Charles Buddie Mullins

List of Publications by Citations

236 papers	13,153 citations	65 h-index	106 g-index
244 ext. papers	14,898 ext. citations	9.7 avg, IF	6.97 L-index

#	Paper	IF	Citations
236	Enhancing visible light photo-oxidation of water with TiO2 nanowire arrays via cotreatment with H2 and NH3: synergistic effects between Ti3+ and N. *Journal of the American Chemical Society*, **2012**, 134, 3659-62	16.4	536
235	Visible light driven photoelectrochemical water oxidation on nitrogen-modified TiO2 nanowires. *Nano Letters*, **2012**, 12, 26-32	11.5	464
234	Amorphous FeOOH oxygen evolution reaction catalyst for photoelectrochemical water splitting. *Journal of the American Chemical Society*, **2014**, 136, 2843-50	16.4	424
233	Combined charge carrier transport and photoelectrochemical characterization of BiVO4 single crystals: intrinsic behavior of a complex metal oxide. *Journal of the American Chemical Society*, **2013**, 135, 11389-96	16.4	359
232	Fe2O3 Nanorods as Anode Material for Lithium Ion Batteries. *Journal of Physical Chemistry Letters*, **2011**, 2, 2885-2891	6.4	271
231	The Role of Anions in Metal Chalcogenide Oxygen Evolution Catalysis: Electrodeposited Thin Films of Nickel Sulfide as Pre-catalysts *ACS Energy Letters*, **2016**, 1, 195-201	20.1	237
230	Photoelectrochemical Performance of Nanostructured Ti- and Sn-Doped Fe2O3Photoanodes. *Chemistry of Materials*, **2010**, 22, 6474-6482	9.6	237
229	Silicon nanowire fabric as a lithium ion battery electrode material. *Journal of the American Chemical Society*, **2011**, 133, 20914-21	16.4	230
228	Photoelectrochemical Oxidation of Water Using Nanostructured BiVO4 Films. *Journal of Physical Chemistry C*, **2011**, 115, 3794-3802	3.8	215
227	Electrode Degradation in Lithium-Ion Batteries. *ACS Nano*, **2020**, 14, 1243-1295	16.7	209
226	Incorporation of Mo and W into nanostructured BiVO4 films for efficient photoelectrochemical water oxidation. *Physical Chemistry Chemical Physics*, **2012**, 14, 7065-75	3.6	201
225	Catalyst or Precatalyst? The Effect of Oxidation on Transition Metal Carbide, Pnictide, and Chalcogenide Oxygen Evolution Catalysts. *ACS Energy Letters*, **2018**, 3, 2956-2966	20.1	196
224	Surface science investigations of oxidative chemistry on gold. *Accounts of Chemical Research*, **2009**, 42, 1063-73	24.3	191
223	Metal-free photocatalysts for hydrogen evolution. *Chemical Society Reviews*, **2020**, 49, 1887-1931	58.5	190
222	Unravelling Small-Polaron Transport in Metal Oxide Photoelectrodes. *Journal of Physical Chemistry Letters*, **2016**, 7, 471-9	6.4	181
221	Selective hydrogen production from formic acid decomposition on Pd-Au bimetallic surfaces. *Journal of the American Chemical Society*, **2014**, 136, 11070-8	16.4	176
220	Solution-grown germanium nanowire anodes for lithium-ion batteries. *ACS Applied Materials & Interfaces*, **2012**, 4, 4658-64	9.5	165

219	Reactive ballistic deposition of alpha-Fe2O3 thin films for photoelectrochemical water oxidation. *ACS Nano*, **2010**, 4, 1977-86	16.7	165
218	Beyond Doping and Coating: Prospective Strategies for Stable High-Capacity Layered Ni-Rich Cathodes. *ACS Energy Letters*, **2020**, 5, 1136-1146	20.1	161
217	Sn-Cu nanocomposite anodes for rechargeable sodium-ion batteries. *ACS Applied Materials & Interfaces*, **2013**, 5, 8273-7	9.5	155
216	Nanocolumnar Germanium Thin Films as a High-Rate Sodium-Ion Battery Anode Material. *Journal of Physical Chemistry C*, **2013**, 117, 18885-18890	3.8	150
215	Water-enhanced low-temperature CO oxidation and isotope effects on atomic oxygen-covered Au(111). *Journal of the American Chemical Society*, **2008**, 130, 6801-12	16.4	149
214	Spray pyrolysis deposition and photoelectrochemical properties of n-type BiOI nanoplatelet thin films. *ACS Nano*, **2012**, 6, 7712-22	16.7	147
213	Simple Synthesis of Nanocrystalline Tin Sulfide/N-Doped Reduced Graphene Oxide Composites as Lithium Ion Battery Anodes. *ACS Nano*, **2016**, 10, 10778-10788	16.7	146
212	Improving the stability of nanostructured silicon thin film lithium-ion battery anodes through their controlled oxidation. *ACS Nano*, **2012**, 6, 2506-16	16.7	143
211	On the nature of trapping and desorption at high surface temperatures. Theory and experiments for the Ar/Pt(111) system. *Journal of Chemical Physics*, **1991**, 94, 1516-1527	3.9	140
210	Cryogenic CO oxidation on TiO(2)-supported gold nanoclusters precovered with atomic oxygen. *Journal of the American Chemical Society*, **2003**, 125, 2018-9	16.4	138
209	Selective oxidation of ethanol to acetaldehyde on gold. *Journal of the American Chemical Society*, **2008**, 130, 16458-9	16.4	132
208	Highly Efficient Photoelectrochemical Water Splitting from Hierarchical WO/BiVO Nanoporous Sphere Arrays. *Nano Letters*, **2017**, 17, 8012-8017	11.5	131
207	Nanostructured Si(Ek)Gex for tunable thin film lithium-ion battery anodes. *ACS Nano*, **2013**, 7, 2249-57	16.7	130
206	Synthesis of BiVO4 nanoflake array films for photoelectrochemical water oxidation. *Journal of Materials Chemistry A*, **2014**, 2, 9371-9379	13	121
205	Nanostructured Bi2S3/WO3 heterojunction films exhibiting enhanced photoelectrochemical performance. *Journal of Materials Chemistry A*, **2013**, 1, 12826	13	114
204	Synthesis of Ta3N5 Nanotube Arrays Modified with Electrocatalysts for Photoelectrochemical Water Oxidation. *Journal of Physical Chemistry C*, **2012**, 116, 14541-14550	3.8	108
203	Simple Synthesis of Nanostructured Sn/Nitrogen-Doped Carbon Composite Using Nitrilotriacetic Acid as Lithium Ion Battery Anode. *Chemistry of Materials*, **2016**, 28, 1343-1347	9.6	106
202	Electrochemical Synthesis and Characterization of p-CuBi2O4 Thin Film Photocathodes. *Journal of Physical Chemistry C*, **2012**, 116, 6459-6466	3.8	105

