

Thomas J A Slater

List of Publications by Year in descending order

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Version: 2024-02-01

56
papers

1,734
citations

304743

22
h-index

289244

40
g-index

60
all docs

60
docs citations

60
times ranked

2841
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Correlative Tomography. Scientific Reports, 2014, 4, 4711. | 3.3 | 124 |
| 2 | Correlating Catalytic Activity of Ag@Au Nanoparticles with 3D Compositional Variations. Nano Letters, 2014, 14, 1921-1926. | 9.1 | 119 |
| 3 | Hierarchical integration of porosity in shales. Scientific Reports, 2018, 8, 11683. | 3.3 | 88 |
| 4 | Self assembled monolayers (SAMs) on metallic surfaces (gold and graphene) for electronic applications. Journal of Materials Chemistry C, 2013, 1, 376-393. | 5.5 | 87 |
| 5 | Crystallographic effects on the corrosion of twin roll cast AZ31 Mg alloy sheet. Acta Materialia, 2017, 133, 90-99. | 7.9 | 83 |
| 6 | STEM-EDX tomography of bimetallic nanoparticles: A methodological investigation. Ultramicroscopy, 2016, 162, 61-73. | 1.9 | 74 |
| 7 | An investigation of diffusion-mediated cyclic coarsening and reversal coarsening in an advanced Ni-based superalloy. Acta Materialia, 2016, 110, 295-305. | 7.9 | 69 |
| 8 | On the influence of Mn on the phase stability of the CrMn _x FeCoNi high entropy alloys. Intermetallics, 2018, 92, 84-92. | 3.9 | 68 |
| 9 | Efficient energy transport in an organic semiconductor mediated by transient exciton delocalization. Science Advances, 2021, 7, . | 10.3 | 68 |
| 10 | Real-time imaging and elemental mapping of AgAu nanoparticle transformations. Nanoscale, 2014, 6, 13598-13605. | 5.6 | 64 |
| 11 | Asymmetric MoS ₂ /Graphene/Metal Sandwiches: Preparation, Characterization, and Application. Advanced Materials, 2016, 28, 8256-8264. | 21.0 | 64 |
| 12 | Real-time imaging and local elemental analysis of nanostructures in liquids. Chemical Communications, 2014, 50, 10019-10022. | 4.1 | 56 |
| 13 | Next frontiers in cleaner synthesis: 3D printed graphene-supported CeZrLa mixed-oxide nanocatalyst for CO ₂ utilisation and direct propylene carbonate production. Journal of Cleaner Production, 2019, 214, 606-614. | 9.3 | 54 |
| 14 | Measurement of size-dependent composition variations for gamma prime (γ') precipitates in an advanced nickel-based superalloy. Ultramicroscopy, 2014, 144, 1-8. | 1.9 | 45 |
| 15 | Controlling Size, Morphology, and Surface Composition of AgAu Nanodendrites in 15 s for Improved Environmental Catalysis under Low Metal Loadings. ACS Applied Materials & Interfaces, 2015, 7, 25624-25632. | 8.0 | 42 |
| 16 | Nanocomposites of graphene nanoplatelets in natural rubber: microstructure and mechanisms of reinforcement. Journal of Materials Science, 2017, 52, 9558-9572. | 3.7 | 41 |
| 17 | Au@HgxCd _{1-x} Te core@shell nanorods by sequential aqueous cation exchange for near-infrared photodetectors. Nano Energy, 2019, 57, 57-65. | 16.0 | 38 |
| 18 | Oleylamine Aging of PtNi Nanoparticles Giving Enhanced Functionality for the Oxygen Reduction Reaction. Nano Letters, 2021, 21, 3989-3996. | 9.1 | 37 |

