John Watt

List of Publications by Year in descending order

46 papers	2,563 citations	279487 23 h-index	253896 43 g-index
50 all docs	50 docs citations	50 times ranked	4006 citing authors

#	Article	IF	Citations
1	Shape control of platinum and palladium nanoparticles for catalysis. Nanoscale, 2010, 2, 2045.	2.8	305
2	Enhanced Nanoparticle Size Control by Extending LaMerâ€™s Mechanism. Chemistry of Materials, 2015, 27, 6059-6066.	3.2	195
3	Ultrafast Growth of Highly Branched Palladium Nanostructures for Catalysis. ACS Nano, 2010, 4, 396-402.	7.3	194
4	A Synthetic Hydrogel Composite with the Mechanical Behavior and Durability of Cartilage. Advanced Functional Materials, 2020, 30, 2003451.	7.8	171
5	In Situ and Ex Situ Studies of Platinum Nanocrystals: Growth and Evolution in Solution. Journal of the American Chemical Society, 2009, 131, 14590-14595.	6.6	157
6	A single-Pt-atom-on-Ru-nanoparticle electrocatalyst for CO-resilient methanol oxidation. Nature Catalysis, 2022, 5, 231-237.	16.1	133
7	Review of Multifunctional Separators: Stabilizing the Cathode and the Anode for Alkali (Li, Na, and K) Metalâ€“Sulfur and Selenium Batteries. Chemical Reviews, 2022, 122, 8053-8125.	23.0	132
8	Synthesis and Structural Characterization of Branched Palladium Nanostructures. Advanced Materials, 2009, 21, 2288-2293.	11.1	124
9	Dendriteâ€Free Potassium Metal Anodes in a Carbonate Electrolyte. Advanced Materials, 2020, 32, e1906735.	11.1	107
10	Goldâ€“Palladium Coreâ€“Shell Nanocrystals with Size and Shape Control Optimized for Catalytic Performance. Angewandte Chemie - International Edition, 2013, 52, 1477-1480.	7.2	104
11	Gold over Branched Palladium Nanostructures for Photothermal Cancer Therapy. ACS Nano, 2015, 9, 12283-12291.	7.3	102
12	How to control the shape of metal nanostructures in organic solution phase synthesis for plasmonics and catalysis. Nano Today, 2013, 8, 198-215.	6.2	94
13	Faceted Branched Nickel Nanoparticles with Tunable Branch Length for Highâ€Activity Electrocatalytic Oxidation of Biomass. Angewandte Chemie - International Edition, 2020, 59, 15487-15491.	7.2	83
14	Can Polymorphism be Used to form Branched Metal Nanostructures?. Advanced Materials, 2013, 25, 1552-1556.	11.1	72
15	Stable Potassium Metal Anodes with an Allâ€Aluminum Current Collector through Improved Electrolyte Wetting. Advanced Materials, 2020, 32, e2002908.	11.1	70
16	Shape Control from Thermodynamic Growth Conditions: The Case of hcp Ruthenium Hourglass Nanocrystals. Journal of the American Chemical Society, 2013, 135, 606-609.	6.6	67
17	Formation of Branched Ruthenium Nanoparticles for Improved Electrocatalysis of Oxygen Evolution Reaction. Small, 2019, 15, e1804577.	5.2	54
18	Ostwaldâ€™s Rule of Stages and Its Role in CdSe Quantum Dot Crystallization. Journal of the American Chemical Society, 2012, 134, 17046-17052.	6.6	48

