

Brandi Cossairt

List of Publications by Year in descending order

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91
papers

4,270
citations

101496

36
h-index

114418

63
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118
all docs

118
docs citations

118
times ranked

4098
citing authors

#	ARTICLE	IF	CITATIONS
1	Direct intercalation of MoS ₂ and WS ₂ thin films by vacuum filtration. <i>Materials Horizons</i> , 2022, 9, 360-367.	6.4	8
2	Organic building blocks at inorganic nanomaterial interfaces. <i>Materials Horizons</i> , 2022, 9, 61-87.	6.4	18
3	Integrated Quantum Nanophotonics with Solution-Processed Materials. <i>Advanced Quantum Technologies</i> , 2022, 5, 2100078.	1.8	7
4	Semiconductor clusters and their use as precursors to nanomaterials. , 2022, , 165-200.		1
5	Impact of Nanoparticle Size and Surface Chemistry on Peptoid Self-Assembly. <i>ACS Nano</i> , 2022, 16, 8095-8106.	7.3	9
6	Surface Chemistry and Quantum Dot Luminescence: Shell Growth, Atomistic Modification, and Beyond. <i>ACS Energy Letters</i> , 2021, 6, 977-984.	8.8	30
7	CO ₂ Hydrogenation Catalyzed by a Ruthenium Protic N-Heterocyclic Carbene Complex. <i>Inorganic Chemistry</i> , 2021, 60, 5996-6003.	1.9	7
8	(Invited) Interfacial Chemistry As an Enabling Tool in the Development of Transition Metal Phosphide Electrocatalysts. <i>ECS Meeting Abstracts</i> , 2021, MA2021-01, 1286-1286.	0.0	0
9	Surface Chemistry of Metal Phosphide Nanocrystals. <i>Annual Review of Materials Research</i> , 2021, 51, 541-564.	4.3	10
10	Tuning the interfacial stoichiometry of InP core and InP/ZnSe core/shell quantum dots. <i>Journal of Chemical Physics</i> , 2021, 155, 084701.	1.2	9
11	Peptoid-directed assembly of CdSe nanoparticles. <i>Nanoscale</i> , 2021, 13, 1273-1282.	2.8	18
12	Elucidating the Location of Cd ²⁺ in Post-synthetically Treated InP Quantum Dots Using Dynamic Nuclear Polarization ³¹ P and ¹¹³ Cd Solid-State NMR Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2021, 125, 2956-2965.	1.5	16
13	Covalent Functionalization of Nickel Phosphide Nanocrystals with Aryl-Diazonium Salts. <i>Chemistry of Materials</i> , 2021, 33, 9652-9665.	3.2	9
14	Covalently Linked, Two-Dimensional Quantum Dot Assemblies. <i>Langmuir</i> , 2020, 36, 9944-9951.	1.6	4
15	Seeded Growth of Nanoscale Semiconductor Tetrapods: Generality and the Role of Cation Exchange. <i>Chemistry of Materials</i> , 2020, 32, 4774-4784.	3.2	18
16	Checking in with Women Materials Scientists During a Global Pandemic: May 2020. <i>Chemistry of Materials</i> , 2020, 32, 4859-4862.	3.2	3
17	Modeling Equilibrium Binding at Quantum Dot Surfaces Using Cyclic Voltammetry. <i>Nano Letters</i> , 2020, 20, 2620-2624.	4.5	10
18	Designing nanoparticle interfaces for inner-sphere catalysis. <i>Dalton Transactions</i> , 2020, 49, 4995-5005.	1.6	12

