

David A Cullen

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

227
papers

11,592
citations

52
h-index

103
g-index

267
ext. papers

15,173
ext. citations

9.9
avg, IF

6.62
L-index

#	Paper	IF	Citations
227	Multi-principal elemental intermetallic nanoparticles synthesized via a disorder-to-order transition.. <i>Science Advances</i> , 2022 , 8, eabm4322	14.3	5
226	Pt Particle Size Affects Both the Charge Separation and Water Reduction Efficiencies of CdS-Pt Nanorod Photocatalysts for Light Driven H ₂ Generation.. <i>Journal of the American Chemical Society</i> , 2022 ,	16.4	15
225	Mesoporous textured Fe-N-C electrocatalysts as highly efficient cathodes for proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2022 , 520, 230819	8.9	6
224	Tuning Catalyst Activation and Utilization Via Controlled Electrode Patterning for Low-Loading and High-Efficiency Water Electrolyzers.. <i>Small</i> , 2022 , e2107745	11	4
223	Design of PGM-free Cathodic Catalyst Layers for Advanced PEM Fuel Cells. <i>Applied Catalysis B: Environmental</i> , 2022 , 121424	21.8	0
222	Chemical preintercalation synthesis approach for the formation of new layered tungsten oxides. <i>Journal of Materials Science</i> , 2022 , 57, 7814	4.3	0
221	MoS ₂ nanosheet integrated electrodes with engineered 1T-2H phases and defects for efficient hydrogen production in practical PEM electrolysis. <i>Applied Catalysis B: Environmental</i> , 2022 , 313, 121458	21.8	1
220	Mapping the Evolution of Surface Strain in PtCo Core-Shell Catalysts By 4D-STEM. <i>ECS Meeting Abstracts</i> , 2021 , MA2021-02, 1020-1020	0	
219	Construction of Inverse Metal-Zeolite Interfaces via Area-Selective Atomic Layer Deposition. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 51759-51766	9.5	
218	Slow Auger Recombination of Trapped Excitons Enables Efficient Multiple Electron Transfer in CdS-Pt Nanorod Heterostructures. <i>Journal of the American Chemical Society</i> , 2021 , 143, 20264-20273	16.4	4
217	Engineered Thin Diffusion Layers for Anion-Exchange Membrane Electrolyzer Cells with Outstanding Performance. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 50957-50964	9.5	4
216	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> , 2021 , 516, 230641	8.9	1
215	Dynamically Unveiling Metal-Nitrogen Coordination during Thermal Activation to Design High-Efficient Atomically Dispersed CoN Active Sites. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 9516-9526	16.4	44
214	Dynamically Unveiling Metal-Nitrogen Coordination during Thermal Activation to Design High-Efficient Atomically Dispersed CoN ₄ Active Sites. <i>Angewandte Chemie</i> , 2021 , 133, 9602-9612	3.6	3
213	AuPd Nanoicosahedra: Atomic-Level Surface Modulation for Optimization of Electrocatalytic and Photocatalytic Energy Conversion. <i>ACS Applied Energy Materials</i> , 2021 , 4, 2652-2662	6.1	1
212	New roads and challenges for fuel cells in heavy-duty transportation. <i>Nature Energy</i> , 2021 , 6, 462-474	62.3	89
211	Promoting Atomically Dispersed MnN Sites Sulfur Doping for Oxygen Reduction: Unveiling Intrinsic Activity and Degradation in Fuel Cells. <i>ACS Nano</i> , 2021 , 15, 6886-6899	16.7	30

