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	Highly Dynamic Ligand Binding and Light Absorption Coefficient of Cesium Lead Bromide Perovskite Nanocrystals. ACS Nano, 2016, 10, 2071-2081.	7.3	1,448
2	Economic and Size-Tunable Synthesis of InP/ZnE (E = S, Se) Colloidal Quantum Dots.. Chemistry of Materials, 2015, 27, 4893-4898.	3.2	333
3	Light Absorption Coefficient of CsPbBr₃ Perovskite Nanocrystals. Journal of Physical Chemistry Letters, 2018, 9, 3093-3097.	2.1	219
4	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
5	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
6	Probing Solventâ€“Ligand Interactions in Colloidal Nanocrystals by the NMR Line Broadening. Chemistry of Materials, 2018, 30, 5485-5492.	3.2	117
7	Ligand Displacement Exposes Binding Site Heterogeneity on CdSe Nanocrystal Surfaces. Chemistry of Materials, 2018, 30, 1178-1186.	3.2	116
8	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
9	From ligands to binding motifs and beyond; the enhanced versatility of nanocrystal surfaces. Dalton Transactions, 2016, 45, 13277-13283.	1.6	97
10	Colloidal metal oxide nanocrystal catalysis by sustained chemically driven ligand displacement. Nature Materials, 2016, 15, 517-521.	13.3	82
11	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
12	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
13	Using Bulk-like Nanocrystals To Probe Intrinsic Optical Gain Characteristics of Inorganic Lead Halide Perovskites. ACS Nano, 2018, 12, 10178-10188.	7.3	56
14	Superconducting YBa₂Cu₃O_{7â€“Î´} Nanocomposites Using Preformed ZrO₂ Nanocrystals: Growth Mechanisms and Vortex Pinning Properties. Advanced Electronic Materials, 2016, 2, 1600161.	2.6	55
15	The Trouble with ODE: Polymerization during Nanocrystal Synthesis. Nano Letters, 2019, 19, 7411-7417.	4.5	54
16	Fast and Tunable Synthesis of ZrO₂ Nanocrystals: Mechanistic Insights into Precursor Dependence. Inorganic Chemistry, 2015, 54, 3469-3476.	1.9	49
17	Epitaxial YBa₂Cu₃O_{7âˆ’<i>x</i>}nanocomposite thin films from colloidal solutions. Superconductor Science and Technology, 2015, 28, 124007.	1.8	49
18	Chemically Triggered Formation of Two-Dimensional Epitaxial Quantum Dot Superlattices. ACS Nano, 2016, 10, 6861-6870.	7.3	49

#	Article	IF	Citations
19	Continuous Nucleation and Size Dependent Growth Kinetics of Indium Phosphide Nanocrystals. Chemistry of Materials, 2020, 32, 4358-4368.	3.2	48
20	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
21	Anthracene Diphosphate Ligands for CdSe Quantum Dots; Molecular Design for Efficient Upconversion. Chemistry of Materials, 2020, 32, 1461-1466.	3.2	46
22	Fast, microwave-assisted synthesis of monodisperse HfO2 nanoparticles. Journal of Nanoparticle Research, 2013, 15, 1.	0.8	45
23	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
24	Atomically Precise Nanocrystals. Journal of the American Chemical Society, 2020, 142, 15627-15637.	6.6	45
25	Scalable Heating-Up Synthesis of Monodisperse Cu₂ZnSnS₄ Nanocrystals. Chemistry of Materials, 2016, 28, 720-726.	3.2	43
26	Kinetic Control over CdS Nanocrystal Nucleation Using a Library of Thiocarbonates, Thiocarbamates, and Thioureas. Chemistry of Materials, 2017, 29, 8711-8719.	3.2	41
27	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
28	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
29	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
30	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
31	Synthesis of Phosphonic Acid Ligands for Nanocrystal Surface Functionalization and Solution Processed Memristors. Chemistry of Materials, 2018, 30, 8034-8039.	3.2	30
32	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
33	Colloidal AgSbSe₂ nanocrystals: surface analysis, electronic doping and processing into thermoelectric nanomaterials. Journal of Materials Chemistry C, 2016, 4, 4756-4762.	2.7	27
34	The Surface Chemistry of Colloidal HgSe Nanocrystals, toward Stoichiometric Quantum Dots by Design. Chemistry of Materials, 2018, 30, 7637-7647.	3.2	25
35	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
36	How Ligands Affect Resistive Switching in Solution-Processed HfO₂ Nanoparticle Assemblies. ACS Applied Materials & Interfaces, 2018, 10, 4824-4830.	4.0	23