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19	Synthesis and Spectroscopy of Emissive, Surface-Modified, Copper-Doped Indium Phosphide Nanocrystals. , 2020, 2, 576-581.		31
20	What IS Inorganic Chemistry?. Inorganic Chemistry, 2019, 58, 9515-9516.	1.9	2
21	The Chemistry Women Mentorship Network (ChemWMN): A Tool for Creating Critical Mass in Academic Chemistry. Inorganic Chemistry, 2019, 58, 12493-12496.	1.9	14
22	The Chemistry Women Mentorship Network (ChemWMN): A Tool for Creating Critical Mass in Academic Chemistry. ACS Central Science, 2019, 5, 1625-1629.	5.3	3
23	The Chemistry Women Mentorship Network (ChemWMN): A Tool for Creating Critical Mass in Academic Chemistry. Chemistry of Materials, 2019, 31, 8239-8242.	3.2	1
24	Effects of Surface Chemistry on the Photophysics of Colloidal InP Nanocrystals. ACS Nano, 2019, 13, 14198-14207.	7.3	71
25	Probing the Surface Structure of Semiconductor Nanoparticles by DNP SENS with Dielectric Support Materials. Journal of the American Chemical Society, 2019, 141, 15532-15546.	6.6	39
26	Hydrogen on Cobalt Phosphide. Journal of the American Chemical Society, 2019, 141, 15390-15402.	6.6	41
27	Synthesis of $\text{In}_{37}\text{P}_{20}(\text{O})_{51}$ Clusters and Their Conversion to InP Quantum Dots. Journal of Visualized Experiments, 2019, , .	0.2	4
28	Effect of Surface Ligands on CoP for the Hydrogen Evolution Reaction. ACS Applied Energy Materials, 2019, 2, 1642-1645.	2.5	32
29	Photolytic C–O Bond Cleavage with Quantum Dots. Chemistry of Materials, 2019, 31, 2677-2682.	3.2	29
30	Carboxylate Anchors Act as Exciton Reporters in 1.3 nm Indium Phosphide Nanoclusters. Journal of Physical Chemistry Letters, 2019, 10, 1833-1839.	2.1	23
31	Effects of Zn ²⁺ and Ga ³⁺ doping on the quantum yield of cluster-derived InP quantum dots. Journal of Chemical Physics, 2019, 151, 194702.	1.2	21
32	Conversion of InP Clusters to Quantum Dots. Inorganic Chemistry, 2019, 58, 803-810.	1.9	46
33	Quantifying Ligand Exchange on InP Using an Atomically Precise Cluster Platform. Inorganic Chemistry, 2019, 58, 2840-2847.	1.9	39
34	Deterministic positioning of colloidal quantum dots on silicon nitride nanobeam cavities. , 2019, , .		0
35	Improved HER Catalysis through Facile, Aqueous Electrochemical Activation of Nanoscale WSe ₂ . Nano Letters, 2018, 18, 2329-2335.	4.5	66
36	Synthetic routes to a coordinatively unsaturated ruthenium complex supported by a tripodal, protic bis(N-heterocyclic carbene) phosphine ligand. Dalton Transactions, 2018, 47, 1276-1283.	1.6	13

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37	Templated Growth of InP Nanocrystals with a Polytwistane Structure. <i>Angewandte Chemie</i> , 2018, 130, 1926-1930.	1.6	14
38	Templated Growth of InP Nanocrystals with a Polytwistane Structure. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 1908-1912.	7.2	25
39	Kinetically controlled assembly of cadmium chalcogenide nanorods and nanorod heterostructures. <i>Materials Chemistry Frontiers</i> , 2018, 2, 1296-1305.	3.2	12
40	Reaction-Driven Nucleation Theory. <i>Journal of Physical Chemistry C</i> , 2018, 122, 9671-9679.	1.5	18
41	Deterministic Positioning of Colloidal Quantum Dots on Silicon Nitride Nanobeam Cavities. <i>Nano Letters</i> , 2018, 18, 6404-6410.	4.5	51
42	Conversion Reactions of Atomically Precise Semiconductor Clusters. <i>Accounts of Chemical Research</i> , 2018, 51, 2803-2810.	7.6	46
43	Probing Surface Defects of InP Quantum Dots Using Phosphorus K α and K β X-ray Emission Spectroscopy. <i>Chemistry of Materials</i> , 2018, 30, 6377-6388.	3.2	70
44	Synthesis of tailor-made colloidal semiconductor heterostructures. <i>Chemical Communications</i> , 2018, 54, 7109-7122.	2.2	20
45	4 ϵ 1: Invited Paper: Role of Phosphorus Oxidation in Controlling the Luminescent Properties of Indium Phosphide Quantum Dots. <i>Digest of Technical Papers SID International Symposium</i> , 2018, 49, 21-24.	0.1	8
46	Aminophosphines as Versatile Precursors for the Synthesis of Metal Phosphide Nanocrystals. <i>Chemistry of Materials</i> , 2018, 30, 5373-5379.	3.2	54
47	(Invited) Surface Chemistry and Intercalation As Strategies to Tune Reactivity in Colloidal Electrocatalysts. <i>ECS Meeting Abstracts</i> , 2018, MA2018-01, 1862-1862.	0.0	0
48	Main-Group-Semiconductor Cluster Molecules as Synthetic Intermediates to Nanostructures. <i>Inorganic Chemistry</i> , 2017, 56, 8689-8697.	1.9	54
49	Investigating the role of amine in InP nanocrystal synthesis: destabilizing cluster intermediates by Z-type ligand displacement. <i>Chemical Communications</i> , 2017, 53, 161-164.	2.2	55
50	Effect of Ligand Coverage on Hydrogen Evolution Catalyzed by Colloidal WSe ₂ . <i>ACS Catalysis</i> , 2017, 7, 2815-2820.	5.5	62
51	Quantifying Cation Exchange of Cd ²⁺ in ZnTe: A Challenge for Accessing Type II Heterostructures. <i>Chemistry of Materials</i> , 2017, 29, 666-672.	3.2	20
52	Cation Exchange Induced Transformation of InP Magic-Sized Clusters. <i>Chemistry of Materials</i> , 2017, 29, 7984-7992.	3.2	67
53	II ₃ V ₂ (II: Zn, Cd; V: P, As) Semiconductors: From Bulk Solids to Colloidal Nanocrystals. <i>Small</i> , 2017, 13, 1702038.	5.2	13
54	Synthesis of Zn ₃ As ₂ and (Cd _y Zn _{1-y}) ₃ As ₂ Colloidal Quantum Dots. <i>Chemistry of Materials</i> , 2017, 29, 6195-6199.	3.2	6

