

# David A Cullen

## List of Publications by Citations

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227  
papers

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52  
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103  
g-index

267  
ext. papers

15,173  
ext. citations

9.9  
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6.62  
L-index

#	Paper	IF	Citations
227	Direct atomic-level insight into the active sites of a high-performance PGM-free ORR catalyst. <i>Science</i> , <b>2017</b> , 357, 479-484	33.3	920
226	Atomically dispersed manganese catalysts for oxygen reduction in proton-exchange membrane fuel cells. <i>Nature Catalysis</i> , <b>2018</b> , 1, 935-945	36.5	691
225	Nitrogen-Coordinated Single Cobalt Atom Catalysts for Oxygen Reduction in Proton Exchange Membrane Fuel Cells. <i>Advanced Materials</i> , <b>2018</b> , 30, 1706758	24	590
224	Bulk production of a new form of sp(2) carbon: crystalline graphene nanoribbons. <i>Nano Letters</i> , <b>2008</b> , 8, 2773-8	11.5	524
223	Highly active atomically dispersed CoN <sub>4</sub> fuel cell cathode catalysts derived from surfactant-assisted MOFs: carbon-shell confinement strategy. <i>Energy and Environmental Science</i> , <b>2019</b> , 12, 250-260	35.4	475
222	Ex-MWNTs: graphene sheets and ribbons produced by lithium intercalation and exfoliation of carbon nanotubes. <i>Nano Letters</i> , <b>2009</b> , 9, 1527-33	11.5	326
221	Metal-organic framework-derived nitrogen-doped highly disordered carbon for electrochemical ammonia synthesis using N <sub>2</sub> and H <sub>2</sub> O in alkaline electrolytes. <i>Nano Energy</i> , <b>2018</b> , 48, 217-226	17.1	309
220	Unveiling Active Sites of CO <sub>2</sub> Reduction on Nitrogen-Coordinated and Atomically Dispersed Iron and Cobalt Catalysts. <i>ACS Catalysis</i> , <b>2018</b> , 8, 3116-3122	13.1	304
219	Covalently bonded three-dimensional carbon nanotube solids via boron induced nanojunctions. <i>Scientific Reports</i> , <b>2012</b> , 2, 363	4.9	300
218	High-performance fuel cell cathodes exclusively containing atomically dispersed iron active sites. <i>Energy and Environmental Science</i> , <b>2019</b> , 12, 2548-2558	35.4	280
217	Thermally Driven Structure and Performance Evolution of Atomically Dispersed FeN Sites for Oxygen Reduction. <i>Angewandte Chemie - International Edition</i> , <b>2019</b> , 58, 18971-18980	16.4	207
216	A physical catalyst for the electrolysis of nitrogen to ammonia. <i>Science Advances</i> , <b>2018</b> , 4, e1700336	14.3	196
215	Performance enhancement and degradation mechanism identification of a single-atom CoN <sub>4</sub> C catalyst for proton exchange membrane fuel cells. <i>Nature Catalysis</i> , <b>2020</b> , 3, 1044-1054	36.5	186
214	Nitrogen-mediated carbon nanotube growth: diameter reduction, metallicity, bundle dispersability, and bamboo-like structure formation. <i>ACS Nano</i> , <b>2007</b> , 1, 369-75	16.7	185
213	Ozonated graphene oxide film as a proton-exchange membrane. <i>Angewandte Chemie - International Edition</i> , <b>2014</b> , 53, 3588-93	16.4	173
212	Hard-Magnet L10-CoPt Nanoparticles Advance Fuel Cell Catalysis. <i>Joule</i> , <b>2019</b> , 3, 124-135	27.8	171
211	Heterodoped nanotubes: theory, synthesis, and characterization of phosphorus-nitrogen doped multiwalled carbon nanotubes. <i>ACS Nano</i> , <b>2008</b> , 2, 441-8	16.7	165

