Raymond E Schaak

List of Publications by Year
in descending order

177 papers	23,333 citations	13068 68 h-index	7718 150 g-index
194 all docs	194 docs citations	194 times ranked	28025 citing authors

#	Article	IF	Citations
1	Nanostructured Nickel Phosphide as an Electrocatalyst for the Hydrogen Evolution Reaction. Journal of the American Chemical Society, 2013, 135, 9267-9270.	6.6	2,624
2	Recent Advances in Two-Dimensional Materials beyond Graphene. ACS Nano, 2015, 9, 11509-11539.	7.3	2,069
3	Transition Metal Dichalcogenides and Beyond: Synthesis, Properties, and Applications of Single- and Few-Layer Nanosheets. Accounts of Chemical Research, 2015, 48, 56-64.	7.6	1,089
4	Highly Active Electrocatalysis of the Hydrogen Evolution Reaction by Cobalt Phosphide Nanoparticles. Angewandte Chemie - International Edition, 2014, 53, 5427-5430.	7.2	1,033
5	Diverse Applications of Nanomedicine. ACS Nano, 2017, 11, 2313-2381.	7.3	976
6	Tutorial on Powder X-ray Diffraction for Characterizing Nanoscale Materials. ACS Nano, 2019, 13, 7359-7365.	7.3	662
7	Perovskites by Design:Â A Toolbox of Solid-State Reactions. Chemistry of Materials, 2002, 14, 1455-1471.	3.2	625
8	Best Practices for Reporting Electrocatalytic Performance of Nanomaterials. ACS Nano, 2018, 12, 9635-9638.	7.3	537
9	Synthesis, Characterization, and Properties of Metal Phosphide Catalysts for the Hydrogen-Evolution Reaction. Chemistry of Materials, 2016, 28, 6017-6044.	3.2	519
10	Nanostructured Co₂P Electrocatalyst for the Hydrogen Evolution Reaction and Direct Comparison with Morphologically Equivalent CoP. Chemistry of Materials, 2015, 27, 3769-3774.	3.2	450
11	Electrocatalytic and Photocatalytic Hydrogen Production from Acidic and Neutral-pH Aqueous Solutions Using Iron Phosphide Nanoparticles. ACS Nano, 2014, 8, 11101-11107.	7.3	429
12	2D materials advances: from large scale synthesis and controlled heterostructures to improved characterization techniques, defects and applications. 2D Materials, 2016, 3, 042001.	2.0	408
13	Converting Metals into Phosphides:Â A General Strategy for the Synthesis of Metal Phosphide Nanocrystals. Journal of the American Chemical Society, 2007, 129, 1896-1897.	6.6	383
14	Amorphous Molybdenum Phosphide Nanoparticles for Electrocatalytic Hydrogen Evolution. Chemistry of Materials, 2014, 26, 4826-4831.	3.2	379
15	Single-Crystal Colloidal Nanosheets of GeS and GeSe. Journal of the American Chemical Society, 2010, 132, 15170-15172.	6.6	378
16	A total-synthesis framework for the construction of high-order colloidal hybrid nanoparticles. Nature Chemistry, 2012, 4, 37-44.	6.6	316
17	One-Pot Synthesis of Hollow Superparamagnetic CoPt Nanospheres. Journal of the American Chemical Society, 2005, 127, 12504-12505.	6.6	286
18	Prying Apart Ruddlesdenâ˜'Popper Phases:Â Exfoliation into Sheets and Nanotubes for Assembly of Perovskite Thin Films. Chemistry of Materials, 2000, 12, 3427-3434.	3.2	270

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19	Electrocatalytic hydrogen evolution using amorphous tungsten phosphide nanoparticles. Chemical Communications, 2014, 50, 11026.	2.2	264
20	General Strategy for the Synthesis of Transition Metal Phosphide Films for Electrocatalytic Hydrogen and Oxygen Evolution. ACS Applied Materials & Interfaces, 2016, 8, 12798-12803.	4.0	256
