Matthew R Jones

List of Publications by Year
in descending order

47 papers	7,360 citations	147566 31 h-index	197535 49 g-index
54 all docs	54 docs citations	54 times ranked	9191 citing authors

#	Article	IF	Citations
1	Giant Isotope Effect of Thermal Conductivity in Silicon Nanowires. Physical Review Letters, 2022, 128, 085901.	2.9	16
2	Uncovering material deformations via machine learning combined with four-dimensional scanning transmission electron microscopy. Npj Computational Materials, 2022, 8, .	3.5	15
3	Mechanical Reshaping of Inorganic Nanostructures with Weak Nanoscale Forces. Nano Letters, 2021, 21, 130-135.	4.5	9
4	Understanding Symmetry Breaking at the Single-Particle Level <i>via</i> the Growth of Tetrahedron-Shaped Nanocrystals from Higher-Symmetry Precursors. ACS Nano, 2021, 15, 15953-15961.	7.3	23
5	Tracking the Effects of Ligands on Oxidative Etching of Gold Nanorods in Graphene Liquid Cell Electron Microscopy. ACS Nano, 2020, 14, 10239-10250.	7.3	35
6	Tip-Enhanced Multipolar Raman Scattering. Journal of Physical Chemistry Letters, 2020, 11, 2464-2469.	2.1	25
7	Colloidal interactions get patchy and directional. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 15382-15384.	3.3	8
8	Tip-Enhanced Raman Nanospectroscopy of Smooth Spherical Gold Nanoparticles. Journal of Physical Chemistry Letters, 2020, 11, 1795-1801.	2.1	25
9	Measurement Challenges in Dynamic and Nonequilibrium Nanoscale Systems. Analytical Chemistry, 2019, 91, 13324-13336.	3.2	6
10	The role of trace Ag in the synthesis of Au nanorods. Nanoscale, 2019, 11, 11744-11754.	2.8	24
11	Building superlattices from individual nanoparticles via template-confined DNA-mediated assembly. Science, 2018, 359, 669-672.	6.0	195
12	Hybrid Lithographic and DNA-Directed Assembly of a Configurable Plasmonic Metamaterial That Exhibits Electromagnetically Induced Transparency. Nano Letters, 2018, 18, 859-864.	4.5	24
13	Polycrystallinity of Lithographically Fabricated Plasmonic Nanostructures Dominates Their Acoustic Vibrational Damping. Nano Letters, 2018, 18, 3494-3501.	4.5	35
14	Microscopic mechanisms of deformation transfer in high dynamic range branched nanoparticle deformation sensors. Nature Communications, 2018, 9, 1155.	5.8	4
15	Using Graphene Liquid Cell Electron Microscopy to Elucidate Nanocrystal Etching Mechanisms. Microscopy and Microanalysis, 2018, 24, 246-247.	0.2	0
16	New Strategies for Probing Energy Systems with In Situ Liquid-Phase Transmission Electron Microscopy. ACS Energy Letters, 2018, 3, 1269-1278.	8.8	33
17	Unraveling Kinetically-Driven Mechanisms of Gold Nanocrystal Shape Transformations Using Graphene Liquid Cell Electron Microscopy. Nano Letters, 2018, 18, 5731-5737.	4.5	64
18	Understanding nanoparticle-mediated nucleation pathways of anisotropic nanoparticles. Chemical Physics Letters, 2017, 683, 389-392.	1.2	14

