate ligands with superior binding affinity for nanocrystal surfaces. Chemical Communications, 2021, 57, 4694-4697.	2.2	5
9	The Young Faculty Meeting 2021 â€“ A Focus on Group Management. Chimia, 2021, 75, 692-694.	0.3	0
10	Ligand Conversion in Nanocrystal Synthesis: The Oxidation of Alkylamines to Fatty Acids by Nitrate. Jacs Au, 2021, 1, 1898-1903.	3.6	15
11	Precursor chemistry of metal nitride nanocrystals. Nanoscale, 2021, 13, 18865-18882.	2.8	11
12	Atomically Precise Nanocrystals. Journal of the American Chemical Society, 2020, 142, 15627-15637.	6.6	45
13	Continuous Nucleation and Size Dependent Growth Kinetics of Indium Phosphide Nanocrystals. Chemistry of Materials, 2020, 32, 4358-4368.	3.2	48
14	Scalable Approaches to Copper Nanocrystal Synthesis under Ambient Conditions for Printed Electronics. ACS Applied Nano Materials, 2020, 3, 3523-3531.	2.4	8
15	Anthracene Diphosphate Ligands for CdSe Quantum Dots; Molecular Design for Efficient Upconversion. Chemistry of Materials, 2020, 32, 1461-1466.	3.2	46
16	The Trouble with ODE: Polymerization during Nanocrystal Synthesis. Nano Letters, 2019, 19, 7411-7417.	4.5	54
17	Ligand Binding to Copper Nanocrystals: Amines and Carboxylic Acids and the Role of Surface Oxides. Chemistry of Materials, 2019, 31, 2058-2067.	3.2	24
18	How Ligands Affect Resistive Switching in Solution-Processed HfO₂ Nanoparticle Assemblies. ACS Applied Materials & Interfaces, 2018, 10, 4824-4830.	4.0	23

#	Article	IF	Citations
19	Ligand Displacement Exposes Binding Site Heterogeneity on CdSe Nanocrystal Surfaces. Chemistry of Materials, 2018, 30, 1178-1186.	3.2	116
20	Colloidal CdSe Nanoplatelets, A Model for Surface Chemistry/Optoelectronic Property Relations in Semiconductor Nanocrystals. Journal of the American Chemical Society, 2018, 140, 13292-13300.	6.6	126
21	Synthesis of Phosphonic Acid Ligands for Nanocrystal Surface Functionalization and Solution Processed Memristors. Chemistry of Materials, 2018, 30, 8034-8039.	3.2	30
22	The Surface Chemistry of Colloidal HgSe Nanocrystals, toward Stoichiometric Quantum Dots by Design. Chemistry of Materials, 2018, 30, 7637-7647.	3.2	25
23	Using Bulk-like Nanocrystals To Probe Intrinsic Optical Gain Characteristics of Inorganic Lead Halide Perovskites. ACS Nano, 2018, 12, 10178-10188.	7.3	56
24	Pair Distribution Function Analysis of ZrO2 Nanocrystals and Insights in the Formation of ZrO2-YBa2Cu3O7 Nanocomposites. Materials, 2018, 11, 1066.	1.3	20
25	Light Absorption Coefficient of CsPbBr₃ Perovskite Nanocrystals. Journal of Physical Chemistry Letters, 2018, 9, 3093-3097.	2.1	219
26	Size Tunable Synthesis and Surface Chemistry of Metastable TiO₂-<i>Bronze</i> Nanocrystals. Chemistry of Materials, 2018, 30, 4298-4306.	3.2	15
27	Probing Solventâ€“Ligand Interactions in Colloidal Nanocrystals by the NMR Line Broadening. Chemistry of Materials, 2018, 30, 5485-5492.	3.2	117
28	Stereoelectronic Effects on the Binding of Neutral Lewis Bases to CdSe Nanocrystals. Journal of the American Chemical Society, 2018, 140, 7199-7205.	6.6	32
29	Microwaveâ€assisted YBa₂Cu₃O₇ precursors: A fast and reliable method towards chemical precursors for superconducting films. Journal of the American Ceramic Society, 2017, 100, 2407-2418.	1.9	11
30	Tuning Branching in Ceria Nanocrystals. Chemistry of Materials, 2017, 29, 4418-4424.	3.2	19
31	Solution-based synthesis and processing of Sn- and Bi-doped Cu₃SbSe₄nanocrystals, nanomaterials and ring-shaped thermoelectric generators. Journal of Materials Chemistry A, 2017, 5, 2592-2602.	5.2	73
32	Kinetic Control over CdS Nanocrystal Nucleation Using a Library of Thiocarbonates, Thiocarbamates, and Thioureas. Chemistry of Materials, 2017, 29, 8711-8719.	3.2	41
33	Stabilization of Colloidal Ti, Zr, and Hf Oxide Nanocrystals by Protonated Tri-<i>n</i>-octylphosphine Oxide (TOPO) and Its Decomposition Products. Chemistry of Materials, 2017, 29, 10233-10242.	3.2	47
34	Optimizing Nanocomposites through Nanocrystal Surface Chemistry: Superconducting YBa₂Cu₃O₇ Thin Films via Low-Fluorine Metal Organic Deposition and Preformed Metal Oxide Nanocrystals. Chemistry of Materials, 2017, 29, 6104-6113.	3.2	45
35	Diffusion (DOSY) 1H NMR as an Alternative Method for Molecular Weight Determination of Poly(ethylene furanoate) (PEF) Polyesters. Macromolecular Chemistry and Physics, 2017, 218, 1600436.	1.1	28
36	Thermal processing of aqueous AZO inks towards functional TCO thin films. Journal of Alloys and Compounds, 2017, 690, 360-368.	2.8	11