21	Tunable intraparticle frameworks for creating complex heterostructured nanoparticle libraries. Science, 2018, 360, 513-517.	6.0	242
22	Hybrid CuOâ€TiO_{2â”x}N_x Hollow Nanocubes for Photocatalytic Conversion of CO₂ into Methane under Solar Irradiation. Angewandte Chemie - International Edition, 2012, 51, 3915-3918.	7.2	211
23	Topochemical Deintercalation of Al from MoAlB: Stepwise Etching Pathway, Layered Intergrowth Structures, and Two-Dimensional MBene. Journal of the American Chemical Society, 2018, 140, 8833-8840.	6.6	204
24	Trioctylphosphine:â€‰ A General Phosphorus Source for the Low-Temperature Conversion of Metals into Metal Phosphides. Chemistry of Materials, 2007, 19, 4234-4242.	3.2	202
25	A Precursor-Limited Nanoparticle Coalescence Pathway for Tuning the Thickness of Laterally-Uniform Colloidal Nanosheets: The Case of SnSe. ACS Nano, 2011, 5, 8852-8860.	7.3	195
26	Synthesis of Atomically Ordered AuCu and AuCu3Nanocrystals from Bimetallic Nanoparticle Precursors. Journal of the American Chemical Society, 2004, 126, 6667-6672.	6.6	186
27	Emerging Strategies for the Total Synthesis of Inorganic Nanostructures. Angewandte Chemie - International Edition, 2013, 52, 6154-6178.	7.2	184
28	The Solvent Matters: Kinetic versus Thermodynamic Shape Control in the Polyol Synthesis of Rhodium Nanoparticles. ACS Nano, 2011, 5, 8089-8099.	7.3	181
29	Self-assembly of Tiled Perovskite Monolayer and Multilayer Thin Films. Chemistry of Materials, 2000, 12, 2513-2516.	3.2	180
30	Crystalline Cobalt Oxide Films for Sustained Electrocatalytic Oxygen Evolution under Strongly Acidic Conditions. Chemistry of Materials, 2017, 29, 950-957.	3.2	173
31	Auâ”Cu Alloy Nanoparticles with Tunable Compositions and Plasmonic Properties: Experimental Determination of Composition and Correlation with Theory. Journal of Physical Chemistry C, 2010, 114, 19263-19269.	1.5	165
32	Synthesis, properties and applications of colloidal germanium and germanium-based nanomaterials. Chemical Society Reviews, 2013, 42, 2861-2879.	18.7	163
33	Rational construction of a scalable heterostructured nanorod megalibrary. Science, 2020, 367, 418-424.	6.0	163
34	Metallurgy in a Beaker:Â Nanoparticle Toolkit for the Rapid Low-Temperature Solution Synthesis of Functional Multimetallic Solid-State Materials. Journal of the American Chemical Society, 2005, 127, 3506-3515.	6.6	160
35	Shape-Controlled Conversion of Î²-Sn Nanocrystals into IntermetallicM-Sn (M= Fe, Co, Ni, Pd) Nanocrystals. Journal of the American Chemical Society, 2007, 129, 7339-7345.	6.6	143
36	Synthesis of CuPt Nanorod Catalysts with Tunable Lengths. Journal of the American Chemical Society, 2009, 131, 5720-5721.	6.6	141

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37	Low-Temperature Solution Synthesis of Nanocrystalline Binary Intermetallic Compounds Using the Polyol Process. Chemistry of Materials, 2005, 17, 6835-6841.	3.2	136
38	Converting nanocrystalline metals into alloys and intermetallic compounds for applications in catalysis. Journal of Materials Chemistry, 2008, 18, 275-282.	6.7	132
39	Synthesis and Crystallographic Analysis of Shape-Controlled SnS Nanocrystal Photocatalysts: Evidence for a Pseudotetragonal Structural Modification. Journal of the American Chemical Society, 2013, 135, 11634-11644.	6.6	129
