Hubert A Gasteiger

List of Publications by Year in descending order

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		1704	1316
347	51,859	104	224
papers	citations	h-index	g-index
351	351	351	28410
all docs	docs citations	times ranked	citing authors

#	Article	IF	CITATIONS
1	Activity benchmarks and requirements for Pt, Pt-alloy, and non-Pt oxygen reduction catalysts for PEMFCs. Applied Catalysis B: Environmental, 2005, 56, 9-35.	20.2	4,307
2	A Perovskite Oxide Optimized for Oxygen Evolution Catalysis from Molecular Orbital Principles. Science, 2011, 334, 1383-1385.	12.6	4,230
3	Design principles for oxygen-reduction activity on perovskite oxide catalysts for fuel cells and metal–air batteries. Nature Chemistry, 2011, 3, 546-550.	13.6	2,331
4	Hydrogen Oxidation and Evolution Reaction Kinetics on Platinum: Acid vs Alkaline Electrolytes. Journal of the Electrochemical Society, 2010, 157, B1529.	2.9	1,388
5	Just a Dream—or Future Reality?. Science, 2009, 324, 48-49.	12.6	1,326
6	Instability of Ptâ^•C Electrocatalysts in Proton Exchange Membrane Fuel Cells. Journal of the Electrochemical Society, 2005, 152, A2256.	2.9	1,324
7	Oxygen reduction on a high-surface area Pt/Vulcan carbon catalyst: a thin-film rotating ring-disk electrode study. Journal of Electroanalytical Chemistry, 2001, 495, 134-145.	3.8	1,289
8	New insights into the electrochemical hydrogen oxidation and evolution reaction mechanism. Energy and Environmental Science, 2014, 7, 2255-2260.	30.8	1,220
9	Platinumâ^'Gold Nanoparticles: A Highly Active Bifunctional Electrocatalyst for Rechargeable Lithiumâ^'Air Batteries. Journal of the American Chemical Society, 2010, 132, 12170-12171.	13.7	1,171
10	Characterization of High‣urfaceâ€Area Electrocatalysts Using a Rotating Disk Electrode Configuration. Journal of the Electrochemical Society, 1998, 145, 2354-2358.	2.9	1,071
11	Methanol electrooxidation on well-characterized platinum-ruthenium bulk alloys. The Journal of Physical Chemistry, 1993, 97, 12020-12029.	2.9	902
12	Oxygen Release and Its Effect on the Cycling Stability of LiNi _x Mn _y Co _z O ₂ (NMC) Cathode Materials for Li-Ion Batteries. Journal of the Electrochemical Society, 2017, 164, A1361-A1377.	2.9	813
13	Carbon monoxide electrooxidation on well-characterized platinum-ruthenium alloys. The Journal of Physical Chemistry, 1994, 98, 617-625.	2.9	781
14	Structure and Chemical Composition of a Supported Pt-Ru Electrocatalyst for Methanol Oxidation. Journal of Catalysis, 1995, 154, 98-106.	6.2	724
15	Oxygen Reduction on Platinum Low-Index Single-Crystal Surfaces in Sulfuric Acid Solution: Rotating Ring-Pt(hkl) Disk Studies. The Journal of Physical Chemistry, 1995, 99, 3411-3415.	2.9	674
16	Dependence of PEM fuel cell performance on catalyst loading. Journal of Power Sources, 2004, 127, 162-171.	7.8	593
17	Temperatureâ€Dependent Methanol Electroâ€Oxidation on Wellâ€Characterized Ptâ€Ru Alloys. Journal of the Electrochemical Society, 1994, 141, 1795-1803.	2.9	564
18	Catalytic Activity Trends of Oxygen Reduction Reaction for Nonaqueous Li-Air Batteries. Journal of the American Chemical Society, 2011, 133, 19048-19051.	13.7	525

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19	H2 and CO Electrooxidation on Well-Characterized Pt, Ru, and Pt-Ru. 1. Rotating Disk Electrode Studies of the Pure Gases Including Temperature Effects. The Journal of Physical Chemistry, 1995, 99, 8290-8301.	2.9	506