210	Porphyrin Aerogel Catalysts for Oxygen Reduction Reaction in Anion-Exchange Membrane Fuel Cells. <i>Advanced Functional Materials</i> , 2021 , 31, 2100963	15.6	24
209	Effect of Catalyst and Catalyst Layer Composition on Catalyst Support Durability. <i>Journal of the Electrochemical Society</i> , 2021 , 168, 044502	3.9	4
208	Single Atomic Iron Site Catalysts via Benign Aqueous Synthesis for Durability Improvement in Proton Exchange Membrane Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2021 , 168, 044501	3.9	5
207	Highly Efficient Plasmon Induced Hot-Electron Transfer at Ag/TiO ₂ Interface. <i>ACS Photonics</i> , 2021 , 8, 1497-1504	6.3	12
206	Constructing Ultrathin W-Doped NiFe Nanosheets via Facile Electrosynthesis as Bifunctional Electrocatalysts for Efficient Water Splitting. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 20070-20080	8.5	12
205	Impact of Catalyst Ink Dispersing Solvent on PEM Fuel Cell Performance and Durability. <i>Journal of the Electrochemical Society</i> , 2021 , 168, 044517	3.9	8
204	Synthesis strategies toward improved ordering of [MnO ₆] octahedra in tunnel structured 2D and 2D MnO ₂ . <i>Scripta Materialia</i> , 2021 , 195, 113713	5.6	2
203	Harvesting Sub-Bandgap IR Photons by Photothermionic Hot Electron Transfer in a Plasmonic p-n Junction. <i>Nano Letters</i> , 2021 , 21, 4036-4043	11.5	5
202	Ultrathin platinum nanowire based electrodes for high-efficiency hydrogen generation in practical electrolyzer cells. <i>Chemical Engineering Journal</i> , 2021 , 410, 128333	14.7	14
201	(Invited) Catalyst Assessments and Device Incorporation in Low Temperature Electrolysis. <i>ECS Meeting Abstracts</i> , 2021 , MA2021-01, 1183-1183	0	
200	Electrochemical ammonia synthesis via nitrate reduction on Fe single atom catalyst. <i>Nature Communications</i> , 2021 , 12, 2870	17.4	136
199	Chemical vapour deposition of Fe-N-C oxygen reduction catalysts with full utilization of dense Fe-N sites. <i>Nature Materials</i> , 2021 , 20, 1385-1391	27	96
198	Bridging Thermal Catalysis and Electrocatalysis: Catalyzing CO Conversion with Carbon-Based Materials. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 17472-17480	16.4	5
197	Hollow Silica Particles: A Novel Strategy for Cost Reduction. <i>Nanomaterials</i> , 2021 , 11,	5.4	1
196	General synthesis of single-atom catalysts with high metal loading using graphene quantum dots. <i>Nature Chemistry</i> , 2021 , 13, 887-894	17.6	86
195	Bridging Thermal Catalysis and Electrocatalysis: Catalyzing CO ₂ Conversion with Carbon-Based Materials. <i>Angewandte Chemie</i> , 2021 , 133, 17613-17621	3.6	1
194	Elucidating fuel cell catalyst degradation mechanisms by identical-location transmission electron microscopy. <i>Microscopy and Microanalysis</i> , 2021 , 27, 974-976	0.5	1
193	Quantifying the projected unit cell size variation of off-axis PtCo catalyst nanoparticles through 4D-STEM. <i>Microscopy and Microanalysis</i> , 2021 , 27, 1440-1442	0.5	

192	Electron tomography of unirradiated and irradiated nuclear graphite. <i>Journal of Nuclear Materials</i> , 2021 , 545, 152649	3.3	2
191	Engineering Atomically Dispersed FeN ₄ Active Sites for CO ₂ Electroreduction. <i>Angewandte Chemie</i> , 2021 , 133, 1035-1045	3.6	13
190	Engineering Atomically Dispersed FeN Active Sites for CO Electroreduction. <i>Angewandte Chemie - International Edition</i> , 2021 , 60, 1022-1032	16.4	66
189	Status and challenges for the application of platinum group metal-free catalysts in proton-exchange membrane fuel cells. <i>Current Opinion in Electrochemistry</i> , 2021 , 25, 100627	7.2	22
188	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> , 2021 , 393, 215-229	7.3	14
187	Tailoring the Radionuclide Encapsulation and Surface Chemistry of La(223Ra)VO ₄ Nanoparticles for Targeted Alpha Therapy. <i>Journal of Nanotheranostics</i> , 2021 , 2, 33-50	3.8	1
186	Atomic-scale Imaging of PGM-free Catalyst Active Sites by 30 keV 4D-STEM. <i>Microscopy and Microanalysis</i> , 2021 , 27, 2976-2977	0.5	
185	Automated methods for improved characterization of alloy nanoparticle catalysts. <i>Microscopy and Microanalysis</i> , 2021 , 27, 2616-2618	0.5	
184	Effects of Ink Formulation on the Structure and Performance of PGM-Free Catalyst Layer in PEMFCs. <i>ECS Transactions</i> , 2021 , 104, 327-333	1	0
183	W-induced morphological modification of NiFe layered double hydroxides as efficient electrocatalysts for overall water splitting. <i>Electrochimica Acta</i> , 2021 , 395, 139199	6.7	9
182	Synthesis of Novel Phases in Si Nanowires Using Diamond Anvil Cells at High Pressures and Temperatures. <i>Nano Letters</i> , 2021 , 21, 1427-1433	11.5	3
181	Performance enhancement and degradation mechanism identification of a single-atom CoN ₄ catalyst for proton exchange membrane fuel cells. <i>Nature Catalysis</i> , 2020 , 3, 1044-1054	36.5	186
180	Atomic-Scale Structural Mapping of Active Sites in Monolayer PGM-Free Catalysts by Low-Voltage 4D-STEM. <i>Microscopy and Microanalysis</i> , 2020 , 26, 162-163	0.5	2
179	Efficient Hot Electron Transfer from Small Au Nanoparticles. <i>Nano Letters</i> , 2020 , 20, 4322-4329	11.5	42
178	Hybrid hollow silica particles: synthesis and comparison of properties with pristine particles.. <i>RSC Advances</i> , 2020 , 10, 22331-22334	3.7	3
177	Multi-scale characterization and simulation of impact welding between immiscible Mg/steel alloys. <i>Journal of Materials Science and Technology</i> , 2020 , 59, 149-163	9.1	9
176	Enhancing CexZr1-xO ₂ Activity for Methane Dry Reforming Using Subsurface Ni Dopants. <i>ACS Catalysis</i> , 2020 , 10, 4070-4079	13.1	54
175	Improving Electronic Conductivity of Layered Oxides through the Formation of Two-Dimensional Heterointerface for Intercalation Batteries. <i>ACS Applied Energy Materials</i> , 2020 , 3, 3835-3844	6.1	12