40	Spontaneous Hierarchical Assembly of Rhodium Nanoparticles into Spherical Aggregates and Superlattices. Chemistry of Materials, 2005, 17, 514-520.	3.2	122
41	Direct Solution Synthesis of Intermetallic AuCu and AuCu3 Nanocrystals and Nanowire Networks. Chemistry of Materials, 2005, 17, 758-766.	3.2	122
42	Stability and Activity of Nonâ€Nobleâ€Metalâ€Based Catalysts Toward the Hydrogen Evolution Reaction. Angewandte Chemie - International Edition, 2017, 56, 9767-9771.	7.2	118
43	Highly branched cobalt phosphide nanostructures for hydrogen-evolution electrocatalysis. Journal of Materials Chemistry A, 2015, 3, 5420-5425.	5.2	116
44	Preserving Both Anion and Cation Sublattice Features during a Nanocrystal Cation-Exchange Reaction: Synthesis of Metastable Wurtzite-Type CoS and MnS. Journal of the American Chemical Society, 2016, 138, 471-474.	6.6	110
45	Partial Etching of Al from MoAlB Single Crystals To Expose Catalytically Active Basal Planes for the Hydrogen Evolution Reaction. Chemistry of Materials, 2017, 29, 8953-8957.	3.2	110
46	Low-Temperature Solution Synthesis of the Non-Equilibrium Ordered Intermetallic Compounds Au₃Fe, Au₃Co, and Au₃Ni as Nanocrystals. Journal of the American Chemical Society, 2008, 130, 11866-11867.	6.6	107
47	Nanocrystal conversion chemistry: A unified and materials-general strategy for the template-based synthesis of nanocrystalline solids. Journal of Solid State Chemistry, 2008, 181, 1509-1523.	1.4	103
48	Formation and Interlayer Decoupling of Colloidal MoSe₂ Nanoflowers. Chemistry of Materials, 2015, 27, 3167-3175.	3.2	103
49	Low-Temperature Polyol Synthesis of AuCuSn2and AuNiSn2:Â Using Solution Chemistry to Access Ternary Intermetallic Compounds as Nanocrystals. Journal of the American Chemical Society, 2005, 127, 7326-7327.	6.6	101
50	Supported Palladium Nanoparticles: An Efficient Catalyst for the Direct Formation of H₂O₂ from H₂ and O₂. Angewandte Chemie - International Edition, 2008, 47, 6221-6224.	7.2	100
51	Exfoliation of layered rutile and perovskite tungstates. Chemical Communications, 2002, , 706-707.	2.2	99
52	Bridging hcp-Ni and Ni₃C via a Ni₃C_{1-x} Solid Solution: Tunable Composition and Magnetism in Colloidal Nickel Carbide Nanoparticles. Chemistry of Materials, 2011, 23, 2475-2480.	3.2	99
53	Synthesis of Colloidal Auâ€“Cu₂S Heterodimers via Chemically Triggered Phase Segregation of AuCu Nanoparticles. Chemistry of Materials, 2012, 24, 1552-1554.	3.2	98
54	Solution Synthesis of Nanocrystalline Mâ‚Zn (M = Pd, Au, Cu) Intermetallic Compounds via Chemical Conversion of Metal Nanoparticle Precursors. Chemistry of Materials, 2007, 19, 4098-4104.	3.2	97

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55	Simultaneous Multication Exchange Pathway to High-Entropy Metal Sulfide Nanoparticles. Journal of the American Chemical Society, 2021, 143, 1017-1023.	6.6	97
56	Chemical Synthesis of Two-Dimensional Iron Chalcogenide Nanosheets: FeSe, FeTe, Fe(Se,Te), and FeTe₂. Chemistry of Materials, 2009, 21, 3655-3661.	3.2	95
57	Direct synthesis of H2O2 from H2 and O2 over Pdâ€“Pt/SiO2 bimetallic catalysts in a H2SO4/ethanol system. Applied Catalysis A: General, 2008, 339, 130-136.	2.2	92