210	Ternary electrocatalysts for oxidizing ethanol to carbon dioxide: making it capable of splitting C-C bond. <i>Journal of the American Chemical Society</i> , <b>2013</b> , 135, 132-41	16.4	149
209	Ultrasensitive gas detection of large-area boron-doped graphene. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2015</b> , 112, 14527-32	11.5	146
208	Electrochemical ammonia synthesis via nitrate reduction on Fe single atom catalyst. <i>Nature Communications</i> , <b>2021</b> , 12, 2870	17.4	136
207	Single Cobalt Sites Dispersed in Hierarchically Porous Nanofiber Networks for Durable and High-Power PGM-Free Cathodes in Fuel Cells. <i>Advanced Materials</i> , <b>2020</b> , 32, e2003577	24	132
206	P-block single-metal-site tin/nitrogen-doped carbon fuel cell cathode catalyst for oxygen reduction reaction. <i>Nature Materials</i> , <b>2020</b> , 19, 1215-1223	27	127
205	PlatinumRuthenium Nanotubes and PlatinumRuthenium Coated Copper Nanowires As Efficient Catalysts for Electro-Oxidation of Methanol. <i>ACS Catalysis</i> , <b>2015</b> , 5, 1468-1474	13.1	124
204	A general synthesis approach for supported bimetallic nanoparticles via surface inorganometallic chemistry. <i>Science</i> , <b>2018</b> , 362, 560-564	33.3	120
203	Discovery of true electrochemical reactions for ultrahigh catalyst mass activity in water splitting. <i>Science Advances</i> , <b>2016</b> , 2, e1600690	14.3	106
202	Chemical vapor deposition synthesis of N-, P-, and Si-doped single-walled carbon nanotubes. <i>ACS Nano</i> , <b>2010</b> , 4, 1696-702	16.7	101
201	Phosphate-Tolerant Oxygen Reduction Catalysts. <i>ACS Catalysis</i> , <b>2014</b> , 4, 3193-3200	13.1	100
200	Investigation of thin/well-tunable liquid/gas diffusion layers exhibiting superior multifunctional performance in low-temperature electrolytic water splitting. <i>Energy and Environmental Science</i> , <b>2017</b> , 10, 166-175	35.4	98
199	Chemical vapour deposition of Fe-N-C oxygen reduction catalysts with full utilization of dense Fe-N sites. <i>Nature Materials</i> , <b>2021</b> , 20, 1385-1391	27	96
198	Tunnel structured manganese oxide nanowires as redox active electrodes for hybrid capacitive deionization. <i>Nano Energy</i> , <b>2018</b> , 44, 476-488	17.1	95
197	Atomistic-Scale Simulations of Defect Formation in Graphene under Noble Gas Ion Irradiation. <i>ACS Nano</i> , <b>2016</b> , 10, 8376-84	16.7	92
196	New roads and challenges for fuel cells in heavy-duty transportation. <i>Nature Energy</i> , <b>2021</b> , 6, 462-474	62.3	89
195	Atomically Dispersed Single Ni Site Catalysts for Nitrogen Reduction toward Electrochemical Ammonia Synthesis Using N <sub>2</sub> and H <sub>2</sub> O. <i>Small Methods</i> , <b>2020</b> , 4, 1900821	12.8	88
194	General synthesis of single-atom catalysts with high metal loading using graphene quantum dots. <i>Nature Chemistry</i> , <b>2021</b> , 13, 887-894	17.6	86
193	Fabrication of Au (SG) -ZIF-8 Nanocomposites: A Facile Strategy to Position Au (SG) Nanoclusters Inside and Outside ZIF-8. <i>Advanced Materials</i> , <b>2018</b> , 30, 1704576	24	80