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55	A compact dispersive refocusing Rowland circle X-ray emission spectrometer for laboratory, synchrotron, and XFEL applications. <i>Review of Scientific Instruments</i> , 2017, 88, 073904.	0.6	40
56	Purification and In Situ Ligand Exchange of Metal-Carboxylate-Treated Fluorescent InP Quantum Dots via Gel Permeation Chromatography. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 4055-4060.	2.1	21
57	Shining Light on Indium Phosphide Quantum Dots: Understanding the Interplay among Precursor Conversion, Nucleation, and Growth. <i>Chemistry of Materials</i> , 2016, 28, 7181-7189.	3.2	103
58	Resolving the Chemistry of Zn ₃ P ₂ Nanocrystal Growth. <i>Chemistry of Materials</i> , 2016, 28, 6374-6380.	3.2	17
59	H ₂ Production Mediated by CO ₂ via Initial Reduction to Formate. <i>Organometallics</i> , 2016, 35, 2778-2781.	1.1	10
60	Gel permeation chromatography as a multifunctional processor for nanocrystal purification and on-column ligand exchange chemistry. <i>Chemical Science</i> , 2016, 7, 5671-5679.	3.7	40
61	Single-Crystal and Electronic Structure of a 1.3 nm Indium Phosphide Nanocluster. <i>Journal of the American Chemical Society</i> , 2016, 138, 1510-1513.	6.6	164
62	Luminescent InP Quantum Dots with Tunable Emission by Post-Synthetic Modification with Lewis Acids. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 1315-1320.	2.1	104
63	A doubly deprotonated diimine dioximate metalloligand as a synthon for multimetallic complex assembly. <i>Dalton Transactions</i> , 2016, 45, 10068-10075.	1.6	6
64	Assembly and stabilization of {E(cyclo-P ₃) ₂ } (E = Sn, Pb) as a bridging ligand spanning two triaryloxy niobium units. <i>Dalton Transactions</i> , 2016, 45, 1891-1895.	1.6	8
65	Two-Step Nucleation and Growth of InP Quantum Dots via Magic-Sized Cluster Intermediates. <i>Chemistry of Materials</i> , 2015, 27, 1432-1441.	3.2	240
66	CdSe on a mesoporous transparent conducting oxide scaffold as a photocathode. <i>Journal of Materials Chemistry A</i> , 2015, 3, 14585-14591.	5.2	6
67	Ternary synthesis of colloidal Zn ₃ P ₂ quantum dots. <i>Chemical Communications</i> , 2015, 51, 5283-5286.	2.2	35
68	Investigation of Indium Phosphide Quantum Dot Nucleation and Growth Utilizing Triarylsilylphosphine Precursors. <i>Chemistry of Materials</i> , 2014, 26, 1734-1744.	3.2	115
69	Mono- and Dimetalation of a Tridentate Bisimidazole-Phosphine Ligand. <i>Organometallics</i> , 2014, 33, 4341-4344.	1.1	45
70	Conversion Reactions of Cadmium Chalcogenide Nanocrystal Precursors. <i>Chemistry of Materials</i> , 2013, 25, 1233-1249.	3.2	184
71	Role of Acid in Precursor Conversion During InP Quantum Dot Synthesis. <i>Chemistry of Materials</i> , 2013, 25, 2463-2469.	3.2	90
72	The Importance of Nanocrystal Precursor Conversion Kinetics: Mechanism of the Reaction between Cadmium Carboxylate and Cadmium Bis(diphenyldithiophosphate). <i>ACS Nano</i> , 2012, 6, 10054-10062.	7.3	47