20	Kinetics of Oxygen Reduction on Pt(hkl) Electrodes: Implications for the Crystallite Size Effect with Supported Pt Electrocatalysts. Journal of the Electrochemical Society, 1997, 144, 1591-1597.	2.9	500
21	Electro-oxidation mechanisms of methanol and formic acid on Pt-Ru alloy surfaces. Electrochimica Acta, 1995, 40, 91-98.	5.2	470
22	Kinetics of the Selective CO Oxidation in H2-Rich Gas on Pt/Al2O3. Journal of Catalysis, 1997, 171, 93-105.	6.2	449
23	The Influence of Catalysts on Discharge and Charge Voltages of Rechargeable Li–Oxygen Batteries. Electrochemical and Solid-State Letters, 2010, 13, A69.	2.2	427
24	Oxygen Reduction on Platinum Low-Index Single-Crystal Surfaces in Alkaline Solution:  Rotating Ring DiskPt(hkl) Studies. The Journal of Physical Chemistry, 1996, 100, 6715-6721.	2.9	426
25	The oxygen reduction reaction on a Pt/carbon fuel cell catalyst in the presence of chloride anions. Journal of Electroanalytical Chemistry, 2001, 508, 41-47.	3.8	425
26	Review—Electromobility: Batteries or Fuel Cells?. Journal of the Electrochemical Society, 2015, 162, A2605-A2622.	2.9	424
27	Oxygen reduction reaction on Pt(111): effects of bromide. Journal of Electroanalytical Chemistry, 1999, 467, 157-163.	3.8	419
28	Tortuosity Determination of Battery Electrodes and Separators by Impedance Spectroscopy. Journal of the Electrochemical Society, 2016, 163, A1373-A1387.	2.9	419
29	Hydrogen Oxidation and Evolution Reaction Kinetics on Carbon Supported Pt, Ir, Rh, and Pd Electrocatalysts in Acidic Media. Journal of the Electrochemical Society, 2015, 162, F190-F203.	2.9	412
30	Hydrogen electrochemistry on platinum low-index single-crystal surfaces in alkaline solution. Journal of the Chemical Society, Faraday Transactions, 1996, 92, 3719-3725.	1.7	363
31	Study of the Exchange Current Density for the Hydrogen Oxidation and Evolution Reactions. Journal of the Electrochemical Society, 2007, 154, B631.	2.9	355
32	Electrocatalytic Measurement Methodology of Oxide Catalysts Using a Thin-Film Rotating Disk Electrode. Journal of the Electrochemical Society, 2010, 157, B1263.	2.9	339
33	Chemical versus Electrochemical Electrolyte Oxidation on NMC111, NMC622, NMC811, LNMO, and Conductive Carbon. Journal of Physical Chemistry Letters, 2017, 8, 4820-4825.	4.6	338
34	Determination of Catalyst Unique Parameters for the Oxygen Reduction Reaction in a PEMFC. Journal of the Electrochemical Society, 2006, 153, A1955.	2.9	333
35	On the reaction pathway for methanol and carbon monoxide electrooxidation on Pt-Sn alloy versus Pt-Ru alloy surfaces. Electrochimica Acta, 1996, 41, 2587-2593.	5.2	331
36	Two Fuel Cell Cars In Every Garage?. Electrochemical Society Interface, 2005, 14, 24-35.	0.4	331

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37	Aspects of the Chemical Degradation of PFSA Ionomers used in PEM Fuel Cells. Fuel Cells, 2005, 5, 302-308.	2.4	317
38	Effect of Temperature on Surface Processes at the Pt(111)â''Liquid Interface:Â Hydrogen Adsorption, Oxide Formation, and CO Oxidation. Journal of Physical Chemistry B, 1999, 103, 8568-8577.	2.6	315
39	Platinum-Alloy Cathode Catalyst Degradation in Proton Exchange Membrane Fuel Cells: Nanometer-Scale Compositional and Morphological Changes. Journal of the Electrochemical Society, 2010, 157, A82.	2.9	314
40	Effect of Ambient Storage on the Degradation of Ni-Rich Positive Electrode Materials (NMC811) for Li-Ion Batteries. Journal of the Electrochemical Society, 2018, 165, A132-A141.	2.9	311