192	Recent developments in catalyst-related PEM fuel cell durability. <i>Current Opinion in Electrochemistry</i> , <b>2020</b> , 21, 192-200	7.2	75
191	Novel thin/tunable gas diffusion electrodes with ultra-low catalyst loading for hydrogen evolution reactions in proton exchange membrane electrolyzer cells. <i>Nano Energy</i> , <b>2018</b> , 47, 434-441	17.1	74
190	The degradation mitigation effect of cerium oxide in polymer electrolyte membranes in extended fuel cell durability tests. <i>Journal of Power Sources</i> , <b>2013</b> , 225, 75-83	8.9	69
189	An atomistic branching mechanism for carbon nanotubes: sulfur as the triggering agent. <i>Angewandte Chemie - International Edition</i> , <b>2008</b> , 47, 2948-53	16.4	69
188	Spiny Rhombic Dodecahedral CuPt Nanoframes with Enhanced Catalytic Performance Synthesized from Cu Nanocube Templates. <i>Chemistry of Materials</i> , <b>2017</b> , 29, 5681-5692	9.6	68
187	Distinct photoluminescence and Raman spectroscopy signatures for identifying highly crystalline WS <sub>2</sub> monolayers produced by different growth methods. <i>Journal of Materials Research</i> , <b>2016</b> , 31, 931-944	2.5	68
186	Thin liquid/gas diffusion layers for high-efficiency hydrogen production from water splitting. <i>Applied Energy</i> , <b>2016</b> , 177, 817-822	10.7	68
185	Distribution and Valence State of Ru Species on CeO <sub>2</sub> Supports: Support Shape Effect and Its Influence on CO Oxidation. <i>ACS Catalysis</i> , <b>2019</b> , 9, 11088-11103	13.1	67
184	Platinum-Coated Nickel Nanowires as Oxygen-Reducing Electrocatalysts. <i>ACS Catalysis</i> , <b>2014</b> , 4, 1114-1119	13.1	67
183	Methanol tolerance of atomically dispersed single metal site catalysts: mechanistic understanding and high-performance direct methanol fuel cells. <i>Energy and Environmental Science</i> , <b>2020</b> , 13, 3544-3555	35.4	66
182	Engineering Atomically Dispersed FeN Active Sites for CO Electroreduction. <i>Angewandte Chemie - International Edition</i> , <b>2021</b> , 60, 1022-1032	16.4	66
181	Evaluation of Al <sub>3</sub> Mg <sub>2</sub> Precipitates and Mn-Rich Phase in Aluminum-Magnesium Alloy Based on Scanning Transmission Electron Microscopy Imaging. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2012</b> , 43, 4933-4939	2.3	65
180	Vapor phase hydrogenation of furfural over nickel mixed metal oxide catalysts derived from layered double hydroxides. <i>Applied Catalysis A: General</i> , <b>2016</b> , 517, 187-195	5.1	58
179	Super-stable, highly monodisperse plasmonic Faradaurate-500 nanocrystals with 500 gold atoms: Au(~500)(SR)(~120). <i>Journal of the American Chemical Society</i> , <b>2014</b> , 136, 7410-7	16.4	58
178	Turning the Halide Switch in the Synthesis of Au-Pd Alloy and Core-Shell Nanoicosahedra with Terraced Shells: Performance in Electrochemical and Plasmon-Enhanced Catalysis. <i>Nano Letters</i> , <b>2016</b> , 16, 5514-20	11.5	57
177	Chemical Vapor Deposition for Atomically Dispersed and Nitrogen Coordinated Single Metal Site Catalysts. <i>Angewandte Chemie - International Edition</i> , <b>2020</b> , 59, 21698-21705	16.4	55
176	Enhancing CexZr1-xO <sub>2</sub> Activity for Methane Dry Reforming Using Subsurface Ni Dopants. <i>ACS Catalysis</i> , <b>2020</b> , 10, 4070-4079	13.1	54
175	Platinum-Coated Cobalt Nanowires as Oxygen Reduction Reaction Electrocatalysts. <i>ACS Catalysis</i> , <b>2014</b> , 4, 2680-2686	13.1	52