58	Topochemical Synthesis of Three-Dimensional Perovskites from Lamellar Precursors. Journal of the American Chemical Society, 2000, 122, 2798-2803.	6.6	89
59	ZnO-Templated Synthesis of Wurtzite-Type ZnS and ZnSe Nanoparticles. Journal of the American Chemical Society, 2009, 131, 424-425.	6.6	85
60	Lowâ€Temperature Solution Synthesis of Fewâ€Layer 1Tâ€‰â€²â€MoTe₂ Nanostructures Exhibiting Lattice Compression. Angewandte Chemie - International Edition, 2016, 55, 2830-2834.	7.2	84
61	Multi-Step Topochemical Pathway to Metastable Mo₂AlB₂ and Related Two-Dimensional Nanosheet Heterostructures. Journal of the American Chemical Society, 2019, 141, 10852-10861.	6.6	84
62	Solution Synthesis of Cu₃PdN Nanocrystals as Ternary Metal Nitride Electrocatalysts for the Oxygen Reduction Reaction. Chemistry of Materials, 2014, 26, 6226-6232.	3.2	82
63	Uniform Hollow Carbon Shells: Nanostructured Graphitic Supports for Improved Oxygenâ€Reduction Catalysis. Angewandte Chemie - International Edition, 2010, 49, 7045-7048.	7.2	81
64	Colloidal Synthesis and Electrical Properties of GeSe Nanobelts. Chemistry of Materials, 2012, 24, 3643-3649.	3.2	81
65	Phase-Selective Chemical Extraction of Selenium and Sulfur from Nanoscale Metal Chalcogenides: A General Strategy for Synthesis, Purification, and Phase Targeting. Journal of the American Chemical Society, 2011, 133, 1294-1297.	6.6	76
66	Aqueous room-temperature synthesis of Auâ€“Rh, Auâ€“Pt, Ptâ€“Rh, and Pdâ€“Rh alloy nanoparticles: fully tunable compositions within the miscibility gaps. Journal of Materials Chemistry, 2011, 21, 11599.	6.7	76
67	Interface-mediated noble metal deposition on transition metal dichalcogenide nanostructures. Nature Chemistry, 2020, 12, 284-293.	6.6	73
68	Room-Temperature Chemical Synthesis of Shape-Controlled Indium Nanoparticles. Journal of the American Chemical Society, 2008, 130, 8140-8141.	6.6	72
69	Colloidal Synthesis of Air-Stable Crystalline Germanium Nanoparticles with Tunable Sizes and Shapes. Chemistry of Materials, 2010, 22, 6103-6108.	3.2	70
70	Solution Synthesis of Thiospinel CuCo₂S₄ Nanoparticles. Inorganic Chemistry, 2016, 55, 221-226.	1.9	69
71	Low-Temperature Solution Synthesis of Transition Metal Dichalcogenide Alloys with Tunable Optical Properties. Journal of the American Chemical Society, 2017, 139, 11096-11105.	6.6	68
72	Colloidal Synthesis of Nonâ€Equilibrium Wurtziteâ€Type MnSe. Angewandte Chemie - International Edition, 2010, 49, 4638-4640.	7.2	67

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73	Intermetallic Ni₂Ta Electrocatalyst for the Oxygen Evolution Reaction in Highly Acidic Electrolytes. Inorganic Chemistry, 2018, 57, 6010-6015.	1.9	61
74	Reacting the Unreactive:Â A Toolbox of Low-Temperature Solution-Mediated Reactions for the Facile Interconversion of Nanocrystalline Intermetallic Compounds. Journal of the American Chemical Society, 2006, 128, 9588-9589.	6.6	60
75	Comparison of the Performance of CoP-Coated and Pt-Coated Radial Junction n⁺p-Silicon Microwire-Array Photocathodes for the Sunlight-Driven Reduction of Water to H₂(g). Journal of Physical Chemistry Letters, 2015, 6, 1679-1683.	2.1	60
76	X-ray-Based Techniques to Study the Nanoâ€“Bio Interface. ACS Nano, 2021, 15, 3754-3807.	7.3	60