174	Impact of Polyvinylidene Fluoride on Nanofiber Cathode Structure and Durability in Proton Exchange Membrane Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 054517	3.9	7
173	Building Electron/Proton Nanohighways for Full Utilization of Water Splitting Catalysts. <i>Advanced Energy Materials</i> , 2020 , 10, 1903871	21.8	19
172	Recent developments in catalyst-related PEM fuel cell durability. <i>Current Opinion in Electrochemistry</i> , 2020 , 21, 192-200	7.2	75
171	Plasma Synthesis of Spherical Crystalline and Amorphous Electrolyte Nanopowders for Solid-State Batteries. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 11570-11578	9.5	4
170	Adsorption of Colloidal Metal Nanoparticles via Solvent Engineering. <i>ACS Catalysis</i> , 2020 , 10, 2378-2383	13.1	4
169	Atomically Dispersed Single Ni Site Catalysts for Nitrogen Reduction toward Electrochemical Ammonia Synthesis Using N ₂ and H ₂ O. <i>Small Methods</i> , 2020 , 4, 1900821	12.8	88
168	Electrocatalysts: Building Electron/Proton Nanohighways for Full Utilization of Water Splitting Catalysts (Adv. Energy Mater. 16/2020). <i>Advanced Energy Materials</i> , 2020 , 10, 2070075	21.8	3
167	The Impact of Ink and Spray Variables on Catalyst Layer Properties, Electrolyzer Performance, and Electrolyzer Durability. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 144512	3.9	10
166	Stabilizing Fuel Cell Materials Through Cryogenic Cooling for Simultaneous EELS-EDS Analysis. <i>Microscopy and Microanalysis</i> , 2020 , 26, 1660-1662	0.5	
165	Exchange of Ions across the TiN/TaO Interface during Electroformation of TaO-Based Resistive Switching Devices. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 27378-27385	9.5	1
164	Methanol tolerance of atomically dispersed single metal site catalysts: mechanistic understanding and high-performance direct methanol fuel cells. <i>Energy and Environmental Science</i> , 2020 , 13, 3544-3555	35.4	66
163	Method To Synthesize Micronized Spherical Carbon Particles from Lignin. <i>Industrial & Engineering Chemistry Research</i> , 2020 , 59, 9-17	3.9	4
162	Impacts of catalyst nanolayers on water permeation and swelling of polymer electrolyte membranes. <i>Journal of Power Sources</i> , 2020 , 448, 227582	8.9	5
161	Heat-Treated Aerogel as a Catalyst for the Oxygen Reduction Reaction. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 2483-2489	16.4	47
160	Single Cobalt Sites Dispersed in Hierarchically Porous Nanofiber Networks for Durable and High-Power PGM-Free Cathodes in Fuel Cells. <i>Advanced Materials</i> , 2020 , 32, e2003577	24	132
159	P-block single-metal-site tin/nitrogen-doped carbon fuel cell cathode catalyst for oxygen reduction reaction. <i>Nature Materials</i> , 2020 , 19, 1215-1223	27	127
158	Durability evaluation of a Fe ₃ N ₄ catalyst in polymer electrolyte fuel cell environment via accelerated stress tests. <i>Nano Energy</i> , 2020 , 78, 105209	17.1	18
157	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> , 2020 , 279, 119400	21.8	51