174	Faradaurate-940: synthesis, mass spectrometry, electron microscopy, high-energy X-ray diffraction, and X-ray scattering study of Au~940H20(SR)~160H4 nanocrystals. <i>ACS Nano</i> , <b>2014</b> , 8, 6431-9	16.7	52
173	Single-Iron Site Catalysts with Self-Assembled Dual-size Architecture and Hierarchical Porosity for Proton-Exchange Membrane Fuel Cells. <i>Applied Catalysis B: Environmental</i> , <b>2020</b> , 279, 119400	21.8	51
172	In situ investigation on ultrafast oxygen evolution reactions of water splitting in proton exchange membrane electrolyzer cells. <i>Journal of Materials Chemistry A</i> , <b>2017</b> , 5, 18469-18475	13	50
171	3D Analysis of Fuel Cell Electrocatalyst Degradation on Alternate Carbon Supports. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 29839-29848	9.5	49
170	Heat-Treated Aerogel as a Catalyst for the Oxygen Reduction Reaction. <i>Angewandte Chemie - International Edition</i> , <b>2020</b> , 59, 2483-2489	16.4	47
169	Atomic-level active sites of efficient imidazolite framework-derived nickel catalysts for CO2 reduction. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 26231-26237	13	46
168	Selective and Stable Non-Noble-Metal Intermetallic Compound Catalyst for the Direct Dehydrogenation of Propane to Propylene. <i>Journal of the American Chemical Society</i> , <b>2018</b> , 140, 14010-14014	16.4	46
167	Elucidation of Fe-N-C electrocatalyst active site functionality via in-situ X-ray absorption and operando determination of oxygen reduction reaction kinetics in a PEFC. <i>Applied Catalysis B: Environmental</i> , <b>2019</b> , 257, 117929	21.8	45
166	The Role of Sulfur in the Synthesis of Novel Carbon Morphologies: From Covalent Y-Junctions to Sea-Urchin-Like Structures. <i>Advanced Functional Materials</i> , <b>2009</b> , 19, 1193-1199	15.6	44
165	Dynamically Unveiling Metal-Nitrogen Coordination during Thermal Activation to Design High-Efficient Atomically Dispersed CoN Active Sites. <i>Angewandte Chemie - International Edition</i> , <b>2021</b> , 60, 9516-9526	16.4	44
164	Efficient Hot Electron Transfer from Small Au Nanoparticles. <i>Nano Letters</i> , <b>2020</b> , 20, 4322-4329	11.5	42
163	Imaging and Microanalysis of Thin Ionomer Layers by Scanning Transmission Electron Microscopy. <i>Journal of the Electrochemical Society</i> , <b>2014</b> , 161, F1111-F1117	3.9	42
162	Quantitative phase imaging of nanoscale electrostatic and magnetic fields using off-axis electron holography. <i>Ultramicroscopy</i> , <b>2010</b> , 110, 375-382	3.1	42
161	Local Platinum Environments in a Solid Analogue of the Molecular Periana Catalyst. <i>ACS Catalysis</i> , <b>2016</b> , 6, 2332-2340	13.1	40
160	Durability of Pt-Co Alloy Polymer Electrolyte Fuel Cell Cathode Catalysts under Accelerated Stress Tests. <i>Journal of the Electrochemical Society</i> , <b>2018</b> , 165, F3166-F3177	3.9	38
159	Thermally Driven Structure and Performance Evolution of Atomically Dispersed FeN4 Sites for Oxygen Reduction. <i>Angewandte Chemie</i> , <b>2019</b> , 131, 19147-19156	3.6	38
158	Thin film surface modifications of thin/tunable liquid/gas diffusion layers for high-efficiency proton exchange membrane electrolyzer cells. <i>Applied Energy</i> , <b>2017</b> , 206, 983-990	10.7	37
157	Engineering the mechanical properties of ultrabARRIER films grown by atomic layer deposition for the encapsulation of printed electronics. <i>Journal of Applied Physics</i> , <b>2015</b> , 118, 085501	2.5	36

156	Third order nonlinear optical response exhibited by mono- and few-layers of WS <sub>2</sub> . <i>2D Materials</i> , <b>2016</b> , 3, 021005	5.9	35
155	The chemical behavior and degradation mitigation effect of cerium oxide nanoparticles in perfluorosulfonic acid polymer electrolyte membranes. <i>Polymer Degradation and Stability</i> , <b>2013</b> , 98, 1766-1772 <sup>35</sup>	4.7	35
154	Electric-Field-Driven Degradation in off-State Step-Stressed AlGa <sub>N</sub> /Ga <sub>N</sub> High-Electron Mobility Transistors. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2011</b> , 11, 187-193	1.6	33
153	A novel PEMEC with 3D printed non-conductive bipolar plate for low-cost hydrogen production from water electrolysis. <i>Energy Conversion and Management</i> , <b>2019</b> , 182, 108-116	10.6	31
152	Critical role of intercalated water for electrocatalytically active nitrogen-doped graphitic systems. <i>Science Advances</i> , <b>2016</b> , 2, e1501178	14.3	30
151	Promoting Atomically Dispersed Mn <sub>N</sub> Sites Sulfur Doping for Oxygen Reduction: Unveiling Intrinsic Activity and Degradation in Fuel Cells. <i>ACS Nano</i> , <b>2021</b> , 15, 6886-6899	16.7	30
150	Developing titanium micro/nano porous layers on planar thin/tunable LGDLs for high-efficiency hydrogen production. <i>International Journal of Hydrogen Energy</i> , <b>2018</b> , 43, 14618-14628	6.7	30
149	Step-by-Step Growth of Complex Oxide Microstructures. <i>Angewandte Chemie - International Edition</i> , <b>2015</b> , 54, 9011-5	16.4	28
148	Highly Efficient Selective Hydrogenation of Cinnamaldehyde to Cinnamyl Alcohol over Gold Supported on Zinc Oxide Materials. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 28885-28894	3.8	27
147	Solid-state graphene formation via a nickel carbide intermediate phase. <i>RSC Advances</i> , <b>2015</b> , 5, 99037-99043	5.3	27
146	Polarization field mapping of Al <sub>0.85</sub> In <sub>0.15</sub> N/AlN/GaN heterostructure. <i>Applied Physics Letters</i> , <b>2009</b> , 94, 121909	3.4	26
145	Cation-Eutectic Transition via Sublattice Melting in CuInPS/InPS van der Waals Layered Crystals. <i>ACS Nano</i> , <b>2017</b> , 11, 7060-7073	16.7	25
144	Fuel Cells Catalyst for Start-Up and Shutdown Conditions: Electrochemical, XPS, and STEM Evaluation of Sputter-Deposited Ru, Ir, and Ti on Pt-Coated Nanostructured Thin Film Supports. <i>Electrocatalysis</i> , <b>2012</b> , 3, 284-297	2.7	25
143	Correlative Energy-Dispersive X-Ray Spectroscopic Tomography and Atom Probe Tomography of the Phase Separation in an Alnico 8 Alloy. <i>Microscopy and Microanalysis</i> , <b>2016</b> , 22, 1251-1260	0.5	25
142	Geometry-Induced Spatial Variation of Microstructure Evolution During Selective Electron Beam Melting of Rene-N5. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2018</b> , 49, 5080-5096	2.3	25
141	Novel high pressure hexagonal OsB <sub>2</sub> by mechanochemistry. <i>Journal of Solid State Chemistry</i> , <b>2014</b> , 215, 16-21	3.3	24
140	Todorokite-type manganese oxide nanowires as an intercalation cathode for Li-ion and Na-ion batteries. <i>RSC Advances</i> , <b>2015</b> , 5, 106265-106271	3.7	24
139	. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2013</b> , 13, 126-135	1.6	24



