

Kyle D Gilroy

List of Publications by Year in descending order

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58
papers

4,620
citations

159585

30
h-index

138484

58
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60
all docs

60
docs citations

60
times ranked

6520
citing authors

#	ARTICLE	IF	CITATIONS
1	Bimetallic Nanocrystals: Syntheses, Properties, and Applications. <i>Chemical Reviews</i> , 2016, 116, 10414-10472.	47.7	1,339
2	Seed-Mediated Growth of Colloidal Metal Nanocrystals. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 60-95.	13.8	581
3	Intermetallic Nanocrystals: Syntheses and Catalytic Applications. <i>Advanced Materials</i> , 2017, 29, 1605997.	21.0	375
4	Facile Synthesis of Silver Nanocubes with Sharp Corners and Edges in an Aqueous Solution. <i>ACS Nano</i> , 2016, 10, 9861-9870.	14.6	149
5	Synthesis of Colloidal Metal Nanocrystals: A Comprehensive Review on the Reductants. <i>Chemistry - A European Journal</i> , 2018, 24, 16944-16963.	3.3	143
6	Shape-Controlled Synthesis of Colloidal Metal Nanocrystals by Replicating the Surface Atomic Structure on the Seed. <i>Advanced Materials</i> , 2018, 30, e1706312.	21.0	114
7	Textile-templated electrospun anisotropic scaffolds for regenerative cardiac tissue engineering. <i>Biomaterials</i> , 2014, 35, 8540-8552.	11.4	85
8	Symmetry breaking during nanocrystal growth. <i>Chemical Communications</i> , 2017, 53, 4530-4541.	4.1	84
9	Icosahedral nanocrystals of noble metals: Synthesis and applications. <i>Nano Today</i> , 2017, 15, 121-144.	11.9	83
10	Hollow Metal Nanocrystals with Ultrathin, Porous Walls and Well-Controlled Surface Structures. <i>Advanced Materials</i> , 2018, 30, e1801956.	21.0	83
11	Seeing Is Believing: Hot Electron Based Gold Nanoplasmonic Optical Hydrogen Sensor. <i>ACS Nano</i> , 2014, 8, 7755-7762.	14.6	80
12	Reduction rate as a quantitative knob for achieving deterministic synthesis of colloidal metal nanocrystals. <i>Chemical Science</i> , 2017, 8, 6730-6749.	7.4	75
13	Sacrificial Templates for Galvanic Replacement Reactions: Design Criteria for the Synthesis of Pure Pt Nanoshells with a Smooth Surface Morphology. <i>Chemistry of Materials</i> , 2014, 26, 3340-3347.	6.7	72
14	Photocatalytic Enhancements to the Reduction of 4-Nitrophenol by Resonantly Excited Triangular Gold-Copper Nanostructures. <i>Journal of Physical Chemistry C</i> , 2015, 119, 17308-17315.	3.1	71
15	Synthesis of Ru Icosahedral Nanocages with a Face-Centered-Cubic Structure and Evaluation of Their Catalytic Properties. <i>ACS Catalysis</i> , 2018, 8, 6948-6960.	11.2	66
16	Gold-Based Cubic Nanoboxes with Well-Defined Openings at the Corners and Ultrathin Walls Less Than Two Nanometers Thick. <i>ACS Nano</i> , 2016, 10, 8019-8025.	14.6	65
17	Keimvermitteltes Wachstum kolloidaler Metallnanokristalle. <i>Angewandte Chemie</i> , 2017, 129, 60-98.	2.0	64
18	Autocatalytic surface reduction and its role in controlling seed-mediated growth of colloidal metal nanocrystals. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 13619-13624.	7.1	64