156	Chemical Vapor Deposition for Atomically Dispersed and Nitrogen Coordinated Single Metal Site Catalysts. <i>Angewandte Chemie</i> , 2020 , 132, 21882-21889	3.6	6
155	Direct Characterization of Atomically Dispersed Catalysts: Nitrogen-Coordinated Ni Sites in Carbon-Based Materials for CO ₂ Electroreduction. <i>Advanced Energy Materials</i> , 2020 , 10, 2001836	21.8	20
154	Styrene-Based Elastomer Composites with Functionalized Graphene Oxide and Silica Nanofiber Fillers: Mechanical and Thermal Conductivity Properties. <i>Nanomaterials</i> , 2020 , 10,	5.4	5
153	Chemical Vapor Deposition for Atomically Dispersed and Nitrogen Coordinated Single Metal Site Catalysts. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 21698-21705	16.4	55
152	Brittle fracture to recoverable plasticity: polytypism-dependent nanomechanics in todorokite-like nanobelts. <i>Nanoscale Advances</i> , 2019 , 1, 357-366	5.1	7
151	Highly active atomically dispersed CoN ₄ fuel cell cathode catalysts derived from surfactant-assisted MOFs: carbon-shell confinement strategy. <i>Energy and Environmental Science</i> , 2019 , 12, 250-260	35.4	475
150	Mass-transport properties of electro sprayed Pt/C catalyst layers for polymer-electrolyte fuel cells. <i>Journal of Power Sources</i> , 2019 , 427, 250-259	8.9	18
149	High-performance fuel cell cathodes exclusively containing atomically dispersed iron active sites. <i>Energy and Environmental Science</i> , 2019 , 12, 2548-2558	35.4	280
148	Voltage gated inter-cation selective ion channels from graphene nanopores. <i>Nanoscale</i> , 2019 , 11, 9856-9861	9.6	23
147	Effect of Moisture on Dopant Segregation in Solid Hosts. <i>Journal of Physical Chemistry C</i> , 2019 , 123, 12234-12240	3.8	10
146	Stable Metallic Enrichment in Conductive Filaments in TaO _x -Based Resistive Switches Arising from Competing Diffusive Fluxes. <i>Advanced Electronic Materials</i> , 2019 , 5, 1800954	6.4	22
145	Thermal-gradient-driven elemental segregation in Ge ₂ Sb ₂ Te ₅ phase change memory cells. <i>Applied Physics Letters</i> , 2019 , 114, 163507	3.4	9
144	Solvothermal hot injection synthesis of core-shell AgNi nanoparticles. <i>Journal of Alloys and Compounds</i> , 2019 , 770, 377-385	5.7	12
143	Resolving Active Sites in Atomically Dispersed Electrocatalysts for Energy Conversion Applications. <i>Microscopy and Microanalysis</i> , 2019 , 25, 2066-2067	0.5	1
142	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> , 2019 , 257, 117929	21.8	45
141	Distribution and Valence State of Ru Species on CeO ₂ Supports: Support Shape Effect and Its Influence on CO Oxidation. <i>ACS Catalysis</i> , 2019 , 9, 11088-11103	13.1	67
140	Thermally Driven Structure and Performance Evolution of Atomically Dispersed FeN ₄ Sites for Oxygen Reduction. <i>Angewandte Chemie</i> , 2019 , 131, 19147-19156	3.6	38
139	Thermally Driven Structure and Performance Evolution of Atomically Dispersed FeN Sites for Oxygen Reduction. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 18971-18980	16.4	207

138	Ionic Conductance through Graphene: Assessing Its Applicability as a Proton Selective Membrane. <i>ACS Nano</i> , 2019 , 13, 12109-12119	16.7	12
137	Ruthenium Diffusion on Different CeO ₂ Surfaces: Support Shape Effect. <i>Microscopy and Microanalysis</i> , 2019 , 25, 2198-2199	0.5	2
136	Atomic-level active sites of efficient imidazolate framework-derived nickel catalysts for CO ₂ reduction. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 26231-26237	13	46
135	Electrospun Particle/Polymer Fiber Electrodes with a Neat Nafion Binder for Hydrogen/Air Fuel Cells. <i>ECS Transactions</i> , 2019 , 92, 595-602	1	4
134	Improved electrochemical cycling stability of intercalation battery electrodes via control of material morphology. <i>Ionics</i> , 2019 , 25, 493-502	2.7	6
133	A novel PEMEC with 3D printed non-conductive bipolar plate for low-cost hydrogen production from water electrolysis. <i>Energy Conversion and Management</i> , 2019 , 182, 108-116	10.6	31
132	Hard-Magnet L10-CoPt Nanoparticles Advance Fuel Cell Catalysis. <i>Joule</i> , 2019 , 3, 124-135	27.8	171
131	Same solution synthesis and self-assembly of porous silica nanoparticles into microspheres. <i>Applied Surface Science</i> , 2019 , 467-468, 634-639	6.7	7
130	Microstructure and coercivity in alnico 9. <i>Journal of Magnetism and Magnetic Materials</i> , 2019 , 471, 142-147	7	7
129	Unveiling Active Sites of CO ₂ Reduction on Nitrogen-Coordinated and Atomically Dispersed Iron and Cobalt Catalysts. <i>ACS Catalysis</i> , 2018 , 8, 3116-3122	13.1	304
128	PtCo Cathode Catalyst Morphological and Compositional Changes after PEM Fuel Cell Accelerated Stress Testing. <i>Journal of the Electrochemical Society</i> , 2018 , 165, F3078-F3084	3.9	22
127	Durability of Pt-Co Alloy Polymer Electrolyte Fuel Cell Cathode Catalysts under Accelerated Stress Tests. <i>Journal of the Electrochemical Society</i> , 2018 , 165, F3166-F3177	3.9	38
126	Nitrogen-Coordinated Single Cobalt Atom Catalysts for Oxygen Reduction in Proton Exchange Membrane Fuel Cells. <i>Advanced Materials</i> , 2018 , 30, 1706758	24	590
125	Tunnel structured manganese oxide nanowires as redox active electrodes for hybrid capacitive deionization. <i>Nano Energy</i> , 2018 , 44, 476-488	17.1	95
124	Fabrication of Au (SG) -ZIF-8 Nanocomposites: A Facile Strategy to Position Au (SG) Nanoclusters Inside and Outside ZIF-8. <i>Advanced Materials</i> , 2018 , 30, 1704576	24	80
123	A physical catalyst for the electrolysis of nitrogen to ammonia. <i>Science Advances</i> , 2018 , 4, e1700336	14.3	196
122	Metal-organic framework-derived nitrogen-doped highly disordered carbon for electrochemical ammonia synthesis using N ₂ and H ₂ O in alkaline electrolytes. <i>Nano Energy</i> , 2018 , 48, 217-226	17.1	309
121	Strain-Driven Stacking Faults in CdSe/CdS Core/Shell Nanorods. <i>Journal of Physical Chemistry Letters</i> , 2018 , 9, 1900-1906	6.4	20

