John Watt

List of Publications by Citations

43 papers	1,762 citations	19 h-index	41 g-index
50 ext. papers	2,125 ext. citations	12.6 avg, IF	4.72 L-index

#	Paper	IF	Citations
43	Shape control of platinum and palladium nanoparticles for catalysis. *Nanoscale*, **2010**, 2, 2045-53	7.7	272
42	Ultrafast growth of highly branched palladium nanostructures for catalysis. *ACS Nano*, **2010**, 4, 396-402	16.7	183
41	Enhanced Nanoparticle Size Control by Extending LaMer's Mechanism. *Chemistry of Materials*, **2015**, 27, 6059-6066	9.6	158
40	In situ and ex situ studies of platinum nanocrystals: growth and evolution in solution. *Journal of the American Chemical Society*, **2009**, 131, 14590-5	16.4	151
39	Synthesis and Structural Characterization of Branched Palladium Nanostructures. *Advanced Materials*, **2009**, 21, 2288-2293	24	115
38	Gold-palladium core-shell nanocrystals with size and shape control optimized for catalytic performance. *Angewandte Chemie - International Edition*, **2013**, 52, 1477-80	16.4	98
37	Gold over Branched Palladium Nanostructures for Photothermal Cancer Therapy. *ACS Nano*, **2015**, 9, 12283-91	16.7	86
36	How to control the shape of metal nanostructures in organic solution phase synthesis for plasmonics and catalysis. *Nano Today*, **2013**, 8, 198-215	17.9	83
35	Dendrite-Free Potassium Metal Anodes in a Carbonate Electrolyte. *Advanced Materials*, **2020**, 32, e1906735	24	67
34	Can polymorphism be used to form branched metal nanostructures?. *Advanced Materials*, **2013**, 25, 1552-6	24	62
33	Shape control from thermodynamic growth conditions: the case of hcp ruthenium hourglass nanocrystals. *Journal of the American Chemical Society*, **2013**, 135, 606-9	16.4	62
32	A Synthetic Hydrogel Composite with the Mechanical Behavior and Durability of Cartilage. *Advanced Functional Materials*, **2020**, 30, 2003451	15.6	55
31	Faceted Branched Nickel Nanoparticles with Tunable Branch Length for High-Activity Electrocatalytic Oxidation of Biomass. *Angewandte Chemie - International Edition*, **2020**, 59, 15487-15491	16.4	41
30	Ostwald's Rule of Stages and its role in CdSe quantum dot crystallization. *Journal of the American Chemical Society*, **2012**, 134, 17046-52	16.4	35
29	Formation of Branched Ruthenium Nanoparticles for Improved Electrocatalysis of Oxygen Evolution Reaction. *Small*, **2019**, 15, e1804577	11	33
28	Efficient conversion of lignin into a water-soluble polymer by a chelator-mediated Fenton reaction: optimization of H2O2 use and performance as a dispersant. *Green Chemistry*, **2018**, 20, 3024-3037	10	28
27	Stable Potassium Metal Anodes with an All-Aluminum Current Collector through Improved Electrolyte Wetting. *Advanced Materials*, **2020**, 32, e2002908	24	27