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|----|--|------|-----------|
| 19 | Quantitative Energy-Dispersive X-Ray Analysis of Catalyst Nanoparticles Using a Partial Cross Section Approach. <i>Microscopy and Microanalysis</i> , 2016, 22, 71-81. | 0.4 | 36 |
| 20 | Gold-Rhodium Nanoflowers for the Plasmon-Enhanced Hydrogen Evolution Reaction under Visible Light. <i>ACS Catalysis</i> , 2021, 11, 13543-13555. | 11.2 | 36 |
| 21 | Multiscale correlative tomography: an investigation of creep cavitation in 316 stainless steel. <i>Scientific Reports</i> , 2017, 7, 7332. | 3.3 | 33 |
| 22 | Non-rigid registration and non-local principle component analysis to improve electron microscopy spectrum images. <i>Nanotechnology</i> , 2016, 27, 364001. | 2.6 | 30 |
| 23 | The Critical Role of PdZn Alloy in Pd/ZnO Catalysts for the Hydrogenation of Carbon Dioxide to Methanol. <i>ACS Catalysis</i> , 2022, 12, 5371-5379. | 11.2 | 23 |
| 24 | Realizing the theoretical stiffness of graphene in composites through confinement between carbon fibers. <i>Composites Part A: Applied Science and Manufacturing</i> , 2018, 113, 311-317. | 7.6 | 22 |
| 25 | Enhanced H ₂ O ₂ Production via Photocatalytic O ₂ Reduction over Structurally-Modified Poly(heptazine imide). <i>Chemistry of Materials</i> , 2022, 34, 5511-5521. | 6.7 | 21 |
| 26 | Hydrogen evolution and capacitance behavior of Au/Pd nanoparticle-decorated graphene heterostructures. <i>Applied Materials Today</i> , 2017, 8, 125-131. | 4.3 | 20 |
| 27 | Design-controlled synthesis of IrO ₂ sub-monolayers on Au nanoflowers: marrying plasmonic and electrocatalytic properties. <i>Nanoscale</i> , 2020, 12, 12281-12291. | 5.6 | 20 |
| 28 | Imaging Three-Dimensional Elemental Inhomogeneity in Pt-Ni Nanoparticles Using Spectroscopic Single Particle Reconstruction. <i>Nano Letters</i> , 2019, 19, 732-738. | 9.1 | 18 |
| 29 | Ultrastructure and Crystallography of Nanoscale Calcite Building Blocks in <i>Rhabdosphaera clavigera</i> Cocolith Spines. <i>Crystal Growth and Design</i> , 2014, 14, 1710-1718. | 3.0 | 17 |
| 30 | Surface Segregated AgAu Tadpole-Shaped Nanoparticles Synthesized Via a Single Step Combined Galvanic and Citrate Reduction Reaction. <i>Chemistry - A European Journal</i> , 2015, 21, 12314-12320. | 3.3 | 17 |
| 31 | The taxonomy of graphite nanoplatelets and the influence of nanocomposite processing. <i>Carbon</i> , 2019, 142, 99-106. | 10.3 | 16 |
| 32 | Correlation of the ratio of metallic to oxide species with activity of PdPt catalysts for methane oxidation. <i>Catalysis Science and Technology</i> , 2020, 10, 1408-1421. | 4.1 | 15 |
| 33 | General synthesis of single atom electrocatalysts via a facile condensation-carbonization process. <i>Journal of Materials Chemistry A</i> , 2020, 8, 25959-25969. | 10.3 | 14 |
| 34 | The Selective Oxidation of Cyclohexane via In-situ H ₂ O ₂ Production Over Supported Pd-based Catalysts. <i>Catalysis Letters</i> , 2021, 151, 2762-2774. | 2.6 | 14 |
| 35 | Unravelling the transport mechanism of pore-filled membranes for hydrogen separation. <i>Separation and Purification Technology</i> , 2018, 203, 41-47. | 7.9 | 13 |
| 36 | Micron-scale crack propagation in laser-irradiated enamel and dentine studied with nano-CT. <i>Clinical Oral Investigations</i> , 2019, 23, 2279-2285. | 3.0 | 13 |