120	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> , 2018 , 47, 434-441	17.1	74
119	Exploring the Activity and Stability of Pt-based Catalysts through Analytical Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2018 , 24, 1510-1511	0.5	
118	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> , 2018 , 30, 4448-4458	8.6	16
117	Formation of the Conducting Filament in TaO ₂ -Resistive Switching Devices by Thermal-Gradient-Induced Cation Accumulation. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 23187-23197	9.5	21
116	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> , 2018 , 9, 6825-6832	6.4	14
115	Solution-Phase Synthesis of Silica Fibers and Their Use in Making Transparent High-Strength Silica-Polymer Composites. <i>ChemistrySelect</i> , 2018 , 3, 13427-13431	1.8	1
114	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> , 2018 , 140, 14010-14014	16.4	46
113	Atomically dispersed manganese catalysts for oxygen reduction in proton-exchange membrane fuel cells. <i>Nature Catalysis</i> , 2018 , 1, 935-945	36.5	69
112	A general synthesis approach for supported bimetallic nanoparticles via surface inorganometallic chemistry. <i>Science</i> , 2018 , 362, 560-564	33.3	120
111	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> , 2018 , 49, 5080-5096	2.3	25
110	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> , 2018 , 59, 337-348	3.5	16
109	Developing titanium micro/nano porous layers on planar thin/tunable LGDLs for high-efficiency hydrogen production. <i>International Journal of Hydrogen Energy</i> , 2018 , 43, 14618-14628	6.7	30
108	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> , 2017 , 118, 22-35	8.1	21
107	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> , 2017 , 33, 991-1003	9.1	18
106	Spiny Rhombic Dodecahedral CuPt Nanoframes with Enhanced Catalytic Performance Synthesized from Cu Nanocube Templates. <i>Chemistry of Materials</i> , 2017 , 29, 5681-5692	9.6	68
105	Long-Term Stability of Nanostructured Thin Film Electrodes at Operating Potentials. <i>Journal of the Electrochemical Society</i> , 2017 , 164, F306-F320	3.9	7
104	Study on corrosion migrations within catalyst-coated membranes of proton exchange membrane electrolyzer cells. <i>International Journal of Hydrogen Energy</i> , 2017 , 42, 27343-27349	6.7	13
103	Lattice Matched Carbide/Phosphide Composites with Superior Electrocatalytic Activity and Stability. <i>Chemistry of Materials</i> , 2017 , 29, 9369-9377	9.6	19

102	In situ investigation on ultrafast oxygen evolution reactions of water splitting in proton exchange membrane electrolyzer cells. <i>Journal of Materials Chemistry A</i> , 2017 , 5, 18469-18475	13	50
101	Thin film surface modifications of thin/tunable liquid/gas diffusion layers for high-efficiency proton exchange membrane electrolyzer cells. <i>Applied Energy</i> , 2017 , 206, 983-990	10.7	37
100	Investigation of Pore Shape Effects of Novel Thin LGDLs for High-Efficiency Hydrogen/Oxygen Generation and Energy Storage 2017 ,		2
99	Controlled Assembly of Lignocellulosic Biomass Components and Properties of Reformed Materials. <i>ACS Sustainable Chemistry and Engineering</i> , 2017 , 5, 8044-8052	8.3	18
98	3D Analysis of Fuel Cell Electrocatalyst Degradation on Alternate Carbon Supports. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 29839-29848	9.5	49
97	Direct atomic-level insight into the active sites of a high-performance PGM-free ORR catalyst. <i>Science</i> , 2017 , 357, 479-484	33.3	920
96	(Invited Plenary) Ultrathin Film NSTF ORR Electrocatalysts for PEM Fuel Cells. <i>ECS Transactions</i> , 2017 , 80, 659-676	1	3
95	Electron Tomography of PEM Fuel Cell Catalyst Coarsening on Alternate Carbon Supports. <i>Microscopy and Microanalysis</i> , 2017 , 23, 2090-2091	0.5	
94	Cation-Eutectic Transition via Sublattice Melting in CuInPS/InPS van der Waals Layered Crystals. <i>ACS Nano</i> , 2017 , 11, 7060-7073	16.7	25
93	Characterization of Al-Mg Alloy Aged at Low Temperatures. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2017 , 48, 2040-2050	2.3	19
92	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> , 2017 , 10, 166-175	35.4	98
91	Recent Progress of Correlative Transmission Electron Microscopy and Atom Probe Tomography for Materials Characterization. <i>Microscopy and Microanalysis</i> , 2017 , 23, 692-693	0.5	
90	Overcoming the Challenges of Beam-sensitivity in Fuel Cell Electrodes. <i>Microscopy and Microanalysis</i> , 2017 , 23, 2222-2223	0.5	1
89	Micro/nano manufacturing of novel multifunctional layers for hydrogen production from water splitting 2017 ,		1
88	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> , 2016 , 16, 5514-20	11.5	57
87	Atomistic-Scale Simulations of Defect Formation in Graphene under Noble Gas Ion Irradiation. <i>ACS Nano</i> , 2016 , 10, 8376-84	16.7	92
86	Anchorage of Al ₂ O ₃ nanoparticles on nitrogen-doped multiwalled carbon nanotubes. <i>Scripta Materialia</i> , 2016 , 123, 17-20	5.6	
85	Discovery of true electrochemical reactions for ultrahigh catalyst mass activity in water splitting. <i>Science Advances</i> , 2016 , 2, e1600690	14.3	106