41	Singlet oxygen evolution from layered transition metal oxide cathode materials and its implications for lithium-ion batteries. Materials Today, 2018, 21, 825-833.	14.2	307
42	Kinetics of the Selective Low-Temperature Oxidation of CO in H2-Rich Gas over Au/α-Fe2O3. Journal of Catalysis, 1999, 182, 430-440.	6.2	296
43	Electro-oxidation of small organic molecules on well-characterized Ptî—,Ru alloys. Electrochimica Acta, 1994, 39, 1825-1832.	5.2	280
44	H2 and CO Electrooxidation on Well-Characterized Pt, Ru, and Pt-Ru. 2. Rotating Disk Electrode Studies of CO/H2 Mixtures at 62 .degree.C. The Journal of Physical Chemistry, 1995, 99, 16757-16767.	2.9	271
45	Surface Composition Tuning of Au–Pt Bimetallic Nanoparticles for Enhanced Carbon Monoxide and Methanol Electro-oxidation. Journal of the American Chemical Society, 2013, 135, 7985-7991.	13.7	266
46	Origin of H ₂ Evolution in LIBs: H ₂ O Reduction vs. Electrolyte Oxidation. Journal of the Electrochemical Society, 2016, 163, A798-A809.	2.9	262
47	Electrocatalytic Activity Studies of Select Metal Surfaces and Implications in Li-Air Batteries. Journal of the Electrochemical Society, 2010, 157, A1016.	2.9	260
48	Nickel, Manganese, and Cobalt Dissolution from Ni-Rich NMC and Their Effects on NMC622-Graphite Cells. Journal of the Electrochemical Society, 2019, 166, A378-A389.	2.9	254
49	Consumption of Fluoroethylene Carbonate (FEC) on Si-C Composite Electrodes for Li-Ion Batteries. Journal of the Electrochemical Society, 2016, 163, A1705-A1716.	2.9	229
50	Electrocatalytic Activity of PtRu Alloy Colloids for CO and CO/H2 Electrooxidation:  Stripping Voltammetry and Rotating Disk Measurements. Langmuir, 1997, 13, 2591-2595.	3.5	227
51	Analysis of Voltage Losses in PEM Water Electrolyzers with Low Platinum Group Metal Loadings. Journal of the Electrochemical Society, 2018, 165, F305-F314.	2.9	227
52	PtRu Alloy Colloids as Precursors for Fuel Cell Catalysts: A Combined XPS, AFM, HRTEM, and RDE Study. Journal of the Electrochemical Society, 1998, 145, 925-931.	2.9	226
53	Transition metal dissolution and deposition in Li-ion batteries investigated by operando X-ray absorption spectroscopy. Journal of Materials Chemistry A, 2016, 4, 18300-18305.	10.3	226
54	The Influence of Water and Protons on Li ₂ O ₂ Crystal Growth in Aprotic Li-O ₂ Cells. Journal of the Electrochemical Society, 2015, 162, A573-A584.	2.9	220

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55	Influence of Ionomer Content in IrO ₂ /TiO ₂ Electrodes on PEM Water Electrolyzer Performance. Journal of the Electrochemical Society, 2016, 163, F3179-F3189.	2.9	220
56	Probing the Lithium–Sulfur Redox Reactions: A Rotating-Ring Disk Electrode Study. Journal of Physical Chemistry C, 2014, 118, 5733-5741.	3.1	215
57	Rotating Disk Electrode Measurements on the CO Tolerance of a Highâ€Surface Area Pt/Vulcan Carbon Fuel Cell Catalyst. Journal of the Electrochemical Society, 1999, 146, 1296-1304.	2.9	214
58	Electrooxidation of CO and H2/CO Mixtures on a Well-Characterized Pt3Sn Electrode Surface. The Journal of Physical Chemistry, 1995, 99, 8945-8949.	2.9	213
59	Kinetics of the Hydrogen Oxidation/Evolution Reaction on Polycrystalline Platinum in Alkaline Electrolyte Reaction Order with Respect to Hydrogen Pressure. Journal of the Electrochemical Society, 2014, 161, F1448-F1457.	2.9	213
60	Aging Analysis of Graphite/LiNi _{1/3} Mn _{1/3} Co _{1/3} O ₂ Cells Using XRD, PGAA, and AC Impedance. Journal of the Electrochemical Society, 2015, 162, A2737-A2746.	2.9	213