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|----|---|------|-----------|
| 37 | Automated Single-Particle Reconstruction of Heterogeneous Inorganic Nanoparticles. <i>Microscopy and Microanalysis</i> , 2020, 26, 1168-1175. | 0.4 | 13 |
| 38 | Understanding the limitations of the Super-X energy dispersive x-ray spectrometer as a function of specimen tilt angle for tomographic data acquisition in the S/TEM. <i>Journal of Physics: Conference Series</i> , 2014, 522, 012025. | 0.4 | 12 |
| 39 | Hemoglobin-derived Fe-Nx-S species supported by bamboo-shaped carbon nanotubes as efficient electrocatalysts for the oxygen evolution reaction. <i>Carbon</i> , 2020, 168, 588-596. | 10.3 | 12 |
| 40 | Bilayer graphene formed by passage of current through graphite: evidence for a three-dimensional structure. <i>Nanotechnology</i> , 2014, 25, 465601. | 2.6 | 11 |
| 41 | Compositional quantification of PtCo acid-leached fuel cell catalysts using EDX partial cross sections. <i>Materials Science and Technology</i> , 2016, 32, 248-253. | 1.6 | 11 |
| 42 | The effect of nano-twins on the thermoelectric properties of Ga ₂ O ₃ (ZnO) _m (m = 9, 11, 13 and 15) homologous compounds. <i>Journal of the European Ceramic Society</i> , 2020, 40, 5549-5558. | 5.7 | 11 |
| 43 | Precise control of interface anisotropy during deposition of Co/Pd multilayers. <i>Journal of Applied Physics</i> , 2014, 116, . | 2.5 | 10 |
| 44 | X-Ray Absorption Correction for Quantitative Scanning Transmission Electron Microscopic Energy-Dispersive X-Ray Spectroscopy of Spherical Nanoparticles. <i>Microscopy and Microanalysis</i> , 2016, 22, 440-447. | 0.4 | 7 |
| 45 | Degradation of metallic materials studied by correlative tomography. <i>IOP Conference Series: Materials Science and Engineering</i> , 2017, 219, 012001. | 0.6 | 7 |
| 46 | PtNi bimetallic structure supported on UiO-67 metal-organic framework (MOF) during CO oxidation. <i>Journal of Catalysis</i> , 2020, 391, 522-529. | 6.2 | 7 |
| 47 | Atomic Structure and Valence State of Cobalt Nanocrystals on Carbon under Syngas Versus Hydrogen Reduction. <i>Journal of Physical Chemistry C</i> , 2022, 126, 6325-6333. | 3.1 | 7 |
| 48 | Trainable segmentation for transmission electron microscope images of inorganic nanoparticles. <i>Journal of Microscopy</i> , 2022, 288, 169-184. | 1.8 | 7 |
| 49 | A high-throughput, solvent free method for dispersing metal atoms directly onto supports. <i>Journal of Materials Chemistry A</i> , 2021, 9, 26676-26679. | 10.3 | 6 |
| 50 | Investigating the Effect of Zirconium Oxide Microstructure on Corrosion Performance: A Comparison between Neutron, Proton, and Nonirradiated Oxides. , 2018, , 491-523. | | 5 |
| 51 | Energy Dispersive X-ray Tomography for 3D Elemental Mapping of Individual Nanoparticles. <i>Journal of Visualized Experiments</i> , 2016, , . | 0.3 | 4 |
| 52 | Automated quantification of morphology and chemistry from STEM data of individual nanoparticles. <i>Journal of Physics: Conference Series</i> , 2017, 902, 012018. | 0.4 | 3 |
| 53 | Recent progress in scanning transmission electron microscope imaging and analysis: application to nanoparticles and 2D nanomaterials. <i>SPR Nanoscience</i> , 2016, , 168-192. | 0.6 | 1 |
| 54 | Revealing New Atomic-scale Information about Materials by Improving the Quality and Quantifiability of Aberration-corrected STEM Data. <i>Microscopy and Microanalysis</i> , 2015, 21, 2409-2410. | 0.4 | 0 |

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|----|--|-----|-----------|
| 55 | Three-Dimensional Imaging of Nanoparticle Chemistry Using Spectroscopic Single Particle Reconstruction. <i>Microscopy and Microanalysis</i> , 2019, 25, 400-401. | 0.4 | 0 |
| 56 | Preface "Electron microscopy of beam-sensitive materials. <i>Micron</i> , 2019, 125, 102716. | 2.2 | 0 |