201	Surface Chemistry of Methanol on Clean and Atomic Oxygen Pre-Covered Au(111). *Journal of Physical Chemistry C*, **2008**, 112, 5501-5509	3.8	105
200	Evidence for molecularly chemisorbed oxygen on TiO2 supported gold nanoclusters and Au(111). *Journal of the American Chemical Society*, **2004**, 126, 1606-7	16.4	104
199	Enhanced Activity Promoted by CeOx on a CoOx Electrocatalyst for the Oxygen Evolution Reaction. *ACS Catalysis*, **2018**, 8, 4257-4265	13.1	98
198	Tin-Seeded Silicon Nanowires for High Capacity Li-Ion Batteries. *Chemistry of Materials*, **2012**, 24, 3738-3745	9.6	97
197	Facet effect on the photoelectrochemical performance of a WO3/BiVO4 heterojunction photoanode. *Applied Catalysis B: Environmental*, **2019**, 245, 227-239	21.8	97
196	Water activated by atomic oxygen on Au(111) to oxidize CO at low temperatures. *Journal of the American Chemical Society*, **2006**, 128, 6282-3	16.4	92
195	Synthesis and Characterization of CuV2O6 and Cu2V2O7: Two Photoanode Candidates for Photoelectrochemical Water Oxidation. *Journal of Physical Chemistry C*, **2015**, 119, 27220-27227	3.8	88
194	Reaction of CO with molecularly chemisorbed oxygen on TiO2-supported gold nanoclusters. *Journal of the American Chemical Society*, **2004**, 126, 13574-5	16.4	86
193	A high-rate germanium-particle slurry cast Li-ion anode with high Coulombic efficiency and long cycle life. *Journal of Power Sources*, **2013**, 238, 123-136	8.9	84
192	Electrochemical Lithiation of Graphene-Supported Silicon and Germanium for Rechargeable Batteries. *Journal of Physical Chemistry C*, **2012**, 116, 11917-11923	3.8	83
191	Interaction of CO with OH on Au(111): HCOO, CO3, and HOCO as Key Intermediates in the Water-Gas Shift Reaction. *Journal of Physical Chemistry C*, **2009**, 113, 19536-19544	3.8	83
190	Model studies of heterogeneous catalytic hydrogenation reactions with gold. *Chemical Society Reviews*, **2013**, 42, 5002-13	58.5	82
189	Morphology Dependence of the Lithium Storage Capability and Rate Performance of Amorphous TiO2 Electrodes. *Journal of Physical Chemistry C*, **2011**, 115, 2585-2591	3.8	80
188	Tin-germanium alloys as anode materials for sodium-ion batteries. *ACS Applied Materials & Interfaces*, **2014**, 6, 15860-7	9.5	77
187	Selective catalytic oxidation of ammonia to nitrogen on atomic oxygen precovered Au(111). *Journal of the American Chemical Society*, **2006**, 128, 9012-3	16.4	74
186	An active nanoporous Ni(Fe) OER electrocatalyst via selective dissolution of Cd in alkaline media. *Applied Catalysis B: Environmental*, **2018**, 225, 1-7	21.8	74
185	Electrodeposition of Ni-doped FeOOH oxygen evolution reaction catalyst for photoelectrochemical water splitting. *Journal of Materials Chemistry A*, **2014**, 2, 14957	13	73
184	Na2Ni2TeO6: Evaluation as a cathode for sodium battery. *Journal of Power Sources*, **2013**, 243, 817-821	8.9	73