84	Synthesis of Half-Sphere/Half-Funnel-Shaped Silica Structures by Reagent Localization and the Role of Water in Shape Control. <i>Chemistry - A European Journal</i> , 2016 , 22, 18700-18704	4.8	4
83	Critical role of intercalated water for electrocatalytically active nitrogen-doped graphitic systems. <i>Science Advances</i> , 2016 , 2, e1501178	14.3	30
82	Characterizing Alnico Alloy by Correlative STEM-EDS Tomography and Atom Probe Tomography. <i>Microscopy and Microanalysis</i> , 2016 , 22, 668-669	0.5	
81	Third order nonlinear optical response exhibited by mono- and few-layers of WS ₂ . <i>2D Materials</i> , 2016 , 3, 021005	5.9	35
80	Colloidosome like structures: self-assembly of silica microrods. <i>RSC Advances</i> , 2016 , 6, 26734-26737	3.7	10
79	Local Platinum Environments in a Solid Analogue of the Molecular Periana Catalyst. <i>ACS Catalysis</i> , 2016 , 6, 2332-2340	13.1	40
78	Vapor phase hydrogenation of furfural over nickel mixed metal oxide catalysts derived from layered double hydroxides. <i>Applied Catalysis A: General</i> , 2016 , 517, 187-195	5.1	58
77	In search of the elusive IrB ₂ : Can mechanochemistry help?. <i>Journal of Solid State Chemistry</i> , 2016 , 233, 108-119	3.3	6
76	Structural Characterization of Bimetallic Nanocrystal Electrocatalysts. <i>Microscopy and Microanalysis</i> , 2016 , 22, 1286-1287	0.5	
75	Distinct photoluminescence and Raman spectroscopy signatures for identifying highly crystalline WS ₂ monolayers produced by different growth methods. <i>Journal of Materials Research</i> , 2016 , 31, 931-944	2.5	68
74	Oxygen Interaction with Hexagonal OsB ₂ at High Temperature. <i>Journal of the American Ceramic Society</i> , 2016 , 99, 4057-4065	3.8	2
73	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> , 2016 , 22, 1251-1260	0.5	25
72	A novel nanocopper-based advanced packaging material 2016 ,		4
71	Thin liquid/gas diffusion layers for high-efficiency hydrogen production from water splitting. <i>Applied Energy</i> , 2016 , 177, 817-822	10.7	68
70	Direct-write liquid phase transformations with a scanning transmission electron microscope. <i>Nanoscale</i> , 2016 , 8, 15581-8	7.7	21
69	PlatinumRuthenium Nanotubes and PlatinumRuthenium Coated Copper Nanowires As Efficient Catalysts for Electro-Oxidation of Methanol. <i>ACS Catalysis</i> , 2015 , 5, 1468-1474	13.1	124
68	Linking morphology with activity through the lifetime of pretreated PtNi nanostructured thin film catalysts. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 11660-11667	13	22
67	Ultrasensitive gas detection of large-area boron-doped graphene. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 14527-32	11.5	146