61	Proton Conduction and Oxygen Reduction Kinetics in PEM Fuel Cell Cathodes: Effects of Ionomer-to-Carbon Ratio and Relative Humidity. Journal of the Electrochemical Society, 2009, 156, B970.	2.9	207
62	LEIS and AES on sputtered and annealed polycrystalline Pt-Ru bulk alloys. Surface Science, 1993, 293, 67-80.	1.9	201
63	Oxygen Reduction on Ru[sub 1.92]Mo[sub 0.08]SeO[sub 4], Ru/Carbon, and Pt/Carbon in Pure and Methanol-Containing Electrolytes. Journal of the Electrochemical Society, 2000, 147, 2620.	2.9	200
64	Methanol electrooxidation on a colloidal PtRu-alloy fuel-cell catalyst. Electrochemistry Communications, 1999, 1, 1-4.	4.7	196
65	Rechargeability of Li–air cathodes pre-filled with discharge products using an ether-based electrolyte solution: implications for cycle-life of Li–air cells. Physical Chemistry Chemical Physics, 2013, 15, 11478.	2.8	192
66	The Effect of Water on the Discharge Capacity of a Non-Catalyzed Carbon Cathode for Li-O2 Batteries. Electrochemical and Solid-State Letters, 2012, 15, A45.	2.2	190
67	The Key to High Performance Low Pt Loaded Electrodes. Journal of the Electrochemical Society, 2017, 164, F418-F426.	2.9	183
68	Cathode Catalyst Utilization for the ORR in a PEMFC. Journal of the Electrochemical Society, 2007, 154, B279.	2.9	178
69	The Role of Oxygen Release from Li- and Mn-Rich Layered Oxides during the First Cycles Investigated by On-Line Electrochemical Mass Spectrometry. Journal of the Electrochemical Society, 2017, 164, A400-A406.	2.9	175
70	Effect of Relative Humidity on Oxygen Reduction Kinetics in a PEMFC. Journal of the Electrochemical Society, 2005, 152, A1073.	2.9	164
71	Impact of Intermittent Operation on Lifetime and Performance of a PEM Water Electrolyzer. Journal of the Electrochemical Society, 2019, 166, F487-F497.	2.9	164
72	Quantitative and time-resolved detection of lithium plating on graphite anodes in lithium ion batteries. Materials Today, 2018, 21, 231-240.	14.2	163

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73	Role of 1,3-Propane Sultone and Vinylene Carbonate in Solid Electrolyte Interface Formation and Gas Generation. Journal of Physical Chemistry C, 2015, 119, 11337-11348.	3.1	162
74	Using Rotating Ring Disc Electrode Voltammetry to Quantify the Superoxide Radical Stability of Aprotic Li–Air Battery Electrolytes. Journal of Physical Chemistry C, 2012, 116, 19084-19094.	3.1	160
75	Correlation between CO surface coverage and selectivity/kinetics for the preferential CO oxidation over Pt/γ-Al2O3 and Au/α-Fe2O3: an in-situ DRIFTS study. Journal of Power Sources, 1999, 84, 175-182.	7.8	158
76	Bimetallic PtSn catalyst for selective CO oxidation in H2-rich gases at low temperatures. Physical Chemistry Chemical Physics, 2001, 3, 1123-1131.	2.8	157
77	Stability of superoxide radicals in glyme solvents for non-aqueous Li–O2 battery electrolytes. Physical Chemistry Chemical Physics, 2013, 15, 11830.	2.8	157
78	Current Challenges in Catalyst Development forÂPEM Water Electrolyzers. Chemie-Ingenieur-Technik, 2020, 92, 31-39.	0.8	156
79	Anodic Oxidation of Conductive Carbon and Ethylene Carbonate in High-Voltage Li-Ion Batteries Quantified by On-Line Electrochemical Mass Spectrometry. Journal of the Electrochemical Society, 2015, 162, A1123-A1134.	2.9	151
80	A Novel On-Line Mass Spectrometer Design for the Study of Multiple Charging Cycles of a Li-O ₂ Battery. Journal of the Electrochemical Society, 2013, 160, A471-A477.	2.9	148