183	Tuning the Intrinsic Properties of Carbon Nitride for High Quantum Yield Photocatalytic Hydrogen Production. *Advanced Science*, **2018**, 5, 1800820	13.6	72
182	Evaluating Electrocatalysts for the Hydrogen Evolution Reaction Using Bipolar Electrode Arrays: Bi- and Trimetallic Combinations of Co, Fe, Ni, Mo, and W. *ACS Catalysis*, **2014**, 4, 1332-1339	13.1	72
181	Nanostructured Ta3N5 Films as Visible-Light Active Photoanodes for Water Oxidation. *Journal of Physical Chemistry C*, **2012**, 116, 19225-19232	3.8	72
180	Improved Visible Light Harvesting of WO3 by Incorporation of Sulfur or Iodine: A Tale of Two Impurities. *Chemistry of Materials*, **2014**, 26, 1670-1677	9.6	71
179	In Situ Optical Imaging of Sodium Electrodeposition: Effects of Fluoroethylene Carbonate. *ACS Energy Letters*, **2017**, 2, 2051-2057	20.1	71
178	Influences of Gold, Binder and Electrolyte on Silicon Nanowire Performance in Li-Ion Batteries. *Journal of Physical Chemistry C*, **2012**, 116, 18079-18086	3.8	71
177	p-Si/W2C and p-Si/W2C/Pt photocathodes for the hydrogen evolution reaction. *Journal of the American Chemical Society*, **2014**, 136, 1535-44	16.4	70
176	Effect of Si Doping and Porosity on Hematite□ (□Fe2O3) Photoelectrochemical Water Oxidation Performance. *Journal of Physical Chemistry C*, **2012**, 116, 5255-5261	3.8	69
175	Hydrogen Adsorption and Absorption with Pd□Au Bimetallic Surfaces. *Journal of Physical Chemistry C*, **2013**, 117, 19535-19543	3.8	68
174	Screening of transition and post-transition metals to incorporate into copper oxide and copper bismuth oxide for photoelectrochemical hydrogen evolution. *Physical Chemistry Chemical Physics*, **2013**, 15, 4554-65	3.6	66
173	Parallel screening of electrocatalyst candidates using bipolar electrochemistry. *Analytical Chemistry* , **2013**, 85, 2493-9	7.8	65
172	SnO2 and TiO2-supported-SnO2 lithium battery anodes with improved electrochemical performance. *Journal of Materials Chemistry*, **2012**, 22, 11134		65
171	Understanding Charge Transport in Carbon Nitride for Enhanced Photocatalytic Solar Fuel Production. *Accounts of Chemical Research*, **2019**, 52, 248-257	24.3	65
170	Tantalum Cobalt Nitride Photocatalysts for Water Oxidation under Visible Light. *Chemistry of Materials*, **2012**, 24, 579-586	9.6	63
169	Selective oxidation of propanol on Au(111): mechanistic insights into aerobic oxidation of alcohols. *ChemPhysChem*, **2008**, 9, 2461-6	3.2	61
168	Anisotropic small-polaron hopping in W:BiVO4 single crystals. *Applied Physics Letters*, **2015**, 106, 022106	3.4	60
167	Optimum lithium-ion conductivity in cubic Li7□La3Hf2□TaxO12. *Journal of Power Sources*, **2012**, 209, 184-188	8.9	60
166	High-rate oxygen evolution reaction on Al-doped LiNiO2. *Advanced Materials*, **2015**, 27, 6063-7	24	59

165	Coincorporation of N and Ta into TiO2 Nanowires for Visible Light Driven Photoelectrochemical Water Oxidation. *Journal of Physical Chemistry C*, **2012**, 116, 23283-23290	3.8	59
164	Ethanol Decomposition on PdAu Alloy Catalysts. *Journal of Physical Chemistry C*, **2018**, 122, 22024-22032	3.8	59
163	K+ Reduces Lithium Dendrite Growth by Forming a Thin, Less-Resistive Solid Electrolyte Interphase. *ACS Energy Letters*, **2016**, 1, 414-419	20.1	57
162	Antimony-doped tin oxide nanorods as a transparent conducting electrode for enhancing photoelectrochemical oxidation of water by hematite. *ACS Applied Materials & Interfaces*, **2014**, 6, 5494-9	9.5	56
161	Reactive Ballistic Deposition of Porous TiO2Films: Growth and Characterization. *Journal of Physical Chemistry C*, **2007**, 111, 4765-4773	3.8	56
160	In situ formation of a multicomponent inorganic-rich SEI layer provides a fast charging and high specific energy Li-metal battery. *Journal of Materials Chemistry A*, **2019**, 7, 17782-17789	13	55
159	Mechanism for the water gas shift reaction on monofunctional platinum and cause of catalyst deactivation. *Journal of Catalysis*, **2011**, 282, 278-288	7.3	55
158	Adsorption and Reaction of Nitric Oxide with Atomic Oxygen Covered Au(111). *Journal of Physical Chemistry B*, **2004**, 108, 17952-17958	3.4	55
157	Selective decomposition of formic acid on molybdenum carbide: A new reaction pathway. *Journal of Catalysis*, **2010**, 269, 33-43	7.3	53
156	Low-Temperature Hydrogenation of Acetaldehyde to Ethanol on H-Precovered Au(111). *Journal of Physical Chemistry Letters*, **2011**, 2, 1363-1367	6.4	52
155	Oxygen Activation and Reaction on PdAu Bimetallic Surfaces. *Journal of Physical Chemistry C*, **2015**, 119, 11754-11762	3.8	50
154	Storage of Lithium in Hydrothermally Synthesized GeO2 Nanoparticles. *Journal of Physical Chemistry Letters*, **2013**, 4, 999-1004	6.4	50
153	Low Temperature Synthesis and Characterization of Nanocrystalline Titanium Carbide with Tunable Porous Architectures. *Chemistry of Materials*, **2010**, 22, 319-329	9.6	50
152	Growth and Characterization of High Surface Area Titanium Carbide. *Journal of Physical Chemistry C*, **2009**, 113, 12742-12752	3.8	48
151	High tap density microparticles of selenium-doped germanium as a high efficiency, stable cycling lithium-ion battery anode material. *Journal of Materials Chemistry A*, **2015**, 3, 5829-5834	13	47
150	Capacity Degradation Mechanism and Cycling Stability Enhancement of AlF-Coated Nanorod Gradient Na[NiCoMn]O Cathode for Sodium-Ion Batteries. *ACS Nano*, **2018**, 12, 12912-12922	16.7	47
149	Mechanistic insights on ethanol dehydrogenation on Pd-Au model catalysts: a combined experimental and DFT study. *Physical Chemistry Chemical Physics*, **2017**, 19, 30578-30589	3.6	46
148	Activation of a Nickel-Based Oxygen Evolution Reaction Catalyst on a Hematite Photoanode via Incorporation of Cerium for Photoelectrochemical Water Oxidation. *ACS Applied Materials & Interfaces*, **2017**, 9, 30654-30661	9.5	46