66	Catalyst-Layer Ionomer Imaging of Fuel Cells. <i>ECS Transactions</i> , 2015 , 69, 455-464	1	21
65	Au ₃₂₉ Ag _x (SR) ₈₄ Nanomolecules: Plasmonic Alloy Faradaurate-329. <i>Journal of Physical Chemistry Letters</i> , 2015 , 6, 3320-3326	6.4	11
64	High temperature Ir segregation in IrB ceramics: effect of oxygen presence on stability of IrB ₂ and other IrB phases. <i>Advances in Applied Ceramics</i> , 2015 , 114, 429-435	2.3	6
63	Effects of Different Temper and Aging Temperature on the Precipitation Behavior of Al 5xxx Alloy 2015 , 359-365		0
62	Engineering the mechanical properties of ultrabARRIER films grown by atomic layer deposition for the encapsulation of printed electronics. <i>Journal of Applied Physics</i> , 2015 , 118, 085501	2.5	36
61	Step-by-Step Growth of Complex Oxide Microstructures. <i>Angewandte Chemie</i> , 2015 , 127, 9139-9143	3.6	7
60	Step-by-Step Growth of Complex Oxide Microstructures. <i>Angewandte Chemie - International Edition</i> , 2015 , 54, 9011-5	16.4	28
59	Atomic Structure of Au ₃₂₉ (SR) ₈₄ Faradaurate Plasmonic Nanomolecules. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 11260-11266	3.8	17
58	Highly Efficient Selective Hydrogenation of Cinnamaldehyde to Cinnamyl Alcohol over Gold Supported on Zinc Oxide Materials. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 28885-28894	3.8	27
57	Solid-state graphene formation via a nickel carbide intermediate phase. <i>RSC Advances</i> , 2015 , 5, 99037-99043	3.7	27
56	Investigation of titanium felt transport parameters for energy storage and hydrogen/oxygen production 2015 ,		8
55	Todorokite-type manganese oxide nanowires as an intercalation cathode for Li-ion and Na-ion batteries. <i>RSC Advances</i> , 2015 , 5, 106265-106271	3.7	24
54	Hexagonal OsB ₂ : Sintering, microstructure and mechanical properties. <i>Journal of Alloys and Compounds</i> , 2015 , 634, 168-178	5.7	14
53	Effects of Different Temper and Aging Temperature on the Precipitation Behavior of Al 5xxx Alloy 2015 , 361-365		1
52	Ozonated graphene oxide film as a proton-exchange membrane. <i>Angewandte Chemie - International Edition</i> , 2014 , 53, 3588-93	16.4	173
51	High-Resolution Mapping of the PFSA Polymer Distribution in PEFC Electrode Layers. <i>ECS Transactions</i> , 2014 , 64, 819-827	1	2
50	Impact of IrRu oxygen evolution reaction catalysts on Pt nanostructured thin films under start-up/shutdown cycling. <i>Journal of Power Sources</i> , 2014 , 269, 671-681	8.9	13
49	Phosphate-Tolerant Oxygen Reduction Catalysts. <i>ACS Catalysis</i> , 2014 , 4, 3193-3200	13.1	100

48	Thermal stability of hexagonal OsB ₂ . <i>Journal of Solid State Chemistry</i> , 2014 , 219, 210-219	3.3	11
47	Novel high pressure hexagonal OsB ₂ by mechanochemistry. <i>Journal of Solid State Chemistry</i> , 2014 , 215, 16-21	3.3	24
46	Platinum-Coated Nickel Nanowires as Oxygen-Reducing Electrocatalysts. <i>ACS Catalysis</i> , 2014 , 4, 1114-1119	13.1	67
45	Platinum-Coated Cobalt Nanowires as Oxygen Reduction Reaction Electrocatalysts. <i>ACS Catalysis</i> , 2014 , 4, 2680-2686	13.1	52
44	Faradaurate-940: synthesis, mass spectrometry, electron microscopy, high-energy X-ray diffraction, and X-ray scattering study of Au~940@20(SR)~160@4 nanocrystals. <i>ACS Nano</i> , 2014 , 8, 6431-9	16.7	52
43	Super-stable, highly monodisperse plasmonic Faradaurate-500 nanocrystals with 500 gold atoms: Au(~500)(SR)(~120). <i>Journal of the American Chemical Society</i> , 2014 , 136, 7410-7	16.4	58
42	Ozonated Graphene Oxide Film as a Proton-Exchange Membrane. <i>Angewandte Chemie</i> , 2014 , 126, 3662-3667	3.6	9
41	Imaging and Microanalysis of Thin Ionomer Layers by Scanning Transmission Electron Microscopy. <i>Journal of the Electrochemical Society</i> , 2014 , 161, F1111-F1117	3.9	42
40	Precipitates in Long Term Aging Al 5083 Alloy 2014 , 249-253		3
39	Precipitates in Long Term Aging Al 5083 Alloy 2014 , 249-253		3
38	The chemical behavior and degradation mitigation effect of cerium oxide nanoparticles in perfluorosulfonic acid polymer electrolyte membranes. <i>Polymer Degradation and Stability</i> , 2013 , 98, 1768-1772	4.7	35
37	The degradation mitigation effect of cerium oxide in polymer electrolyte membranes in extended fuel cell durability tests. <i>Journal of Power Sources</i> , 2013 , 225, 75-83	8.9	69
36	Ternary electrocatalysts for oxidizing ethanol to carbon dioxide: making ir capable of splitting C-C bond. <i>Journal of the American Chemical Society</i> , 2013 , 135, 132-41	16.4	149
35	. <i>IEEE Transactions on Device and Materials Reliability</i> , 2013 , 13, 126-135	1.6	24
34	Efficient Oxygen Evolution Reaction Catalysts for Cell Reversal and Start/Stop Tolerance. <i>Lecture Notes in Energy</i> , 2013 , 637-663	0.4	8
33	XPS and STEM Study of the Interface Formation between Ultra-Thin Ru and Ir OER Catalyst Layers and Perylene Red Support Whiskers. <i>ECS Transactions</i> , 2013 , 50, 19-33	1	2
32	XPS and STEM study of the interface formation between ultra-thin Ru and Ir OER catalyst layers and perylene red support whiskers. <i>Journal of the Serbian Chemical Society</i> , 2013 , 78, 1993-2005	0.9	4
31	Evaluation of the Effect of Impregnated Platinum on PFSA Degradation for PEM Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2013 , 160, F1123-F1128	3.9	12