138	Porphyrin Aerogel Catalysts for Oxygen Reduction Reaction in Anion-Exchange Membrane Fuel Cells. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2100963	15.6	24
137	Voltage gated inter-cation selective ion channels from graphene nanopores. <i>Nanoscale</i> , <b>2019</b> , 11, 9856-9861	9.5	23
136	Effect of source field plate on the characteristics of off-state, step-stressed AlGaIn/GaN high electron mobility transistors. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2011</b> , 29, 032204	1.3	23
135	Stable Metallic Enrichment in Conductive Filaments in TaOx-Based Resistive Switches Arising from Competing Diffusive Fluxes. <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1800954	6.4	22
134	Linking morphology with activity through the lifetime of pretreated PtNi nanostructured thin film catalysts. <i>Journal of Materials Chemistry A</i> , <b>2015</b> , 3, 11660-11667	13	22
133	PtCo Cathode Catalyst Morphological and Compositional Changes after PEM Fuel Cell Accelerated Stress Testing. <i>Journal of the Electrochemical Society</i> , <b>2018</b> , 165, F3078-F3084	3.9	22
132	Status and challenges for the application of platinum group metal-free catalysts in proton-exchange membrane fuel cells. <i>Current Opinion in Electrochemistry</i> , <b>2021</b> , 25, 100627	7.2	22
131	Characterization of the effects of different tempers and aging temperatures on the precipitation behavior of Al-Mg (5.25 at.%) -Mn alloys. <i>Materials and Design</i> , <b>2017</b> , 118, 22-35	8.1	21
130	Catalyst-Layer Ionomer Imaging of Fuel Cells. <i>ECS Transactions</i> , <b>2015</b> , 69, 455-464	1	21
129	Formation of the Conducting Filament in TaO -Resistive Switching Devices by Thermal-Gradient-Induced Cation Accumulation. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 23187-23197	9.5	21
128	Direct-write liquid phase transformations with a scanning transmission electron microscope. <i>Nanoscale</i> , <b>2016</b> , 8, 15581-8	7.7	21
127	Strain-Driven Stacking Faults in CdSe/CdS Core/Shell Nanorods. <i>Journal of Physical Chemistry Letters</i> , <b>2018</b> , 9, 1900-1906	6.4	20
126	Direct Characterization of Atomically Dispersed Catalysts: Nitrogen-Coordinated Ni Sites in Carbon-Based Materials for CO2 Electroreduction. <i>Advanced Energy Materials</i> , <b>2020</b> , 10, 2001836	21.8	20
125	Lattice Matched Carbide/Phosphide Composites with Superior Electrocatalytic Activity and Stability. <i>Chemistry of Materials</i> , <b>2017</b> , 29, 9369-9377	9.6	19
124	Building Electron/Proton Nanohighways for Full Utilization of Water Splitting Catalysts. <i>Advanced Energy Materials</i> , <b>2020</b> , 10, 1903871	21.8	19
123	Characterization of Al-Mg Alloy Aged at Low Temperatures. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , <b>2017</b> , 48, 2040-2050	2.3	19
122	Characterizing and modeling the precipitation of Mg-rich phases in Al 5xxx alloys aged at low temperatures. <i>Journal of Materials Science and Technology</i> , <b>2017</b> , 33, 991-1003	9.1	18
121	Mass-transport properties of electrospayed Pt/C catalyst layers for polymer-electrolyte fuel cells. <i>Journal of Power Sources</i> , <b>2019</b> , 427, 250-259	8.9	18