81	OER Catalyst Stability Investigation Using RDE Technique: A Stability Measure or an Artifact?. Journal of the Electrochemical Society, 2019, 166, F458-F464.	2.9	148
82	Effect of Hydrogen and Oxygen Partial Pressure on Pt Precipitation within the Membrane of PEMFCs. Journal of the Electrochemical Society, 2007, 154, B1006.	2.9	147
83	Singlet Oxygen Formation during the Charging Process of an Aprotic Lithium–Oxygen Battery. Angewandte Chemie - International Edition, 2016, 55, 6892-6895.	13.8	146
84	Editors' Choice—Washing of Nickel-Rich Cathode Materials for Lithium-Ion Batteries: Towards a Mechanistic Understanding. Journal of the Electrochemical Society, 2019, 166, A4056-A4066.	2.9	137
85	Ambient Storage Derived Surface Contamination of NCM811 and NCM111: Performance Implications and Mitigation Strategies. Journal of the Electrochemical Society, 2019, 166, A2322-A2335.	2.9	132
86	Temperature and Concentration Dependence of the Ionic Transport Properties of Lithium-Ion Battery Electrolytes. Journal of the Electrochemical Society, 2019, 166, A3079-A3097.	2.9	132
87	Temperature Dependence of Oxygen Release from LiNi _{0.6} Mn _{0.2} Co _{0.2} O ₂ (NMC622) Cathode Materials for Li-Ion Batteries. Journal of the Electrochemical Society, 2018, 165, A2869-A2879.	2.9	130
88	On-Line Electrochemical Mass Spectrometry Investigations on the Gassing Behavior of Li ₄ Ti ₅ O ₁₂ Electrodes and Its Origins. Journal of the Electrochemical Society, 2014, 161, A497-A505.	2.9	129
89	Operando electron paramagnetic resonance spectroscopy – formation of mossy lithium on lithium anodes during charge–discharge cycling. Energy and Environmental Science, 2015, 8, 1358-1367. 	30.8	128
90	Electrocatalytic transformation of HF impurity to H2 and LiF in lithium-ion batteries. Nature Catalysis, 2018, 1, 255-262.	34.4	128

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91	Differentiating the Degradation Phenomena in Silicon-Graphite Electrodes for Lithium-Ion Batteries. Journal of the Electrochemical Society, 2017, 164, A2840-A2852.	2.9	124
92	Gas Evolution at Graphite Anodes Depending on Electrolyte Water Content and SEI Quality Studied by On-Line Electrochemical Mass Spectrometry. Journal of the Electrochemical Society, 2015, 162, A1984-A1989.	2.9	120
93	An Analysis Protocol for Three-Electrode Li-Ion Battery Impedance Spectra: Part I. Analysis of a High-Voltage Positive Electrode. Journal of the Electrochemical Society, 2017, 164, A1773-A1783.	2.9	120
94	Capabilities and limitations of rotating disk electrodes versus membrane electrode assemblies in the investigation of electrocatalysts. Nature Catalysis, 2022, 5, 363-373.	34.4	119
95	Generation of Cathode Passivation Films via Oxidation of Lithium Bis(oxalato) Borate on High Voltage Spinel (LiNi _{0.5} Mn _{1.5} O ₄). Journal of Physical Chemistry C, 2014, 118, 7363-7368.	3.1	118
96	A Gold Micro-Reference Electrode for Impedance and Potential Measurements in Lithium Ion Batteries. Journal of the Electrochemical Society, 2016, 163, A2265-A2272.	2.9	117
97	Editors' Choice—Capacity Fading Mechanisms of NCM-811 Cathodes in Lithium-Ion Batteries Studied by X-ray Diffraction and Other Diagnostics. Journal of the Electrochemical Society, 2019, 166, A3760-A3774.	2.9	117
98	Li2CO3 decomposition in Li-ion batteries induced by the electrochemical oxidation of the electrolyte and of electrolyte impurities. Electrochimica Acta, 2020, 346, 136271.	5.2	116