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19	Kinetically Controlled Nucleation of Silver on Surfactant-Free Gold Seeds. <i>Journal of the American Chemical Society</i> , 2014, 136, 15337-15345.	13.7	62
20	Synthesis of Pt nanocrystals with different shapes using the same protocol to optimize their catalytic activity toward oxygen reduction. <i>Materials Today</i> , 2018, 21, 834-844.	14.2	58
21	Facile Synthesis of Ru-Based Octahedral Nanocages with Ultrathin Walls in a Face-Centered Cubic Structure. <i>Chemistry of Materials</i> , 2017, 29, 9227-9237.	6.7	55
22	Enabling Complete Ligand Exchange on the Surface of Gold Nanocrystals through the Deposition and Then Etching of Silver. <i>Journal of the American Chemical Society</i> , 2018, 140, 11898-11901.	13.7	53
23	General Approach to the Synthesis of Heterodimers of Metal Nanoparticles through Site-Selected Protection and Growth. <i>Nano Letters</i> , 2019, 19, 6703-6708.	9.1	51
24	A Wulff in a Cage: The Confinement of Substrate-Based Structures in Plasmonic Nanoshells, Nanocages, and Nanoframes Using Galvanic Replacement. <i>ACS Nano</i> , 2016, 10, 6354-6362.	14.6	50
25	Fabrication of Submicrometer-Thick Solid Electrolyte Membranes of $\text{Li}^+\text{PS}^-\text{4}$ via Tiled Assembly of Nanoscale, Plate-Like Building Blocks. <i>Advanced Energy Materials</i> , 2018, 8, 1800014.	19.5	47
26	Ruthenium Nanoframes in the Face-Centered Cubic Phase: Facile Synthesis and Their Enhanced Catalytic Performance. <i>ACS Nano</i> , 2019, 13, 7241-7251.	14.6	47
27	Noble Metal Nanostructure Synthesis at the Liquid-Substrate Interface: New Structures, New Insights, and New Possibilities. <i>Accounts of Chemical Research</i> , 2016, 49, 2243-2250.	15.6	46
28	Dynamic templating: a large area processing route for the assembly of periodic arrays of sub-micrometer and nanoscale structures. <i>Nanoscale</i> , 2013, 5, 1929.	5.6	45
29	Thermal Stability of Metal Nanocrystals: An Investigation of the Surface and Bulk Reconstructions of Pd Concave Icosahedra. <i>Nano Letters</i> , 2017, 17, 3655-3661.	9.1	43
30	Mechanistic study of substrate-based galvanic replacement reactions. <i>Nano Research</i> , 2014, 7, 365-379.	10.4	32
31	Photothermal transformation of Au-Ag nanocages under pulsed laser irradiation. <i>Nanoscale</i> , 2019, 11, 3013-3020.	5.6	29
32	A Rationally Designed Route to the One-Pot Synthesis of Right Bipyramidal Nanocrystals of Copper. <i>Chemistry of Materials</i> , 2018, 30, 6469-6477.	6.7	28
33	Citrate-Induced Nanocubes: A Re-Examination of the Role of Citrate as a Shape-Directing Capping Agent for Ag-Based Nanostructures. <i>Small</i> , 2016, 12, 3444-3452.	10.0	27
34	Substrate-based galvanic replacement reactions carried out on heteroepitaxially formed silver templates. <i>Nano Research</i> , 2013, 6, 418-428.	10.4	26
35	Pentatwinned Cu Nanowires with Ultrathin Diameters below 20 nm and Their Use as Templates for the Synthesis of Ag-Based Nanotubes. <i>ChemNanoMat</i> , 2017, 3, 190-195.	2.8	25
36	Water-Based Synthesis of 10 nm Pt Octahedra and Their Performance towards the Oxygen Reduction Reaction. <i>ChemNanoMat</i> , 2017, 3, 879-884.	2.8	22