120	Controlled Assembly of Lignocellulosic Biomass Components and Properties of Reformed Materials. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2017</b> , 5, 8044-8052	8.3	18
119	Durability evaluation of a FeNiCo catalyst in polymer electrolyte fuel cell environment via accelerated stress tests. <i>Nano Energy</i> , <b>2020</b> , 78, 105209	17.1	18
118	Atomic Structure of Au <sub>329</sub> (SR) <sub>84</sub> Faradaurate Plasmonic Nanomolecules. <i>Journal of Physical Chemistry C</i> , <b>2015</b> , 119, 11260-11266	3.8	17
117	A Materials-Based Mitigation Strategy for SU/SD in PEM Fuel Cells: Properties and Performance-Specific Testing of IrRu OER Catalysts. <i>ECS Electrochemistry Letters</i> , <b>2013</b> , 2, F25-F28		17
116	Aqueous Synthesis of Concave Rh Nanotetrahedra with Defect-Rich Surfaces: Insights into Growth-, Defect-, and Plasmon-Enhanced Catalytic Energy Conversion. <i>Chemistry of Materials</i> , <b>2018</b> , 30, 4448-4458	8.6	16
115	Proton irradiation effects on AlN/GaN high electron mobility transistors. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2010</b> , 28, L47-L51	1.3	16
114	Colloidal cobalt-doped ZnO nanoparticles by microwave-assisted synthesis and their utilization in thin composite layers with MEH-PPV as an electroluminescent material for polymer light emitting diodes. <i>Organic Electronics</i> , <b>2018</b> , 59, 337-348	3.5	16
113	Simulation of polarization charge on AlGaIn/GaN high electron mobility transistors: Comparison to electron holography. <i>Journal of Applied Physics</i> , <b>2010</b> , 107, 054516	2.5	15
112	Production and detailed characterization of bean husk-based carbon: efficient cadmium (II) removal from aqueous solutions. <i>Water Research</i> , <b>2008</b> , 42, 3473-9	12.5	15
111	Pt Particle Size Affects Both the Charge Separation and Water Reduction Efficiencies of CdS-Pt Nanorod Photocatalysts for Light Driven H <sub>2</sub> Generation.. <i>Journal of the American Chemical Society</i> , <b>2022</b> ,	16.4	15
110	Hexagonal OsB <sub>2</sub> : Sintering, microstructure and mechanical properties. <i>Journal of Alloys and Compounds</i> , <b>2015</b> , 634, 168-178	5.7	14
109	Bias dependent two-channel conduction in InAlN/AlN/GaN structures. <i>Journal of Applied Physics</i> , <b>2010</b> , 107, 083706	2.5	14
108	Ultrathin platinum nanowire based electrodes for high-efficiency hydrogen generation in practical electrolyzer cells. <i>Chemical Engineering Journal</i> , <b>2021</b> , 410, 128333	14.7	14
107	On the enhanced sulfur and coking tolerance of Ni-Co-rare earth oxide catalysts for the dry reforming of methane. <i>Journal of Catalysis</i> , <b>2021</b> , 393, 215-229	7.3	14
106	Isolation of a 300 kDa, Au Gold Compound, the Standard 3.6 nm Capstone to a Series of Plasmonic Nanocrystals Protected by Aliphatic-like Thiolates. <i>Journal of Physical Chemistry Letters</i> , <b>2018</b> , 9, 6825-6832	6.4	14
105	Study on corrosion migrations within catalyst-coated membranes of proton exchange membrane electrolyzer cells. <i>International Journal of Hydrogen Energy</i> , <b>2017</b> , 42, 27343-27349	6.7	13
104	Impact of IrRu oxygen evolution reaction catalysts on Pt nanostructured thin films under start-up/shutdown cycling. <i>Journal of Power Sources</i> , <b>2014</b> , 269, 671-681	8.9	13
103	Engineering Atomically Dispersed FeN <sub>4</sub> Active Sites for CO <sub>2</sub> Electroreduction. <i>Angewandte Chemie</i> , <b>2021</b> , 133, 1035-1045	3.6	13