147	Facile Synthesis of Ge/N-Doped Carbon Spheres with Varying Nitrogen Content for Lithium Ion Battery Anodes. *ACS Applied Materials & Interfaces*, **2016**, 8, 27788-27794	9.5	46
146	Interface Engineering and its Effect on WO-Based Photoanode and Tandem Cell. *ACS Applied Materials & Interfaces*, **2018**, 10, 12639-12650	9.5	44
145	Mechanisms of Initial Dissociative Chemisorption of Oxygen on Transition-Metal Surfaces. *Accounts of Chemical Research*, **1998**, 31, 798-804	24.3	44
144	CO oxidation on inverse Fe2O3/Au(1 1 1) model catalysts. *Journal of Catalysis*, **2012**, 294, 216-222	7.3	43
143	Li- and Na-reduction products of meso-Co3O4 form high-rate, stably cycling battery anode materials. *Journal of Materials Chemistry A*, **2014**, 2, 14209-14221	13	42
142	n-BiSI Thin Films: Selenium Doping and Solar Cell Behavior. *Journal of Physical Chemistry C*, **2012**, 116, 24878-24886	3.8	40
141	BiSI Micro-Rod Thin Films: Efficient Solar Absorber Electrodes?. *Journal of Physical Chemistry Letters* , **2012**, 3, 1571-6	6.4	40
140	Low temperature CO oxidation on Au(111) and the role of adsorbed water. *Topics in Catalysis*, **2007**, 44, 57-63	2.3	40
139	Pulsed Laser Deposition of Epitaxial and Polycrystalline Bismuth Vanadate Thin Films. *Journal of Physical Chemistry C*, **2014**, 118, 26543-26550	3.8	39
138	Surface Alloy Composition Controlled O2 Activation on Pd□Au Bimetallic Model Catalysts. *ACS Catalysis*, **2018**, 8, 3641-3649	13.1	38
137	Carbonate formation and decomposition on atomic oxygen precovered Au(111). *Journal of the American Chemical Society*, **2008**, 130, 11250-1	16.4	38
136	Evidence that amorphous water below 160 K is not a fragile liquid. *Journal of Physical Chemistry B*, **2006**, 110, 11033-6	3.4	38
135	Facile growth of porous Fe2V4O13 films for photoelectrochemical water oxidation. *Journal of Materials Chemistry A*, **2016**, 4, 3034-3042	13	36
134	Reactive ballistic deposition of nanostructured model materials for electrochemical energy conversion and storage. *Accounts of Chemical Research*, **2012**, 45, 434-43	24.3	36
133	Development of a chlorine mechanism for use in the carbon bond IV chemistry model. *Journal of Geophysical Research*, **2003**, 108,		36
132	Tin microparticles for a lithium ion battery anode with enhanced cycling stability and efficiency derived from Se-doping. *Journal of Materials Chemistry A*, **2015**, 3, 13500-13506	13	35
131	Chemical bath deposition of vertically aligned TiO2 nanoplatelet arrays for solar energy conversion applications. *Journal of Materials Chemistry A*, **2013**, 1, 4307	13	35
130	Reactive Scattering of CO from an Oxygen-Atom-Covered Au/TiO2 Model Catalyst. *Journal of Physical Chemistry B*, **2004**, 108, 7917-7926	3.4	34

129	Oxygen and hydroxyl species induce multiple reaction pathways for the partial oxidation of allyl alcohol on gold. *Journal of the American Chemical Society*, **2014**, 136, 6489-98	16.4	33
128	Transport in amorphous solid water films: implications for self-diffusivity. *Journal of Physical Chemistry B*, **2006**, 110, 17987-97	3.4	33
127	Carbon Nitride Transforms into a High Lithium Storage Capacity Nitrogen-Rich Carbon. *ACS Nano*, **2019**, 13, 9279-9291	16.7	32
126	The effect of local lithium surface chemistry and topography on solid electrolyte interphase composition and dendrite nucleation. *Journal of Materials Chemistry A*, **2019**, 7, 14882-14894	13	31
125	Probing the Degradation Chemistry and Enhanced Stability of 2D Organolead Halide Perovskites. *Journal of the American Chemical Society*, **2019**, 141, 18170-18181	16.4	31
124	Structure Revealing H/D Exchange with Co-Adsorbed Hydrogen and Water on Gold. *Journal of Physical Chemistry Letters*, **2012**, 3, 1894-9	6.4	31
123	In Situ Growth of Fe(Ni)OOH Catalyst on Stainless Steel for Water Oxidation. *ChemistrySelect*, **2017**, 2, 2230-2234	1.8	30
122	Nanorod Gradient Cathode: Preventing Electrolyte Penetration into Cathode Particles. *ACS Applied Energy Materials*, **2019**, 2, 6002-6011	6.1	30
121	SILAR Growth of Ag3VO4 and Characterization for Photoelectrochemical Water Oxidation. *Journal of Physical Chemistry C*, **2015**, 119, 26803-26808	3.8	29
120	Structural and Catalytic Effects of Iron- and Scandium-Doping on a Strontium Cobalt Oxide Electrocatalyst for Water Oxidation. *ACS Catalysis*, **2016**, 6, 1122-1133	13.1	29
119	Solvent-free vacuum growth of oriented HKUST-1 thin films. *Journal of Materials Chemistry A*, **2019**, 7, 19396-19406	13	29
118	Model studies with gold: a versatile oxidation and hydrogenation catalyst. *Accounts of Chemical Research*, **2014**, 47, 750-60	24.3	29
117	Hybrid Generalized Ellipsometry and Quartz Crystal Microbalance Nanogravimetry for the Determination of Adsorption Isotherms on Biaxial Metal Oxide Films. *Journal of Physical Chemistry Letters*, **2010**, 1, 1264-1268	6.4	29
116	Transition metal-doped Ni-rich layered cathode materials for durable Li-ion batteries. *Nature Communications*, **2021**, 12, 6552	17.4	28
115	Electrodeposition of MoS Hydrogen Evolution Catalysts from Sulfur-Rich Precursors. *ACS Applied Materials & Interfaces*, **2019**, 11, 32879-32886	9.5	27
114	Oxygen exchange in the selective oxidation of 2-butanol on oxygen precovered Au(111). *Journal of the American Chemical Society*, **2009**, 131, 16189-94	16.4	27
113	The Effect of Adsorbed Water in CO Oxidation on Au/TiO2(110). *Journal of Physical Chemistry C*, **2011**, 115, 2057-2065	3.8	26
112	Atomic layer deposition of photoactive CoO/SrTiO3 and CoO/TiO2 on Si(001) for visible light driven photoelectrochemical water oxidation. *Journal of Applied Physics*, **2013**, 114, 084901	2.5	25