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37	Pair Distribution Function Analysis of ZrO2 Nanocrystals and Insights in the Formation of ZrO2-YBa2Cu3O7 Nanocomposites. Materials, 2018, 11, 1066.	1.3	20
38	Nonaqueous Chemistry of Group 4 Oxo Clusters and Colloidal Metal Oxide Nanocrystals. Chemical Reviews, 2022, 122, 10538-10572.	23.0	20
39	Tuning Branching in Ceria Nanocrystals. Chemistry of Materials, 2017, 29, 4418-4424.	3.2	19
40	Growth kinetics determine the polydispersity and size of PbS and PbSe nanocrystals. Chemical Science, 2022, 13, 4555-4565.	3.7	18
41	Mapping out the Aqueous Surface Chemistry of Metal Oxide Nanocrystals: Carboxylate, Phosphonate, and Catecholate Ligands. Jacs Au, 2022, 2, 711-722.	3.6	18
42	Solution-based synthesis of BaZrO3 nanoparticles: conventional versus microwave synthesis. Journal of Nanoparticle Research, 2013, 15, 1.	0.8	17
43	Chemical Considerations for Colloidal Nanocrystal Synthesis. Chemistry of Materials, 2022, 34, 5766-5779.	3.2	17
44	Size Tunable Synthesis and Surface Chemistry of Metastable TiO₂-<i>Bronze</i> Nanocrystals. Chemistry of Materials, 2018, 30, 4298-4306.	3.2	15
45	Ligand Conversion in Nanocrystal Synthesis: The Oxidation of Alkylamines to Fatty Acids by Nitrate. Jacs Au, 2021, 1, 1898-1903.	3.6	15
46	Insights into the Ligand Shell, Coordination Mode, and Reactivity of Carboxylic Acid Capped Metal Oxide Nanocrystals. ChemPlusChem, 2016, 81, 1216-1223.	1.3	13
47	The Chemistry of Cu₃N and Cu₃PdN Nanocrystals**. Angewandte Chemie - International Edition, 2022, 61, .	7.2	12
48	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
49	Thermal processing of aqueous AZO inks towards functional TCO thin films. Journal of Alloys and Compounds, 2017, 690, 360-368.	2.8	11
50	Precursor chemistry of metal nitride nanocrystals. Nanoscale, 2021, 13, 18865-18882.	2.8	11
51	Scalable Approaches to Copper Nanocrystal Synthesis under Ambient Conditions for Printed Electronics. ACS Applied Nano Materials, 2020, 3, 3523-3531.	2.4	8
52	Mechanistic Insight into the Precursor Chemistry of ZrO₂and HfO₂Nanocrystals; towards Size-Tunable Syntheses. Jacs Au, 2022, 2, 827-838.	3.6	6
53	Chemical solution deposition of functional ceramic coatings using ink-jet printing. Pure and Applied Chemistry, 2015, 87, 231-238.	0.9	5
54	Resorcin[4]arene-based multidentate phosphate ligands with superior binding affinity for nanocrystal surfaces. Chemical Communications, 2021, 57, 4694-4697.	2.2	5

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55	Monoalkyl Phosphinic Acids as Ligands in Nanocrystal Synthesis. ACS Nano, 2022, 16, 7361-7372.	7.3	5
56	The chemistry of Cu3N and Cu3PdN nanocrystals. Angewandte Chemie, 0, , .	1.6	1
57	Youth Views on Sustainability: Size Matters, But So Does Speed. Chemistry International, 2014, 36, .	0.3	0
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 Young Faculty Meeting 2021 â€“ A Focus on Group Management. Chimia, 2021, 75, 692-694.	0.3	0
61	The Surface Chemistry of Colloidal II-VI Two-Dimensional Nanoplatelets. , 0, , .		0
62	The Trouble With 1-Octadecene: Polymerization During Nanocrystal Synthesis. , 0, , .		0