102	Improving Electronic Conductivity of Layered Oxides through the Formation of Two-Dimensional Heterointerface for Intercalation Batteries. <i>ACS Applied Energy Materials</i> , <b>2020</b> , 3, 3835-3844	6.1	12
101	Solvothermal hot injection synthesis of core-shell AgNi nanoparticles. <i>Journal of Alloys and Compounds</i> , <b>2019</b> , 770, 377-385	5.7	12
100	Ionic Conductance through Graphene: Assessing Its Applicability as a Proton Selective Membrane. <i>ACS Nano</i> , <b>2019</b> , 13, 12109-12119	16.7	12
99	Evaluation of the Effect of Impregnated Platinum on PFSA Degradation for PEM Fuel Cells. <i>Journal of the Electrochemical Society</i> , <b>2013</b> , 160, F1123-F1128	3.9	12
98	Transmission electron microscopy characterization of electrically stressed AlGaIn/GaN high electron mobility transistor devices. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2012</b> , 30, 062204	1.3	12
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46	Precipitates in Long Term Aging Al 5083 Alloy <b>2014</b> , 249-253		3
45	Precipitates in Long Term Aging Al 5083 Alloy <b>2014</b> , 249-253		3
44	Dynamically Unveiling Metal-Nitrogen Coordination during Thermal Activation to Design High-Efficient Atomically Dispersed CoN <sub>4</sub> Active Sites. <i>Angewandte Chemie</i> , <b>2021</b> , 133, 9602-9612	3.6	3
43	Synthesis of Novel Phases in Si Nanowires Using Diamond Anvil Cells at High Pressures and Temperatures. <i>Nano Letters</i> , <b>2021</b> , 21, 1427-1433	11.5	3
42	Atomic-Scale Structural Mapping of Active Sites in Monolayer PGM-Free Catalysts by Low-Voltage 4D-STEM. <i>Microscopy and Microanalysis</i> , <b>2020</b> , 26, 162-163	0.5	2
41	Ruthenium Diffusion on Different CeO <sub>2</sub> Surfaces: Support Shape Effect. <i>Microscopy and Microanalysis</i> , <b>2019</b> , 25, 2198-2199	0.5	2
40	High-Resolution Mapping of the PFSA Polymer Distribution in PEFC Electrode Layers. <i>ECS Transactions</i> , <b>2014</b> , 64, 819-827	1	2
39	Investigation of Pore Shape Effects of Novel Thin LGDLs for High-Efficiency Hydrogen/Oxygen Generation and Energy Storage <b>2017</b> ,		2
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35	Oxygen Interaction with Hexagonal OsB <sub>2</sub> at High Temperature. <i>Journal of the American Ceramic Society</i> , <b>2016</b> , 99, 4057-4065	3.8	2
34	Electron tomography of unirradiated and irradiated nuclear graphite. <i>Journal of Nuclear Materials</i> , <b>2021</b> , 545, 152649	3.3	2
33	Resolving Active Sites in Atomically Dispersed Electrocatalysts for Energy Conversion Applications. <i>Microscopy and Microanalysis</i> , <b>2019</b> , 25, 2066-2067	0.5	1
32	Overcoming the Challenges of Beam-sensitivity in Fuel Cell Electrodes. <i>Microscopy and Microanalysis</i> , <b>2017</b> , 23, 2222-2223	0.5	1
31	Micro/nano manufacturing of novel multifunctional layers for hydrogen production from water splitting <b>2017</b> ,		1