111	Recent Developments in Dendrite-Free Lithium-Metal Deposition through Tailoring of Micro- and Nanoscale Artificial Coatings. *ACS Nano*, **2021**, 15, 29-46	16.7	25
110	Synthesis, electronic transport and optical properties of Si:□Fe2O3 single crystals. *Journal of Materials Chemistry C*, **2016**, 4, 559-567	7.1	24
109	Sub-stoichiometric germanium sulfide thin-films as a high-rate lithium storage material. *Journal of Materials Chemistry A*, **2014**, 2, 19011-19018	13	24
108	Self-Assembled Cu-Sn-S Nanotubes with High (De)Lithiation Performance. *ACS Nano*, **2017**, 11, 10347-10356	16.7	24
107	Lithium Insertion/Deinsertion Characteristics of Nanostructured Amorphous Tantalum Oxide Thin Films. *ChemElectroChem*, **2014**, 1, 158-164	4.3	24
106	Sulfur-Rich MoS6 as an Electrocatalyst for the Hydrogen Evolution Reaction. *ACS Applied Energy Materials*, **2018**, 1, 4453-4458	6.1	24
105	Water Influences the Activity and Selectivity of Ceria-Supported Gold Catalysts for Oxidative Dehydrogenation and Esterification of Ethanol. *ACS Catalysis*, **2017**, 7, 1216-1226	13.1	23
104	Stabilization of a Highly Ni-Rich Layered Oxide Cathode through Flower-Petal Grain Arrays. *ACS Nano*, **2020**,	16.7	23
103	Bandgap engineering of Fe2O3 with Cr - application to photoelectrochemical oxidation. *Physical Chemistry Chemical Physics*, **2016**, 18, 1644-8	3.6	23
102	The Effects of Adsorbed Water on Gold Catalysis and Surface Chemistry. *Topics in Catalysis*, **2013**, 56, 1499-1511	2.3	23
101	Reactivity of molecularly chemisorbed oxygen on a Au/TiO2 model catalyst. *Journal of Physical Chemistry B*, **2006**, 110, 20337-43	3.4	23
100	Oxidative Cross-Esterification and Related Pathways of Co-Adsorbed Oxygen and Ethanol on Pd□Au. *ACS Catalysis*, **2019**, 9, 4516-4525	13.1	22
99	Control of selectivity in allylic alcohol oxidation on gold surfaces: the role of oxygen adatoms and hydroxyl species. *Physical Chemistry Chemical Physics*, **2015**, 17, 4730-8	3.6	22
98	Reduced-Graphene Oxide/Poly(acrylic acid) Aerogels as a Three-Dimensional Replacement for Metal-Foil Current Collectors in Lithium-Ion Batteries. *ACS Applied Materials & Interfaces*, **2017**, 9, 22641-22651	9.5	21
97	NH3-assisted chloride flux-coating method for direct fabrication of visible-light-responsive SrNbO2N crystal layers. *CrystEngComm*, **2017**, 19, 5532-5541	3.3	21
96	Effect of annealing in oxygen on alloy structures of Pd-Au bimetallic model catalysts. *Physical Chemistry Chemical Physics*, **2015**, 17, 20588-96	3.6	21
95	Formation of molecularly chemisorbed oxygen on TiO2-supported gold nanoclusters and Au(111) from exposure to an oxygen plasma jet. *Journal of Physical Chemistry B*, **2005**, 109, 6316-22	3.4	21
94	A Perspective on the Electrochemical Oxidation of Methane to Methanol in Membrane Electrode Assemblies. *ACS Energy Letters*, **2020**, 5, 2954-2963	20.1	21