77	M13 Bacteriophage as a Biological Scaffold for Magnetically-Recoverable Metal Nanowire Catalysts: Combining Specific and Nonspecific Interactions To Design Multifunctional Nanocomposites. Chemistry of Materials, 2009, 21, 2176-2178.	3.2	58
78	The Active Phase in the Direct Synthesis of H2O2 from H2 and O2 over Pd/SiO2 Catalyst in a H2SO4/Ethanol System. Catalysis Letters, 2009, 132, 342-348.	1.4	55
79	Synthesis of Hybrid Au-In₂O₃ Nanoparticles Exhibiting Dual Plasmonic Resonance. Chemistry of Materials, 2014, 26, 5900-5904.	3.2	55
80	Chemical Synthesis of Air-Stable Manganese Nanoparticles. Journal of the American Chemical Society, 2009, 131, 9144-9145.	6.6	54
81	Structureâ€Selective Cation Exchange in the Synthesis of Zincblende MnS and CoS Nanocrystals. Angewandte Chemie - International Edition, 2017, 56, 6464-6467.	7.2	53
82	Microscopic Investigation of Chemoselectivity in Agâ€“Ptâ€“Fe₃O₄ Heterotrimer Formation: Mechanistic Insights and Implications for Controlling High-Order Hybrid Nanoparticle Morphology. Journal of the American Chemical Society, 2015, 137, 15493-15500.	6.6	52
83	Colloidal Synthesis of Germanium Nanocrystals Using Room-Temperature Benchtop Chemistry. Chemistry of Materials, 2009, 21, 4105-4107.	3.2	51
84	KLnTiO4 (Ln=La, Nd, Sm, Eu, Gd, Dy): A New Series of Ruddlesdenâ€“Popper Phases Synthesized by Ion-Exchange of HLnTiO4. Journal of Solid State Chemistry, 2001, 161, 225-232.	1.4	50
85	Engineering Porosity into Single-Crystal Colloidal Nanosheets Using Epitaxial Nucleation and Chalcogenide Anion Exchange Reactions: The Conversion of SnSe to SnTe. Chemistry of Materials, 2012, 24, 3088-3093.	3.2	50
86	Structure-Selective Synthesis of Wurtzite and Zincblende ZnS, CdS, and CuInS₂ Using Nanoparticle Cation Exchange Reactions. Inorganic Chemistry, 2019, 58, 672-678.	1.9	50
87	Synthesis, Proton Exchange, and Topochemical Dehydration of New Ruddlesdenâ€“Popper Tantalates and Titanotantalates. Journal of Solid State Chemistry, 2000, 155, 46-54.	1.4	49
88	Colloidal Crystal Microarrays and Two-Dimensional Superstructures:Â A Versatile Approach for Patterned Surface Assembly. Langmuir, 2004, 20, 7293-7297.	1.6	49
89	Sequential Anion and Cation Exchange Reactions for Complete Material Transformations of Nanoparticles with Morphological Retention. Angewandte Chemie - International Edition, 2015, 54, 8669-8672.	7.2	49
90	Exploiting Crystallographic Regioselectivity To Engineer Asymmetric Three-Component Colloidal Nanoparticle Isomers Using Partial Cation Exchange Reactions. Journal of the American Chemical Society, 2018, 140, 6771-6775.	6.6	49

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91	Optimized Synthesis and Magnetic Properties of Intermetallic Au₃Fe_{1â^'x}, Au₃Co_{1â^'x}, and Au₃Ni_{1â^'x} Nanoparticles. Chemistry of Materials, 2010, 22, 3988-3994.	3.2	48
92	Purification and Magnetic Interrogation of Hybrid Auâ€Fe₃O₄ and FePtâ€Fe₃O₄ Nanoparticles. Angewandte Chemie - International Edition, 2011, 50, 9875-9879.	7.2	45
93	Solution Synthesis of Metal Silicide Nanoparticles. Inorganic Chemistry, 2015, 54, 707-709.	1.9	45
94	Ligand-Induced Fate of Embryonic Species in the Shape-Controlled Synthesis of Rhodium Nanoparticles. ACS Nano, 2015, 9, 1707-1720.	7.3	44