26	Gold–Palladium Core–Shell Nanocrystals with Size and Shape Control Optimized for Catalytic Performance. *Angewandte Chemie*, **2013**, 125, 1517-1520	3.6	26
25	Effect of Seed Age on Gold Nanorod Formation: A Microfluidic, Real-Time Investigation. *Chemistry of Materials*, **2015**, 27, 6442-6449	9.6	25
24	Non-volatile iron carbonyls as versatile precursors for the synthesis of iron-containing nanoparticles. *Nanoscale*, **2017**, 9, 6632-6637	7.7	19
23	Au-Pd core-shell nanoparticles as alcohol oxidation catalysts: effect of shape and composition. *ChemSusChem*, **2013**, 6, 1858-62	8.3	19
22	Facettierte verzweigte Nickel-Nanopartikel mit variierbarer Verzweigungslänge für die hochaktive elektrokatalytische Oxidation von Biomasse. *Angewandte Chemie*, **2020**, 132, 15615-15620	3.6	13
21	Reversible Magnetic Agglomeration: A Mechanism for Thermodynamic Control over Nanoparticle Size. *Angewandte Chemie - International Edition*, **2018**, 57, 7678-7681	16.4	13
20	Review of Multifunctional Separators: Stabilizing the Cathode and the Anode for Alkali (Li, Na, and K) Metal-Sulfur and Selenium Batteries.. *Chemical Reviews*, **2022**,	68.1	13
19	Multifunctional Separator Allows Stable Cycling of Potassium Metal Anodes and of Potassium Metal Batteries. *Advanced Materials*, **2021**, e2105855	24	11
18	A single-Pt-atom-on-Ru-nanoparticle electrocatalyst for CO-resilient methanol oxidation. *Nature Catalysis*, **2022**, 5, 231-237	36.5	8
17	Magnetically Recoverable Pd/Fe O Core-Shell Nanowire Clusters with Increased Hydrogenation Activity. *ChemPlusChem*, **2017**, 82, 347-351	2.8	7
16	Role of Interface Chemistry in Opening New Radiative Pathways in InP/CdSe Giant Quantum Dots with Blinking-Suppressed Two-Color Emission. *Advanced Functional Materials*, **2019**, 29, 1809111	15.6	7
15	Controlling Pt Crystal Defects on the Surface of Ni–Pt Core–Shell Nanoparticles for Active and Stable Electrocatalysts for Oxygen Reduction. *ACS Applied Nano Materials*, **2020**, 3, 5995-6000	5.6	7
14	Soft matter and nanomaterials characterization by cryogenic transmission electron microscopy. *MRS Bulletin*, **2019**, 44, 942-948	3.2	6
13	Formation of Metal Nanoparticles Directly from Bulk Sources Using Ultrasound and Application to E-Waste Upcycling. *Small*, **2018**, 14, e1703615	11	5
12	Improved Crystalline Structure and Enhanced Photoluminescence of ZnO Nanolayers in Bi2Se3/ZnO Heterostructures. *Journal of Physical Chemistry C*, **2019**, 123, 31156-31166	3.8	5
11	Gram scale synthesis of Fe/FexOy core–shell nanoparticles and their incorporation into matrix-free superparamagnetic nanocomposites. *Journal of Materials Research*, **2018**, 33, 2156-2167	2.5	5
10	Reversible Magnetic Agglomeration: A Mechanism for Thermodynamic Control over Nanoparticle Size. *Angewandte Chemie*, **2018**, 130, 7804-7807	3.6	4
9	In situ TEM study of crystallization and chemical changes in an oxidized uncapped Ge2Sb2Te5 film. *Journal of Applied Physics*, **2020**, 128, 124505	2.5	4

8	Finite element modeling of nanoscale-enabled microinductors for power electronics. *Journal of Materials Research*, **2018**, 33, 2223-2233	2.5	4
7	Magnetic Nanocomposites and Their Incorporation into Higher Order Biosynthetic Functional Architectures. *ACS Omega*, **2018**, 3, 503-508	3.9	3
6	Cesium Lead Halide Perovskite Nanocrystals Assembled in Metal-Organic Frameworks for Stable Blue Light Emitting Diodes.. *Advanced Science*, **2022**, e2105850	13.6	1
5	Ultrasonication: Formation of Metal Nanoparticles Directly from Bulk Sources Using Ultrasound and Application to E-Waste Upcycling (Small 17/2018). *Small*, **2018**, 14, 1870078	11	0
4	In-situ Electron Microscopy to Inform Superior Magnetic Nanocomposites. *Microscopy and Microanalysis*, **2020**, 26, 2554-2555	0.5	
3	Titelbild: Reversible Magnetic Agglomeration: A Mechanism for Thermodynamic Control over Nanoparticle Size (Angew. Chem. 26/2018). *Angewandte Chemie*, **2018**, 130, 7657-7657	3.6	
2	Investigation of Phase Transformations in Ge4Sb4Te5 film using Transmission Electron Microscopy. *Microscopy and Microanalysis*, **2021**, 27, 1240-1242	0.5	
1	CHAPTER 12. Copper-based Multinary Materials for Solar Cells. *RSC Nanoscience and Nanotechnology*,393-435		