93	Visible-Light-Active NiV2O6 Films for Photoelectrochemical Water Oxidation. *Journal of Physical Chemistry C*, **2015**, 119, 14524-14531	3.8	20
92	Methanol Oxidation Catalyzed by Copper Nanoclusters Incorporated in Vacuum-Deposited HKUST-1 Thin Films. *ACS Catalysis*, **2020**, 10, 4997-5007	13.1	20
91	Fast lithium transport in PbTe for lithium-ion battery anodes. *Journal of Materials Chemistry A*, **2014**, 2, 7238	13	20
90	Anodized Nickel Foam for Oxygen Evolution Reaction in Fe-Free and Unpurified Alkaline Electrolytes at High Current Densities. *ACS Nano*, **2021**, 15, 3468-3480	16.7	19
89	Lithium Fluoride Coated Silicon Nanocolumns as Anodes for Lithium Ion Batteries. *ACS Applied Materials & Interfaces*, **2020**, 12, 18465-18472	9.5	18
88	Enhanced Electrochemical Performance of a Tin–Antimony Alloy/N-Doped Carbon Nanocomposite as a Sodium-Ion Battery Anode. *ChemElectroChem*, **2018**, 5, 391-396	4.3	18
87	Thin Nanocolumnar Ge0.9Se0.1 Films Are Rapidly Lithiated/Delithiated. *Journal of Physical Chemistry C*, **2014**, 118, 17407-17412	3.8	18
86	One-step waferscale synthesis of 3-D ZnO nanosuperstructures by designed catalysts for substantial improvement of solar water oxidation efficiency. *Journal of Materials Chemistry A*, **2013**, 1, 8111	13	18
85	Annealing Effect on Reactivity of Oxygen-Covered Au(111). *Journal of Physical Chemistry C*, **2009**, 113, 9820-9825	3.8	18
84	Hydrogen Evolution by Ni2P Catalysts Derived from Phosphine MOFs. *ACS Applied Energy Materials*, **2020**, 3, 176-183	6.1	18
83	Modulating Charge Transfer Efficiency of Hematite Photoanode with Hybrid Dual-Metal-Organic Frameworks for Boosting Photoelectrochemical Water Oxidation. *Advanced Science*, **2020**, 7, 2002563	13.6	18
82	Boosting Photoelectrochemical Performance of BiVO4 through Photoassisted Self-Reduction. *ACS Applied Energy Materials*, **2020**, 3, 4403-4410	6.1	18
81	p-Type BP nanosheet photocatalyst with AQE of 3.9% in the absence of a noble metal cocatalyst: investigation and elucidation of photophysical properties. *Journal of Materials Chemistry A*, **2018**, 6, 18403-18408	13	18
80	In situ and operando investigation of the dynamic morphological and phase changes of a selenium-doped germanium electrode during (de)lithiation processes. *Journal of Materials Chemistry A*, **2020**, 8, 750-759	13	17
79	Interactions of Hydrogen and Carbon Monoxide on Pd–Au Bimetallic Surfaces. *Journal of Physical Chemistry C*, **2014**, 118, 2129-2137	3.8	16
78	Lithiation and Delithiation of Lead Sulfide (PbS). *Journal of the Electrochemical Society*, **2015**, 162, A1182-A1185	3.9	16
77	Influence of Hydrofluoric Acid Formation on Lithium Ion Insertion in Nanostructured V2O5. *Journal of Physical Chemistry C*, **2012**, 116, 21208-21215	3.8	16
76	Investigation of 35 Elements as Single Metal Oxides, Mixed Metal Oxides, or Dopants for Titanium Dioxide for Dye-Sensitized Solar Cells. *Journal of Physical Chemistry C*, **2013**, 117, 25248-25258	3.8	15

75	Mass transport-enhanced electrodeposition of NiSPO films on nickel foam for electrochemical water splitting. *Journal of Materials Chemistry A*, **2021**, 9, 7736-7749	13	15
74	Phase transition systematics in BiVO4 by means of high-pressure high-temperature Raman experiments. *Physical Review B*, **2018**, 98,	3.3	15
73	Highly active and stable nickel molybdenum nitride (Ni2Mo3N) electrocatalyst for hydrogen evolution. *Journal of Materials Chemistry A*, **2021**, 9, 4945-4951	13	15
72	Lead Oxide Microparticles Coated by Ethylenediamine-Cross-Linked Graphene Oxide for Lithium Ion Battery Anodes. *ACS Applied Energy Materials*, **2019**, 2, 3017-3020	6.1	14
71	Improved Charge Carrier Transport of Hydrogen-Treated Copper Tungstate: Photoelectrochemical and Computational Study. *Journal of the Electrochemical Society*, **2016**, 163, H970-H975	3.9	14
70	Effect of the Electrolyte on the Cycling Efficiency of Lithium-Limited Cells and their Morphology Studied Through in Situ Optical Imaging. *ACS Applied Energy Materials*, **2018**, 1, 5830-5835	6.1	14
69	Selective Oxidation of Acetaldehyde to Acetic Acid on Pd Au Bimetallic Model Catalysts. *ACS Catalysis*, **2019**, 9, 4360-4368	13.1	13
68	In Situ Focused Ion Beam-Scanning Electron Microscope Study of Crack and Nanopore Formation in Germanium Particle During (De)lithiation. *ACS Applied Energy Materials*, **2019**, 2, 2441-2446	6.1	13
67	Separator-free and concentrated LiNO3 electrolyte cells enable uniform lithium electrodeposition. *Journal of Materials Chemistry A*, **2020**, 8, 3999-4006	13	13
66	Tunable Syn-gas ratio via bireforming over coke-resistant Ni/Mo2C catalyst. *Fuel Processing Technology*, **2016**, 153, 111-120	7.2	13
65	Interaction of water with the clean and oxygen pre-covered Ir(111) surface?. *Catalysis Today*, **2011**, 160, 198-203	5.3	13
64	Communication Stages in the Dynamic Electrochemical Lithiation of Lead. *Journal of the Electrochemical Society*, **2016**, 163, A1027-A1029	3.9	13
63	Enhanced Photoelectrochemical Performance of Porous Bi2MoO6Photoanode by an Electrochemical Treatment. *Journal of the Electrochemical Society*, **2017**, 164, H299-H306	3.9	12
62	Methanol OH Bond Dissociation on H-Precovered Gold Originating from a Structure with a Wide Range of Surface Stability. *Journal of Physical Chemistry C*, **2012**, 116, 20982-20989	3.8	12
61	An environmental chamber investigation of chlorine-enhanced ozone formation in Houston, Texas. *Journal of Geophysical Research*, **2003**, 108,		12
60	Transformation of a Cobalt Carbide (Co3C) Oxygen Evolution Precatalyst. *ACS Applied Energy Materials*, **2018**,	6.1	12
59	Simple Microwave-Assisted Synthesis of Delafossite CuFeO2 as an Anode Material for Sodium-Ion Batteries. *ChemElectroChem*, **2018**, 5, 2419-2423	4.3	12
58	A Simplified Successive Ionic Layer Adsorption and Reaction (s-SILAR) Method for Growth of Porous BiVO4Thin Films for Photoelectrochemical Water Oxidation. *Journal of the Electrochemical Society*, **2017**, 164, H119-H125	3.9	11