95	Multistep Solution-Mediated Formation of AuCuSn2:Â Mechanistic Insights for the Guided Design of Intermetallic Solid-State Materials and Complex Multimetal Nanocrystals. Journal of the American Chemical Society, 2006, 128, 11475-11482.	6.6	43
96	A Library of Single-Crystal Metalâ^'Tin Nanorods: Using Diffusion as a Tool for Controlling the Morphology of Intermetallic Nanocrystals. Chemistry of Materials, 2008, 20, 2081-2085.	3.2	41
97	Insights into the Thermal Decomposition of Co(II) Oleate for the Shape-Controlled Synthesis of Wurtzite-Type CoO Nanocrystals. Chemistry of Materials, 2014, 26, 1492-1499.	3.2	41
98	Low-Temperature Nanoparticle-Directed Solid-State Synthesis of Ternary and Quaternary Transition Metal Oxides. Chemistry of Materials, 2006, 18, 567-571.	3.2	40
99	Colloidally-synthesized cobalt molybdenum nanoparticles as active and stable electrocatalysts for the hydrogen evolution reaction under alkaline conditions. Journal of Materials Chemistry A, 2016, 4, 3077-3081.	5.2	40
100	Ternary Hybrid Nanoparticle Isomers: Directing the Nucleation of Ag on Ptâ€“Fe₃O₄ Using a Solid-State Protecting Group. ACS Nano, 2014, 8, 1047-1055.	7.3	38
101	Synthesis of tetragonal mackinawite-type FeS nanosheets by solvothermal crystallization. Journal of Solid State Chemistry, 2012, 196, 17-20.	1.4	37
102	Full Disclosure: The Practical Side of Nanoscale Total Synthesis. ACS Nano, 2012, 6, 8492-8497.	7.3	36
103	Bulk iron pyrite as a catalyst for the selective hydrogenation of nitroarenes. Chemical Communications, 2017, 53, 4807-4810.	2.2	36
104	Insights into the Seeded-Growth Synthesis of Colloidal Hybrid Nanoparticles. Chemistry of Materials, 2017, 29, 106-119.	3.2	36
105	Experimental Insights into Partial Cation Exchange Reactions for Synthesizing Heterostructured Metal Sulfide Nanocrystals. Chemistry of Materials, 2020, 32, 5461-5482.	3.2	35
106	Made-to-Order Heterostructured Nanoparticle Libraries. Accounts of Chemical Research, 2020, 53, 2558-2568.	7.6	34
107	Controlling Configurational Isomerism in Three-Component Colloidal Hybrid Nanoparticles. Accounts of Chemical Research, 2017, 50, 1433-1440.	7.6	32
108	Chemical Transformation of Ptâ€“Fe₃O₄ Colloidal Hybrid Nanoparticles into PtPbâ€“Fe₃O₄ and Pt₃Snâ€“Fe₃O₄ Heterodimers and (PtPbâ€“Fe₃O₄)_n Nanoflowers. Chemistry of Materials, 2013, 25, 1886-1892.	3.2	31

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109	Oxidative Transformation of Intermetallic Nanoparticles:â€‰ An Alternative Pathway to Metal/Oxide Nanocomposites, Textured Ceramics, and Nanocrystalline Multimetal Oxides. Chemistry of Materials, 2007, 19, 4545-4550.	3.2	30
110	Defect-mediated selective hydrogenation of nitroarenes on nanostructured WS₂. Chemical Science, 2019, 10, 10310-10317.	3.7	30
111	Phase-Selective Solution Synthesis of Perovskite-Related Cesium Cadmium Chloride Nanoparticles. Inorganic Chemistry, 2020, 59, 11688-11694.	1.9	30
112	Liquid-Phase Synthesis of Uniform Cube-Shaped GeTe Microcrystals. Chemistry of Materials, 2010, 22, 3236-3240.	3.2	29
113	Auâ€“Ge and Agâ€“Ge Heterodimers with Tunable Domain Sizes: A Supersaturation-Precipitation Route to Colloidal Hybrid Nanoparticles. Chemistry of Materials, 2013, 25, 4304-4311.	3.2	29