#	Article	IF	Citations
19	Dopant Mediated Assembly of Cu₂ZnSnS₄ Nanorods into Atomically Coupled 2D Sheets in Solution. Nano Letters, 2017, 17, 3421-3428.	4.5	19
20	The Use of Graphene and Its Derivatives for Liquid-Phase Transmission Electron Microscopy of Radiation-Sensitive Specimens. Nano Letters, 2017, 17, 414-420.	4.5	120
21	Imaging the polymerization of multivalent nanoparticles in solution. Nature Communications, 2017, 8, 761.	5.8	70
22	Deterministic Symmetry Breaking of Plasmonic Nanostructures Enabled by DNA-Programmable Assembly. Nano Letters, 2017, 17, 5830-5835.	4.5	19
23	The nature and implications of uniformity in the hierarchical organization of nanomaterials. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 11717-11725.	3.3	75
24	<i>In Situ</i> Electron Microscopy Imaging and Quantitative Structural Modulation of Nanoparticle Superlattices. ACS Nano, 2016, 10, 9801-9808.	7.3	49
25	Single-particle mapping of nonequilibrium nanocrystal transformations. Science, 2016, 354, 874-877.	6.0	204
26	Transmutable nanoparticles with reconfigurable surface ligands. Science, 2016, 351, 579-582.	6.0	150
27	What Controls the Hybridization Thermodynamics of Spherical Nucleic Acids?. Journal of the American Chemical Society, 2015, 137, 3486-3489.	6.6	79
28	Anisotropic nanoparticle complementarity in DNA-mediated co-crystallization. Nature Materials, 2015, 14, 833-839.	13.3	154
29	Structural diversity in binary superlattices self-assembled from polymer-grafted nanocrystals. Nature Communications, 2015, 6, 10052.	5.8	199
30	Programmable materials and the nature of the DNA bond. Science, 2015, 347, 1260901.	6.0	1,141
31	Uniform Circular Disks With Synthetically Tailorable Diameters: Two-Dimensional Nanoparticles for Plasmonics. Nano Letters, 2015, 15, 1012-1017.	4.5	90
32	Shape-Selective Deposition and Assembly of Anisotropic Nanoparticles. Nano Letters, 2014, 14, 2157-2161.	4.5	101
33	Universal Noble Metal Nanoparticle Seeds Realized Through Iterative Reductive Growth and Oxidative Dissolution Reactions. Journal of the American Chemical Society, 2014, 136, 7603-7606.	6.6	200
34	Using DNA to Design Plasmonic Metamaterials with Tunable Optical Properties. Advanced Materials, 2014, 26, 653-659.	11.1	157
35	Langmuir Analysis of Nanoparticle Polyvalency in DNAâ€Mediated Adsorption. Angewandte Chemie - International Edition, 2014, 53, 9532-9538.	7.2	36
36	Synthesis and Characterization of a Plasmonicâ€“Semiconductor Composite Containing Rationally Designed, Optically Tunable Gold Nanorod Dimers and Anatase TiO₂. Chemistry of Materials, 2014, 26, 3818-3824.	3.2	12

#	Article	IF	Citations
37	Topotactic Interconversion of Nanoparticle Superlattices. Science, 2013, 341, 1222-1225.	6.0	137
38	Bypassing the Limitations of Classical Chemical Purification with DNAâ€Programmable Nanoparticle Recrystallization. Angewandte Chemie - International Edition, 2013, 52, 2886-2891.	7.2	53
39	Assembly of reconfigurable one-dimensional colloidal superlattices due to a synergy of fundamental nanoscale forces. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 2240-2245.	3.3	144
40	Synthetically programmable nanoparticle superlattices using a hollow three-dimensional spacer approach. Nature Nanotechnology, 2012, 7, 24-28.	15.6	158
41	Nanoparticle Shape Anisotropy Dictates the Collective Behavior of Surface-Bound Ligands. Journal of the American Chemical Society, 2011, 133, 18865-18869.	6.6	143
42	Nanoparticle Superlattice Engineering with DNA. Science, 2011, 334, 204-208.	6.0	1,013
43	Templated Techniques for the Synthesis and Assembly of Plasmonic Nanostructures. Chemical Reviews, 2011, 111, 3736-3827.	23.0	1,080
44	Establishing the Design Rules for DNAâ€Mediated Programmable Colloidal Crystallization. Angewandte Chemie - International Edition, 2010, 49, 4589-4592.	7.2	139
45	DNA-nanoparticle superlattices formed from anisotropic building blocks. Nature Materials, 2010, 9, 913-917.	13.3	596
46	Plasmonically Controlled Nucleic Acid Dehybridization with Gold Nanoprisms. ChemPhysChem, 2009, 10, 1461-1465.	1.0	60
47	Iodide Ions Control Seed-Mediated Growth of Anisotropic Gold Nanoparticles. Nano Letters, 2008, 8, 2526-2529.	4.5	380