57	Cobalt Metal□Cobalt Carbide Composite Microspheres for Water Reduction Electrocatalysis. *ACS Applied Energy Materials*, **2020**, 3, 3909-3918	6.1	11
56	The interplay between ceria particle size, reducibility, and ethanol oxidation activity of ceria-supported gold catalysts. *Reaction Chemistry and Engineering*, **2018**, 3, 75-85	4.9	11
55	A soft X-ray spectroscopic perspective of electron localization and transport in tungsten doped bismuth vanadate single crystals. *Physical Chemistry Chemical Physics*, **2016**, 18, 31958-31965	3.6	11
54	Improvement of solar energy conversion with Nb-incorporated TiO2 hierarchical microspheres. *ChemPhysChem*, **2013**, 14, 2270-6	3.2	11
53	Enhanced Carbonate Formation on Gold. *Journal of Physical Chemistry C*, **2008**, 112, 17631-17634	3.8	11
52	CuSnS-Rich Nanomaterials for Thin-Film Lithium Batteries with Enhanced Conversion Reaction. *ACS Nano*, **2019**, 13, 10671-10681	16.7	10
51	Low-Temperature Chemoselective Gold-Surface-Mediated Hydrogenation of Acetone and Propionaldehyde. *ChemCatChem*, **2012**, 4, 1241-1244	5.2	10
50	Highly selective, facile NO2 reduction to NO at cryogenic temperatures on hydrogen precovered gold. *Journal of the American Chemical Society*, **2013**, 135, 436-42	16.4	10
49	Effect of Selenium Content on Nickel Sulfoselenide-Derived Nickel (Oxy)hydroxide Electrocatalysts for Water Oxidation. *ACS Applied Materials & Interfaces*, **2020**, 12, 20366-20375	9.5	9
48	Formation of an Electroactive Polymer Gel Film upon Lithiation and Delithiation of PbSe. *Journal of the Electrochemical Society*, **2016**, 163, A1666-A1671	3.9	9
47	Tunable Ether Production via Coupling of Aldehydes or Aldehyde/Alcohol over Hydrogen-Modified Gold Catalysts at Low Temperatures. *Journal of Physical Chemistry Letters*, **2012**, 3, 2512-6	6.4	9
46	CaCl2-Activated Carbon Nitride: Hierarchically Nanoporous Carbons with Ultrahigh Nitrogen Content for Selective CO2 Adsorption. *ACS Applied Nano Materials*, **2020**, 3, 5965-5977	5.6	8
45	Oxygen-Electrode Catalysis on Oxoperovskites at 700 □C versus 20 □C. *Chemistry of Materials*, **2018**, 30, 629-635	9.6	8
44	Chemistry. Water's place in Au catalysis. *Science*, **2014**, 345, 1564-5	33.3	8
43	Surface Chemistry of 2-Propanol on Clean and Oxygen Precovered Ir(111). *Journal of Physical Chemistry C*, **2009**, 113, 21745-21754	3.8	8
42	Catalytic Reactions on Pd-Au Bimetallic Model Catalysts. *Accounts of Chemical Research*, **2021**, 54, 379-387	24.3	8
41	Current Progress and Future Directions in Gas-Phase Metal-Organic Framework Thin-Film Growth. *ChemSusChem*, **2020**, 13, 5433-5442	8.3	8
40	Simultaneous Sulfite Electrolysis and Hydrogen Production Using Ni Foam-Based Three-Dimensional Electrodes. *Environmental Science & Technology*, **2020**, 54, 12511-12520	10.3	8