114	Colloidal Hybrid Nanoparticle Insertion Reaction for Transforming Heterodimers into Heterotrimers. Journal of the American Chemical Society, 2015, 137, 12514-12517.	6.6	29
115	Colloidal Nanostructures of Transition-Metal Dichalcogenides. Accounts of Chemical Research, 2021, 54, 1517-1527.	7.6	29
116	Orthogonal Reactivity of Metal and Multimetal Nanostructures for Selective, Stepwise, and Spatially-Controlled Solid-State Modification. ACS Nano, 2009, 3, 940-948.	7.3	26
117	Phosphine-Induced Phase Transition in Copper Sulfide Nanoparticles Prior to Initiation of a Cation Exchange Reaction. Journal of the American Chemical Society, 2020, 142, 13345-13349.	6.6	26
118	Synthesis of nanocrystalline REBO3 (RE=Y, Nd, Sm, Eu, Gd, Ho) and YBO3:Eu using a borohydride-based solution precursor route. Journal of Solid State Chemistry, 2008, 181, 3264-3268.	1.4	25
119	Morphology-Dependent Phase Selectivity of Cobalt Sulfide during Nanoparticle Cation Exchange Reactions. Journal of the American Chemical Society, 2021, 143, 7915-7919.	6.6	24
120	Ptâ€“Au Nanoparticle Heterodimers as Seeds for Ptâ€“Auâ€“Metal Sulfide Heterotrimers: Thermal Stability and Chemoselective Growth Characteristics. Journal of Physical Chemistry C, 2015, 119, 8952-8959.	1.5	23
121	Solution synthesis of few-layer WTe₂and Mo_xW_{1â^'x}Te₂nanostructures. Journal of Materials Chemistry C, 2017, 5, 11317-11323.	2.7	23
122	Optimizing accuracy and efficacy in data-driven materials discovery for the solar production of hydrogen. Energy and Environmental Science, 2021, 14, 2335-2348.	15.6	23
123	Nanoscience and Nanotechnology Impacting Diverse Fields of Science, Engineering, and Medicine. ACS Nano, 2016, 10, 10615-10617.	7.3	22
124	Lowâ€Temperature Solution Synthesis of Fewâ€Layer 1Tâ€‰â€²â€MoTe 2 Nanostructures Exhibiting Lattice Compression. Angewandte Chemie, 2016, 128, 2880-2884.	1.6	22
125	Sizeâ€•and Interfaceâ€Modulated Metalâ€“Insulator Transition in Solutionâ€Synthesized Nanoscale VO₂â€TiO₂â€VO₂ Heterostructures. Angewandte Chemie - International Edition, 2017, 56, 15550-15554.	7.2	22
126	Solution chemistry synthesis, morphology studies, and optical properties of five distinct nanocrystalline Auâ€“Zn intermetallic compounds. Journal of Alloys and Compounds, 2010, 490, 98-102.	2.8	21

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127	Seeded Growth of Metal Nitrides on Noble-Metal Nanoparticles To Form Complex Nanoscale Heterostructures. Chemistry of Materials, 2019, 31, 4605-4613.	3.2	21
128	Converting a layer perovskite into a non-defective higher-order homologue: topochemical synthesis of Eu2CaTi2O7. Chemical Communications, 2001, , 853-854.	2.2	20
129	Pawley and Rietveld refinements using electron diffraction from L12-type intermetallic Au3Fe1â^'x nanocrystals during their in-situ orderâ€"disorder transition. Ultramicroscopy, 2011, 111, 1295-1304.	0.8	20
130	Emergence and Control of Stacking Fault Formation during Nanoparticle Cation Exchange Reactions. Journal of the American Chemical Society, 2021, 143, 1779-1783.	6.6	20
131	Reactive AgAuS and Ag₃AuS₂ Synthons Enable the Sequential Transformation of Spherical Nanocrystals into Asymmetric Multicomponent Hybrid Nanoparticles. Chemistry of Materials, 2017, 29, 4153-4160.	3.2	19