30	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> , 2013 , 2, F25-F28		17
29	Composition-Mediated Order-Disorder Transformation in FePt Nanoparticles. <i>Particle and Particle Systems Characterization</i> , 2013 , 30, 678-682	3.1	7
28	Layered YSZ/SCSZ/YSZ Electrolytes for Intermediate Temperature SOFC Part I: Design and Manufacturing. <i>Fuel Cells</i> , 2012 , 12, 722-731	2.9	9
27	Evaluation of Al ₃ Mg ₂ 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> , 2012 , 43, 4933-4939	2.3	65
26	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> , 2012 , 3, 284-297	2.7	25
25	Covalently bonded three-dimensional carbon nanotube solids via boron induced nanojunctions. <i>Scientific Reports</i> , 2012 , 2, 363	4.9	300
24	Transmission electron microscopy characterization of electrically stressed AlGa _N /Ga _N high electron mobility transistor devices. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2012 , 30, 062204	1.3	12
23	Electric Field Driven Degradation of AlGa _N /Ga _N High Electron Mobility Transistors during Off-State Stress. <i>ECS Transactions</i> , 2011 , 41, 89-100	1	
22	Electric-Field-Driven Degradation in off-State Step-Stressed AlGa _N /Ga _N High-Electron Mobility Transistors. <i>IEEE Transactions on Device and Materials Reliability</i> , 2011 , 11, 187-193	1.6	33
21	Effect of source field plate on the characteristics of off-state, step-stressed AlGa _N /Ga _N high electron mobility transistors. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2011 , 29, 032204	1.3	23
20	Conduction electron scattering and spin-flipping at sputtered Al/Cu Interfaces. <i>Journal of Applied Physics</i> , 2011 , 109, 053903	2.5	2
19	Characterization of Durable Nanostructured Thin Film Catalysts Tested under Transient Conditions Using Analytical Aberration-Corrected Electron Microscopy. <i>ECS Transactions</i> , 2011 , 41, 1099-1103	1	4
18	Proton irradiation effects on AlN/Ga _N high electron mobility transistors. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2010 , 28, L47-L51	1.3	16
17	Chemical vapor deposition synthesis of N-, P-, and Si-doped single-walled carbon nanotubes. <i>ACS Nano</i> , 2010 , 4, 1696-702	16.7	101
16	Simulation of polarization charge on AlGa _N /Ga _N high electron mobility transistors: Comparison to electron holography. <i>Journal of Applied Physics</i> , 2010 , 107, 054516	2.5	15
15	Bias dependent two-channel conduction in InAlN/AlN/Ga _N structures. <i>Journal of Applied Physics</i> , 2010 , 107, 083706	2.5	14
14	Applications of TEM imaging, analysis and electron holography to III-nitride HEMT devices. <i>Microelectronics Reliability</i> , 2010 , 50, 1514-1519	1.2	9
13	Quantitative phase imaging of nanoscale electrostatic and magnetic fields using off-axis electron holography. <i>Ultramicroscopy</i> , 2010 , 110, 375-382	3.1	42

12	Microstructure and field mapping of AlInN-based heterostructures and devices. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2010 , 7, 2436-2439		4
11	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> , 2009 , 19, 1193-1199	15.6	44
10	Ex-MWNTs: graphene sheets and ribbons produced by lithium intercalation and exfoliation of carbon nanotubes. <i>Nano Letters</i> , 2009 , 9, 1527-33	11.5	326
9	Polarization field mapping of Al _{0.85} In _{0.15} N/AlN/GaN heterostructure. <i>Applied Physics Letters</i> , 2009 , 94, 121909	3.4	26
8	Polarization Field Mapping of AlGa _N /Ga _N HEMT Devices using Lorentz-mode Electron Holography. <i>Microscopy and Microanalysis</i> , 2009 , 15, 1236-1237	0.5	
7	Mapping Polarization Fields in Al _{0.85} In _{0.15} N/AlN/GaN Heterostructures. <i>Microscopy and Microanalysis</i> , 2009 , 15, 1048-1049	0.5	
6	Bulk production of a new form of sp ² carbon: crystalline graphene nanoribbons. <i>Nano Letters</i> , 2008 , 8, 2773-8	11.5	524
5	Production and detailed characterization of bean husk-based carbon: efficient cadmium (II) removal from aqueous solutions. <i>Water Research</i> , 2008 , 42, 3473-9	12.5	15
4	Assessment of surface damage and sidewall implantation in AlGa _N -based high electron mobility transistor devices caused during focused-ion-beam milling. <i>Journal of Applied Physics</i> , 2008 , 104, 094304 ²⁻⁵		10
3	An atomistic branching mechanism for carbon nanotubes: sulfur as the triggering agent. <i>Angewandte Chemie - International Edition</i> , 2008 , 47, 2948-53	16.4	69
2	Heterodoped nanotubes: theory, synthesis, and characterization of phosphorus-nitrogen doped multiwalled carbon nanotubes. <i>ACS Nano</i> , 2008 , 2, 441-8	16.7	165
1	Nitrogen-mediated carbon nanotube growth: diameter reduction, metallicity, bundle dispersability, and bamboo-like structure formation. <i>ACS Nano</i> , 2007 , 1, 369-75	16.7	185