39	Compact Lithium-Ion Battery Electrodes with Lightweight Reduced Graphene Oxide/Poly(Acrylic Acid) Current Collectors. *ACS Applied Energy Materials*, **2019**, 2, 905-912	6.1	8
38	Facile Synthesis of a Tin Oxide-Carbon Composite Lithium-Ion Battery Anode with High Capacity Retention. *ACS Applied Energy Materials*, **2019**, 2, 7244-7255	6.1	7
37	Investigation of Reversible Li Insertion into LiY(WO4)2. *Chemistry of Materials*, **2016**, 28, 4641-4645	9.6	7
36	Mixing Super P-Li with N-Doped Mesoporous Templated Carbon Improves the High Rate Performance of a Potential Lithium Ion Battery Anode. *Journal of the Electrochemical Society*, **2016**, 163, A953-A957	3.9	7
35	Chloride Flux Growth of Idiomorphic AWO4 (A = Sr, Ba) Single Microcrystals. *Crystal Growth and Design*, **2018**, 18, 5301-5310	3.5	7
34	A free-standing, flexible lithium-ion anode formed from an air-dried slurry cast of high tap density SnO2, CMC polymer binder and Super-P Li. *Journal of Materials Chemistry A*, **2014**, 2, 14459	13	7
33	Effect of Dilute Nitric Acid on Crystallization and Fracture of Amorphous Solid Water Films. *Journal of Physical Chemistry C*, **2007**, 111, 10438-10447	3.8	7
32	Electrodeposition of the NaK Alloy with a Liquid Organic Electrolyte. *ACS Applied Energy Materials*, **2019**, 2, 3009-3012	6.1	6
31	Obviating the need for nanocrystallites in the extended lithiation/de-lithiation of germanium. *Journal of Materials Chemistry A*, **2015**, 3, 23442-23447	13	6
30	Moisture-Driven Formation and Growth of Quasi-2-D Organolead Halide Perovskite Crystallites. *ACS Applied Energy Materials*, **2020**, 3, 6280-6290	6.1	6
29	Sulfur-Rich Molybdenum Sulfide as a Cathode Material for Room Temperature Sodium–Sulfur Batteries. *ACS Applied Energy Materials*, **2020**, 3, 6121-6126	6.1	6
28	Evaluation of Two Potassium-Based Activation Agents for the Production of Oxygen- and Nitrogen-Doped Porous Carbons. *Energy & Fuels*, **2020**, 34, 6101-6112	4.1	6
27	Electrochemical probings of Li1+xVS2. *Electrochimica Acta*, **2012**, 78, 430-433	6.7	6
26	Chemistry. Taking a selective bite out of methane. *Science*, **2008**, 319, 736-7	33.3	6
25	In Situ and Operando Morphology Study of Germanium–Selenium Alloy Anode for Lithium-Ion Batteries. *ACS Applied Energy Materials*, **2020**, 3, 6115-6120	6.1	5
24	Controlled Prelithiation of PbS to Pb/Li2S for High Initial Coulombic Efficiency in Lithium Ion Batteries. *Journal of the Electrochemical Society*, **2019**, 166, A1939-A1943	3.9	5
23	Heterogeneity in Mixed Cerium Oxides and Its Influence on the Behavior of Gold Catalysts for the Selective Oxidation of Ethanol. *Journal of Physical Chemistry C*, **2017**, 121, 19269-19279	3.8	5
22	Li-Zn Overlayer to Facilitate Uniform Lithium Deposition for Lithium Metal Batteries. *ACS Applied Materials & Interfaces*, **2021**, 13, 9985-9993	9.5	5

21	Apparatus for efficient utilization of isotopically-labeled gases in pulse transient studies of heterogeneously catalyzed gas phase reactions. *Reaction Chemistry and Engineering*, **2017**, 2, 512-520	4.9	4
20	HO-Improved O activation on the Pd-Au bimetallic surface. *Chemical Communications*, **2017**, 53, 3990-3993	5.8	4
19	Understanding the Mechanism of Stress Mitigation in Selenium-Doped Germanium Electrodes. *Journal of the Electrochemical Society*, **2019**, 166, A364-A377	3.9	4
18	Hydrogen desorption from the surface and subsurface of cobalt. *Physical Chemistry Chemical Physics*, **2020**, 22, 15281-15287	3.6	4
17	Spatially Controlled Molecular Analysis of Biological Samples Using Nanodroplet Arrays and Direct Droplet Aspiration. *Journal of the American Society for Mass Spectrometry*, **2020**, 31, 418-428	3.5	4
16	Evaluation of a V8C7 Anode for Oxygen Evolution in Alkaline Media: Unusual Morphological Behavior. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 14101-14108	8.3	4
15	Blade-Type Reaction Front in Micrometer-Sized Germanium Particles during Lithiation. *ACS Applied Materials & Interfaces*, **2020**, 12, 47574-47579	9.5	3
14	Effects of Alkylammonium Choice on Stability and Performance of Quasi-2D Organolead Halide Perovskites. *Journal of Physical Chemistry C*, **2020**, 124, 10887-10897	3.8	3
13	Sulfur-Rich Molybdenum Sulfide as an Anode Coating to Improve Performance of Lithium Metal Batteries. *ChemElectroChem*, **2020**, 7, 222-228	4.3	3
12	Evidence of methane adsorption over Mo2C involving single C□H bond dissociation instead of facile carbon exchange. *Reaction Chemistry and Engineering*, **2016**, 1, 667-674	4.9	3
11	In-Situ Characterization of Dynamic Morphological and Phase Changes of Selenium-doped Germanium Using a Single Particle Cell and Synchrotron Transmission X-ray Microscopy. *ChemSusChem*, **2021**, 14, 1370-1376	8.3	3
10	Improvement of the sodiation/de-sodiation stability of Sn(C) by electrochemically inactive Na2Se. *RSC Advances*, **2015**, 5, 82012-82017	3.7	2
9	Conditions for Ta(IV)-Ta(IV) bonding in trirutile Li(x)MTa2O6. *Inorganic Chemistry*, **2015**, 54, 2009-16	5.1	2
8	Low temperature dissociation of CO on manganese promoted cobalt(poly). *Chemical Communications*, **2020**, 56, 2865-2868	5.8	2
7	A Stable Lead (II) Oxide-Carbon Composite Anode Candidate for Secondary Lithium Batteries. *Journal of the Electrochemical Society*, **2020**, 167, 060509	3.9	2
6	Infrared Light-Driven LaW(O,N)3 OER Photoelectrocatalysts from Chloride Flux-Grown La4W3O15 Templating Precursors. *ACS Applied Energy Materials*, **2019**, 2, 913-922	6.1	2
5	CO Dissociation on model Co/SiO2 catalysts □effect of adsorbed hydrogen. *Surface Science*, **2021**, 705, 121783	1.8	2
4	Electrochemical behavior of a Ni3N OER precatalyst in Fe-purified alkaline media: the impact of self-oxidation and Fe incorporation. *Materials Advances*, **2021**, 2, 2299-2309	3.3	2

3	A phase transition-induced photocathodic p-CuFeO2 nanocolumnar film by reactive ballistic deposition. *New Journal of Chemistry*, **2022**, 46, 1238-1245	3.6	1
2	Lithium trapping in germanium nanopores during delithiation process. *Applied Materials Today*, **2021**, 24, 101140	6.6	1
1	Unraveling porogenesis in nitrogen rich K+-activated carbons. *Carbon*, **2022**, 186, 711-723	10.4	0