#	Article	IF	Citations
19	Multifunctional Separator Allows Stable Cycling of Potassium Metal Anodes and of Potassium Metal Batteries. Advanced Materials, 2022, 34, e2105855.	11.1	45
20	Efficient conversion of lignin into a water-soluble polymer by a chelator-mediated Fenton reaction: optimization of H₂O₂use and performance as a dispersant. Green Chemistry, 2018, 20, 3024-3037.	4.6	36
21	Effect of Seed Age on Gold Nanorod Formation: A Microfluidic, Real-Time Investigation. Chemistry of Materials, 2015, 27, 6442-6449.	3.2	34
22	Non-volatile iron carbonyls as versatile precursors for the synthesis of iron-containing nanoparticles. Nanoscale, 2017, 9, 6632-6637.	2.8	26
23	Cesium Lead Halide Perovskite Nanocrystals Assembled in Metalâ€Organic Frameworks for Stable Blue Light Emitting Diodes. Advanced Science, 2022, 9, e2105850.	5.6	23
24	Auâ€“Pd Coreâ€“Shell Nanoparticles as Alcohol Oxidation Catalysts: Effect of Shape and Composition. ChemSusChem, 2013, 6, 1858-1862.	3.6	21
25	Facettierte verzweigte Nickelâ€Nanopartikel mit variierbarer VerzweigungslÃnge fÃ¼r die hochaktive elektrokatalytische Oxidation von Biomasse. Angewandte Chemie, 2020, 132, 15615-15620.	1.6	18
26	Reversible Magnetic Agglomeration: A Mechanism for Thermodynamic Control over Nanoparticle Size. Angewandte Chemie - International Edition, 2018, 57, 7678-7681.	7.2	17
27	Soft matter and nanomaterials characterization by cryogenic transmission electron microscopy. MRS Bulletin, 2019, 44, 942-948.	1.7	15
28	Controlling Pt Crystal Defects on the Surface of Niâ€“Pt Coreâ€“Shell Nanoparticles for Active and Stable Electrocatalysts for Oxygen Reduction. ACS Applied Nano Materials, 2020, 3, 5995-6000.	2.4	15
29	Role of Interface Chemistry in Opening New Radiative Pathways in InP/CdSe Giant Quantum Dots with Blinkingâ€Suppressed Twoâ€Color Emission. Advanced Functional Materials, 2019, 29, 1809111.	7.8	13
30	Gram scale synthesis of Fe/FexOy coreâ€“shell nanoparticles and their incorporation into matrix-free superparamagnetic nanocomposites. Journal of Materials Research, 2018, 33, 2156-2167.	1.2	10
31	Magnetically Recoverable Pd/Fe₃O₄ Coreâ€“Shell Nanowire Clusters with Increased Hydrogenation Activity. ChemPlusChem, 2017, 82, 347-351.	1.3	7
32	Formation of Metal Nanoparticles Directly from Bulk Sources Using Ultrasound and Application to Eâ€Waste Upcycling. Small, 2018, 14, 1703615.	5.2	7
33	Improved Crystalline Structure and Enhanced Photoluminescence of ZnO Nanolayers in Bi₂Se₃/ZnO Heterostructures. Journal of Physical Chemistry C, 2019, 123, 31156-31166.	1.5	7
34	In situ TEM study of crystallization and chemical changes in an oxidized uncapped Ge2Sb2Te5 film. Journal of Applied Physics, 2020, 128, 124505.	1.1	7
35	Magnetic Nanocomposites and Their Incorporation into Higher Order Biosynthetic Functional Architectures. ACS Omega, 2018, 3, 503-508.	1.6	6
36	Reversible Magnetic Agglomeration: A Mechanism for Thermodynamic Control over Nanoparticle Size. Angewandte Chemie, 2018, 130, 7804-7807.	1.6	5

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37	Finite element modeling of nanoscale-enabled microinductors for power electronics. Journal of Materials Research, 2018, 33, 2223-2233.	1.2	4
38	Templated synthesis enhances the cobalt adsorption capacity of a porous organic polymer. Nanoscale, 2022, 14, 299-304.	2.8	3
39	Strong Purcell enhancement at telecom wavelengths afforded by spinel Fe3O4 nanocrystals with size-tunable plasmonic properties. Nanoscale Horizons, 2021, , .	4.1	2
40	Ultrasonication: Formation of Metal Nanoparticles Directly from Bulk Sources Using Ultrasound and Application to Eâ€Waste Upcycling (Small 17/2018). Small, 2018, 14, 1870078.	5.2	1
41	Titelbild: Reversible Magnetic Agglomeration: A Mechanism for Thermodynamic Control over Nanoparticle Size (Angew. Chem. 26/2018). Angewandte Chemie, 2018, 130, 7657-7657.	1.6	0
42	Design and Evaluation of Nano-Composite Core Inductors for Efficiency Improvement in High-Frequency Power Converters. , 2020, , .		0
43	In-situ Electron Microscopy to Inform Superior Magnetic Nanocomposites. Microscopy and Microanalysis, 2020, 26, 2554-2555.	0.2	0
44	Investigation of Phase Transformations in Ge4Sb4Te5 film using Transmission Electron Microscopy. Microscopy and Microanalysis, 2021, 27, 1240-1242.	0.2	0
45	Chemistry, Microstructure, and Interphases of Magnesium Metal Anodes Captured Via Cryogenic Electron Microscopy. ECS Meeting Abstracts, 2020, MA2020-01, 138-138.	0.0	0
46	CHAPTER 12. Copper-based Multinary Materials for Solar Cells. RSC Nanoscience and Nanotechnology, 0, , 393-435.	0.2	0