#	Article	IF	Citations
37	Chemically Triggered Formation of Two-Dimensional Epitaxial Quantum Dot Superlattices. ACS Nano, 2016, 10, 6861-6870.	7.3	49
38	Colloidal AgSbSe₂ nanocrystals: surface analysis, electronic doping and processing into thermoelectric nanomaterials. Journal of Materials Chemistry C, 2016, 4, 4756-4762.	2.7	27
39	Aminophosphines: A Double Role in the Synthesis of Colloidal Indium Phosphide Quantum Dots. Journal of the American Chemical Society, 2016, 138, 5923-5929.	6.6	127
40	Superconducting YBa₂Cu₃O_{7â€"Î´} Nanocomposites Using Preformed ZrO₂ Nanocrystals: Growth Mechanisms and Vortex Pinning Properties. Advanced Electronic Materials, 2016, 2, 1600161.	2.6	55
41	Revisited Wurtzite CdSe Synthesis: A Gateway for the Versatile Flash Synthesis of Multishell Quantum Dots and Rods. Chemistry of Materials, 2016, 28, 7311-7323.	3.2	39
42	From ligands to binding motifs and beyond; the enhanced versatility of nanocrystal surfaces. Dalton Transactions, 2016, 45, 13277-13283.	1.6	97
43	Insights into the Ligand Shell, Coordination Mode, and Reactivity of Carboxylic Acid Capped Metal Oxide Nanocrystals. ChemPlusChem, 2016, 81, 1216-1223.	1.3	13
44	Colloidal metal oxide nanocrystal catalysis by sustained chemically driven ligand displacement. Nature Materials, 2016, 15, 517-521.	13.3	82
45	Highly Dynamic Ligand Binding and Light Absorption Coefficient of Cesium Lead Bromide Perovskite Nanocrystals. ACS Nano, 2016, 10, 2071-2081.	7.3	1,448
46	Scalable Heating-Up Synthesis of Monodisperse Cu₂ZnSnS₄ Nanocrystals. Chemistry of Materials, 2016, 28, 720-726.	3.2	43
47	Amino Acid-Based Stabilization of Oxide Nanocrystals in Polar Media: From Insight in Ligand Exchange to Solution ¹H NMR Probing of Short-Chained Adsorbates. Langmuir, 2016, 32, 1962-1970.	1.6	38
48	The influence of tetraethoxysilane sol preparation on the electrospinning of silica nanofibers. Journal of Sol-Gel Science and Technology, 2016, 77, 453-462.	1.1	40
49	Carboxylicâ€Acidâ€Passivated Metal Oxide Nanocrystals: Ligand Exchange Characteristics of a New Binding Motif. Angewandte Chemie - International Edition, 2015, 54, 6488-6491.	7.2	74
50	Economic and Size-Tunable Synthesis of InP/ZnE (E = S, Se) Colloidal Quantum Dots.. Chemistry of Materials, 2015, 27, 4893-4898.	3.2	333
51	Chemical solution deposition of functional ceramic coatings using ink-jet printing. Pure and Applied Chemistry, 2015, 87, 231-238.	0.9	5
52	Fast and Tunable Synthesis of ZrO₂ Nanocrystals: Mechanistic Insights into Precursor Dependence. Inorganic Chemistry, 2015, 54, 3469-3476.	1.9	49
53	Epitaxial YBa₂Cu₃O_{7â^'<i>x</i>}nanocomposite thin films from colloidal solutions. Superconductor Science and Technology, 2015, 28, 124007.	1.8	49
54	Youth Views on Sustainability: Size Matters, But So Does Speed. Chemistry International, 2014, 36, .	0.3	0

#	Article	IF	Citations
55	Unravelling the Surface Chemistry of Metal Oxide Nanocrystals, the Role of Acids and Bases. Journal of the American Chemical Society, 2014, 136, 9650-9657.	6.6	100
56	Fast, microwave-assisted synthesis of monodisperse HfO2 nanoparticles. Journal of Nanoparticle Research, 2013, 15, 1.	0.8	45
57	Solution-based synthesis of BaZrO3 nanoparticles: conventional versus microwave synthesis. Journal of Nanoparticle Research, 2013, 15, 1.	0.8	17
58	Unexpected ligand transformation in metal oxide nanocrystals synthesis. , 0, , .		0
59	The Surface Chemistry of Colloidal Nanocrystals; Insights from NMR.. , 0, , .		0
60	The Surface Chemistry of Colloidal II-VI Two-Dimensional Nanoplatelets. , 0, , .		0
61	The Trouble With 1-Octadecene: Polymerization During Nanocrystal Synthesis. , 0, , .		0
62	The chemistry of Cu3N and Cu3PdN nanocrystals. Angewandte Chemie, 0, , .	1.6	1