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73	Microwave spectrum of arsenic triphosphide. <i>Journal of Molecular Spectroscopy</i> , 2012, 278, 68-71.	0.4	2
74	White Phosphorus Activation at a Metalâ€“Phosphorus Triple Bond: a New Route to <i>cyclo</i> -Triphosphorus or <i>cyclo</i> -Pentaphosphorus Complexes of Niobium. <i>Inorganic Chemistry</i> , 2011, 50, 12349-12358.	1.9	32
75	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
76	CdSe Clusters: At the Interface of Small Molecules and Quantum Dots. <i>Chemistry of Materials</i> , 2011, 23, 3114-3119.	3.2	155
77	Formation of <i>cyclo</i> -E ₄ ²⁺ Units (E ₄ =P ₄), <i>TJ ETQq1 1</i> 0.784314 <i>rgBT /Over</i> International Edition, 2011, 50, 7283-7286.	7.2	113
78	Molecular Gallium Arsenide Phosphide Clusters Prepared from AsP ₃ , P ₄ , and [GaC(SiMe ₃) ₃] ₄ . <i>Chemistry - A European Journal</i> , 2010, 16, 12603-12608.	1.7	10
79	Shuttling P ₃ from Niobium to Rhodium: The Synthesis and Use of Ph ₃ SnP ₃ (C ₆ H ₈) as a P ₃ ⁺ Synthon. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 1595-1598.	7.2	32
80	On the Molecular and Electronic Structures of AsP ₃ and P ₄ . <i>Journal of the American Chemical Society</i> , 2010, 132, 8459-8465.	6.6	65
81	Radical synthesis of trialkyl, triaryl, trisilyl and tristannyl phosphines from P ₄ . <i>New Journal of Chemistry</i> , 2010, 34, 1533.	1.4	87
82	Early-Transition-Metal-Mediated Activation and Transformation of White Phosphorus. <i>Chemical Reviews</i> , 2010, 110, 4164-4177.	23.0	403
83	Facile Synthesis of AsP ₃ . <i>Science</i> , 2009, 323, 602-602.	6.0	110
84	Properties and Reactivity Patterns of AsP ₃ : An Experimental and Computational Study of Group 15 Elemental Molecules. <i>Journal of the American Chemical Society</i> , 2009, 131, 15501-15511.	6.6	65
85	A Reactive Niobium Phosphinidene P ₈ Cluster Obtained by Reductive Coupling of White Phosphorus. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 169-172.	7.2	43
86	A Niobium-Mediated Cycle Producing Phosphorus-Rich Organic Molecules from White Phosphorus (P ₄) through Activation, Functionalization, and Transfer Reactions. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 8863-8866.	7.2	45
87	Phosphaalkenes as Long-Lived Phosphorus Cluster Surface Functional Groups: Intramolecular P=C Addition to a Niobium-Supported P ₇ Cage. <i>Inorganic Chemistry</i> , 2008, 47, 9363-9371.	1.9	24
88	Experimental and Theoretical Studies of the Reaction of the OH Radical with Alkyl Sulfides: 1. Direct Observations of the Formation of the OH-DMS Adduct- Pressure Dependence of the Forward Rate of Addition and Development of a Predictive Expression at Low Temperature. <i>Journal of Physical Chemistry A</i> , 2007, 111, 89-104.	1.1	33
89	Temperature and Pressure Dependent Rate Coefficients for the Reaction of Hg with Br and the Reaction of Br with Br: A Pulsed Laser Photolysis-Pulsed Laser Induced Fluorescence Study. <i>Journal of Physical Chemistry A</i> , 2006, 110, 6623-6632.	1.1	135
90	Electrocatalytic hydrogen evolution by cobalt difluoroboryl-diglyoximate complexes. <i>Chemical Communications</i> , 2005, , 4723.	2.2	256

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91	Understanding and Directing the Structure and Properties of Indium Phosphide Nanocrystals through Chemistry. , 0, , .		0