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37	A facile, robust and scalable method for the synthesis of Pd nanoplates with hydroxylamine as a reducing agent and mechanistic insights from kinetic analysis. <i>Journal of Materials Chemistry C</i> , 2018, 6, 4677-4682.	5.5	22
38	On the Thermodynamics and Experimental Control of Twinning in Metal Nanocrystals. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 8647-8651.	13.8	21
39	Toward a Quantitative Understanding of the Sulfate-Mediated Synthesis of Pd Decahedral Nanocrystals with High Conversion and Morphology Yields. <i>Chemistry of Materials</i> , 2016, 28, 8800-8806.	6.7	20
40	Palladium@Platinum Concave Nanocubes with Enhanced Catalytic Activity toward Oxygen Reduction. <i>ChemCatChem</i> , 2016, 8, 3082-3088.	3.7	19
41	Behavior of gold nanoparticles in an experimental algal "zooplankton food chain. <i>Journal of Nanoparticle Research</i> , 2014, 16, 1.	1.9	18
42	Synthesis of Palladium Nanoscale Octahedra through a One-Pot, Dual-Reductant Route and Kinetic Analysis. <i>Chemistry - A European Journal</i> , 2018, 24, 6133-6139.	3.3	18
43	Facile Synthesis of ⁶⁴ Cu-Doped Au Nanocages for Positron Emission Tomography Imaging. <i>ChemNanoMat</i> , 2017, 3, 44-50.	2.8	16
44	Plastically deformed Cu-based alloys as high-performance catalysts for the reduction of 4-nitrophenol. <i>Catalysis Science and Technology</i> , 2016, 6, 5737-5745.	4.1	15
45	Dimerization of Colloidal Particles through Controlled Aggregation for Enhanced Properties and Applications. <i>Chemistry - an Asian Journal</i> , 2016, 11, 2341-2351.	3.3	15
46	Rhodium Decahedral Nanocrystals: Facile Synthesis, Mechanistic Insights, and Experimental Controls. <i>ChemNanoMat</i> , 2018, 4, 66-70.	2.8	15
47	Electrospun metal and metal alloy decorated TiO ₂ nanofiber photocatalysts for hydrogen generation. <i>RSC Advances</i> , 2018, 8, 32865-32876.	3.6	15
48	Eutectic Combinations as a Pathway to the Formation of Substrate-Based Au-Ce Heterodimers and Hollowed Au Nanocrescents with Tunable Optical Properties. <i>Small</i> , 2014, 10, 3379-3388.	10.0	13
49	Gold icosahedral nanocages: Facile synthesis, optical properties, and fragmentation under ultrasonication. <i>Chemical Physics Letters</i> , 2017, 683, 613-618.	2.6	13
50	Controlling the Deposition of Pd on Au Nanocages: Outer Surface Only versus Both Outer and Inner Surfaces. <i>Nano Letters</i> , 2017, 17, 5682-5687.	9.1	12
51	Organized Surfaces of Highly Faceted Single-Crystal Palladium Structures Seeded by Sacrificial Templates. <i>Crystal Growth and Design</i> , 2013, 13, 3847-3851.	3.0	11
52	A General Approach to the Synthesis of M@Au/Ag (M = Au, Pd, and Pt) Nanorattles with Ultrathin Shells Less Than 2.5 nm Thick. <i>Particle and Particle Systems Characterization</i> , 2017, 34, 1600279.	2.3	9
53	Micropatterned Polymer Nanorod Forests and Their Use for Dual Drug Loading and Regulation of Cell Adhesion. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 34194-34197.	8.0	6
54	On the Thermodynamics and Experimental Control of Twinning in Metal Nanocrystals. <i>Angewandte Chemie</i> , 2017, 129, 8773-8777.	2.0	6

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55	Colloidal Nanospheres of Amorphous Selenium: Facile Synthesis, Size Control, and Optical Properties. ChemNanoMat, 2021, 7, 620-625.	2.8	5
56	Decomposition Kinetics of H ₂ O ₂ on Pd Nanocrystals with Different Shapes and Surface Strains. ChemCatChem, 2022, 14, .	3.7	5
57	Synthesis and Properties of Au Hydride. ChemistrySelect, 2019, 4, 4287-4292.	1.5	4
58	Frontispiece: Synthesis of Colloidal Metal Nanocrystals: A Comprehensive Review on the Reductants. Chemistry - A European Journal, 2018, 24, .	3.3	0