132	Colloidal Nanoparticles of a Metastable Copper Selenide Phase with Near-Infrared Plasmon Resonance. Chemistry of Materials, 2020, 32, 10227-10234.	3.2	19
133	Semi-preparative asymmetrical flow field-flow fractionation: A closer look at channel dimensions and separation performance. Journal of Chromatography A, 2017, 1499, 149-157.	1.8	18
134	Solution-Mediated Growth of Two-Dimensional SnSe@GeSe Nanosheet Heterostructures. Chemistry of Materials, 2017, 29, 817-822.	3.2	18
135	Low-Temperature Solution-Mediated Synthesis of Polycrystalline Intermetallic Compounds from Bulk Metal Powders. Chemistry of Materials, 2008, 20, 3212-3217.	3.2	16
136	On-Wire Conversion Chemistry: Engineering Solid-State Complexity into Striped Metal Nanowires using Solution Chemistry Reactions. Journal of the American Chemical Society, 2008, 130, 14042-14043.	6.6	16
137	Redefining the Experimental and Methods Sections. ACS Nano, 2019, 13, 4862-4864.	7.3	16
138	Solution-Phase Synthesis and Magnetic Properties of Single-Crystal Iron Germanide Nanostructures. Chemistry of Materials, 2013, 25, 4396-4401.	3.2	15
139	Synthetic Deconvolution of Interfaces and Materials Components in Hybrid Nanoparticles. Chemistry of Materials, 2017, 29, 6168-6177.	3.2	15
140	Magnetic separation of colloidal nanoparticle mixtures using a material specific peptide. Chemical Communications, 2013, 49, 5471.	2.2	14
141	Retrosynthetic Design of Morphologically Complex Metal Sulfide Nanoparticles Using Sequential Partial Cation Exchange and Chemical Etching. , 2020, 2, 1106-1114.		13
142	Synthetic Control of Hot-Electron Thermalization Efficiency in Size-Tunable Auâ€"Pt Hybrid Nanoparticles. ACS Nano, 2021, 15, 1378-1387.	7.3	13
143	Why Do We Care about Studying Transformations in Inorganic Nanocrystals?. Accounts of Chemical Research, 2021, 54, 1543-1544.	7.6	13
144	Solution-Synthesized In4SnSe4 Semiconductor Microwires with a Direct Band Gap. Chemistry of Materials, 2017, 29, 1095-1098.	3.2	12

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145	Multistep Regioselectivity and Non-Kirkendall Anion Exchange of Copper Chalcogenide Nanorods. Chemistry of Materials, 2021, 33, 3841-3850.	3.2	11
146	ZnO-Templated Synthesis and Metal-Insulator Transition of VO₂ Nanostructures. Chemistry of Materials, 2019, 31, 2088-2096.	3.2	10
147	Self-Assembled Colloidal Crystals: Visualizing Atomic Crystal Chemistry Using Microscopic Analogues of Inorganic Solids. Journal of Chemical Education, 2005, 82, 450.	1.1	9
148	Colloidal ZnO and Zn_{1â^'x}Co_xO tetrapod nanocrystals with tunable arm lengths. Nanoscale, 2015, 7, 16671-16676.	2.8	9
149	Metal Ruthenate Perovskites as Heterogeneous Catalysts for the Hydrolysis of Ammonia Borane. ACS Omega, 2018, 3, 3501-3506.	1.6	9
150	In Situ Evolution of Ru₄Al₁₃ Crystals into a Highly Active Catalyst for the Hydrogen Evolution Reaction. Chemistry of Materials, 2021, 33, 7124-7131.	3.2	9
151	Structureâ€Selective Cation Exchange in the Synthesis of Zincblende MnS and CoS Nanocrystals. Angewandte Chemie, 2017, 129, 6564-6567.	1.6	8
152	Composition-Based Separation of Ptâ€“Fe₃O₄ Hybrid Nanoparticles by Thermal Field-Flow Fractionation. ACS Applied Nano Materials, 2018, 1, 6435-6443.	2.4	8
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