30	Insights into the rapid two-phase transport dynamics in different structured porous transport layers of water electrolyzers through high-speed visualization. <i>Journal of Power Sources</i> , <b>2021</b> , 516, 230641	8.9	1
29	Effects of Different Temper and Aging Temperature on the Precipitation Behavior of Al 5xxx Alloy <b>2015</b> , 361-365		1
28	Exchange of Ions across the TiN/TaO Interface during Electroformation of TaO-Based Resistive Switching Devices. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 27378-27385	9.5	1
27	AuPd Nanoicosahedra: Atomic-Level Surface Modulation for Optimization of Electrocatalytic and Photocatalytic Energy Conversion. <i>ACS Applied Energy Materials</i> , <b>2021</b> , 4, 2652-2662	6.1	1
26	Hollow Silica Particles: A Novel Strategy for Cost Reduction. <i>Nanomaterials</i> , <b>2021</b> , 11,	5.4	1
25	Bridging Thermal Catalysis and Electrocatalysis: Catalyzing CO <sub>2</sub> Conversion with Carbon-Based Materials. <i>Angewandte Chemie</i> , <b>2021</b> , 133, 17613-17621	3.6	1
24	Elucidating fuel cell catalyst degradation mechanisms by identical-location transmission electron microscopy. <i>Microscopy and Microanalysis</i> , <b>2021</b> , 27, 974-976	0.5	1
23	Tailoring the Radionuclide Encapsulation and Surface Chemistry of La(223Ra)VO <sub>4</sub> Nanoparticles for Targeted Alpha Therapy. <i>Journal of Nanotheranostics</i> , <b>2021</b> , 2, 33-50	3.8	1
22	Solution-Phase Synthesis of Silica Fibers and Their Use in Making Transparent High-Strength Silica-Polymer Composites. <i>ChemistrySelect</i> , <b>2018</b> , 3, 13427-13431	1.8	1
21	MoS <sub>2</sub> nanosheet integrated electrodes with engineered 1T-2H phases and defects for efficient hydrogen production in practical PEM electrolysis. <i>Applied Catalysis B: Environmental</i> , <b>2022</b> , 313, 121458	21.8	1
20	Effects of Different Temper and Aging Temperature on the Precipitation Behavior of Al 5xxx Alloy <b>2015</b> , 359-365		0
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18	Design of PGM-free Cathodic Catalyst Layers for Advanced PEM Fuel Cells. <i>Applied Catalysis B: Environmental</i> , <b>2022</b> , 121424	21.8	0
17	Chemical preintercalation synthesis approach for the formation of new layered tungsten oxides. <i>Journal of Materials Science</i> , <b>2022</b> , 57, 7814	4.3	0
16	Anchorage of Al <sub>2</sub> O <sub>3</sub> nanoparticles on nitrogen-doped multiwalled carbon nanotubes. <i>Scripta Materialia</i> , <b>2016</b> , 123, 17-20	5.6	
15	Characterizing Alnico Alloy by Correlative STEM-EDS Tomography and Atom Probe Tomography. <i>Microscopy and Microanalysis</i> , <b>2016</b> , 22, 668-669	0.5	
14	Exploring the Activity and Stability of Pt-based Catalysts through Analytical Electron Microscopy. <i>Microscopy and Microanalysis</i> , <b>2018</b> , 24, 1510-1511	0.5	
13	Electron Tomography of PEM Fuel Cell Catalyst Coarsening on Alternate Carbon Supports. <i>Microscopy and Microanalysis</i> , <b>2017</b> , 23, 2090-2091	0.5	

12	Recent Progress of Correlative Transmission Electron Microscopy and Atom Probe Tomography for Materials Characterization. <i>Microscopy and Microanalysis</i> , <b>2017</b> , 23, 692-693	0.5
11	Electric Field Driven Degradation of AlGaIn/GaN High Electron Mobility Transistors during Off-State Stress. <i>ECS Transactions</i> , <b>2011</b> , 41, 89-100	1
10	Polarization Field Mapping of AlGaIn/GaN HEMT Devices using Lorentz-mode Electron Holography. <i>Microscopy and Microanalysis</i> , <b>2009</b> , 15, 1236-1237	0.5
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8	Mapping the Evolution of Surface Strain in PtCo Core-Shell Catalysts By 4D-STEM. <i>ECS Meeting Abstracts</i> , <b>2021</b> , MA2021-02, 1020-1020	0
7	Construction of Inverse Metal-Zeolite Interfaces via Area-Selective Atomic Layer Deposition. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 51759-51766	9.5
6	Stabilizing Fuel Cell Materials Through Cryogenic Cooling for Simultaneous EELS-EDS Analysis. <i>Microscopy and Microanalysis</i> , <b>2020</b> , 26, 1660-1662	0.5
5	(Invited) Catalyst Assessments and Device Incorporation in Low Temperature Electrolysis. <i>ECS Meeting Abstracts</i> , <b>2021</b> , MA2021-01, 1183-1183	0
4	Quantifying the projected unit cell size variation of off-axis PtCo catalyst nanoparticles through 4D-STEM. <i>Microscopy and Microanalysis</i> , <b>2021</b> , 27, 1440-1442	0.5
3	Structural Characterization of Bimetallic Nanocrystal Electrocatalysts. <i>Microscopy and Microanalysis</i> , <b>2016</b> , 22, 1286-1287	0.5
2	Atomic-scale Imaging of PGM-free Catalyst Active Sites by 30 keV 4D-STEM. <i>Microscopy and Microanalysis</i> , <b>2021</b> , 27, 2976-2977	0.5
1	Automated methods for improved characterization of alloy nanoparticle catalysts. <i>Microscopy and Microanalysis</i> , <b>2021</b> , 27, 2616-2618	0.5