99	Origin of High Capacity and Poor Cycling Stability of Li-Rich Layered Oxides: A Long-Duration in Situ Synchrotron Powder Diffraction Study. Chemistry of Materials, 2018, 30, 3656-3667.	6.7	115
100	Quantification of PF ₅ and POF ₃ from Side Reactions of LiPF ₆ in Li-Ion Batteries. Journal of the Electrochemical Society, 2018, 165, A3022-A3028.	2.9	115
101	Tortuosity of Battery Electrodes: Validation of Impedance-Derived Values and Critical Comparison with 3D Tomography. Journal of the Electrochemical Society, 2018, 165, A469-A476.	2.9	114
102	Singlet Oxygen Reactivity with Carbonate Solvents Used for Li-Ion Battery Electrolytes. Journal of Physical Chemistry A, 2018, 122, 8828-8839.	2.5	114
103	Effect of Carbon Surface Area on First Discharge Capacity of Li-O ₂ Cathodes and Cycle-Life Behavior in Ether-Based Electrolytes. Journal of the Electrochemical Society, 2012, 159, A2135-A2142.	2.9	113
104	The Influence of the Cation on the Oxygen Reduction and Evolution Activities of Oxide Surfaces in Alkaline Electrolyte. Electrocatalysis, 2013, 4, 49-55.	3.0	113
105	Understanding the Charging Mechanism of Lithium-Sulfur Batteries Using Spatially Resolved Operando X-Ray Absorption Spectroscopy. Journal of the Electrochemical Society, 2016, 163, A930-A939.	2.9	113
106	Copper Electrodeposition on Pt(111) in the Presence of Chloride and (Bi)sulfate: Rotating Ring-Pt(111) Disk Electrode Studies. Langmuir, 1995, 11, 4098-4108.	3.5	112
107	Cathode Loading Impact on Voltage Cycling Induced PEMFC Degradation: A Voltage Loss Analysis. Journal of the Electrochemical Society, 2018, 165, F3118-F3131.	2.9	110
108	Electrolyte and SEI Decomposition Reactions of Transition Metal Ions Investigated by On-Line Electrochemical Mass Spectrometry. Journal of the Electrochemical Society, 2018, 165, A3304-A3312.	2.9	108

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109	On the CO tolerance of novel colloidal PdAu/carbon electrocatalysts. Journal of Electroanalytical Chemistry, 2001, 501, 132-140.	3.8	105
110	Structural effects in electrocatalysis: electrooxidation of carbon monoxide on Pt3Sn single-crystal alloy surfaces. Catalysis Letters, 1996, 36, 1-8.	2.6	103
111	Operando Characterization of Intermediates Produced in a Lithium-Sulfur Battery. Journal of the Electrochemical Society, 2015, 162, A1146-A1155.	2.9	103
112	Ink Solvent Dependence of the Ionomer Distribution in the Catalyst Layer of a PEMFC. Journal of the Electrochemical Society, 2018, 165, F1254-F1263.	2.9	98
113	Hydrolysis of Ethylene Carbonate with Water and Hydroxide under Battery Operating Conditions. Journal of the Electrochemical Society, 2016, 163, A1219-A1225.	2.9	96
114	Effects of Catalyst Carbon Support on Proton Conduction and Cathode Performance in PEM Fuel Cells. Journal of the Electrochemical Society, 2011, 158, B614-B621.	2.9	95
115	The Role of Electrolyte Solvent Stability and Electrolyte Impurities in the Electrooxidation of Li ₂ O ₂ in Li-O ₂ Batteries. Journal of the Electrochemical Society, 2014, 161, A1306-A1314.	2.9	95
116	Tailoring Catalyst Morphology towards High Performance for Low Pt Loaded PEMFC Cathodes. Journal of the Electrochemical Society, 2018, 165, F770-F779.	2.9	95
117	Thermal and electrochemical decomposition of lithium peroxide in non-catalyzed carbon cathodes for Li–air batteries. Physical Chemistry Chemical Physics, 2013, 15, 11025.	2.8	90
118	Solubility of aluminosilicates in alkaline solutions and a thermodynamic equilibrium model. Industrial & Engineering Chemistry Research, 1992, 31, 1183-1190.	3.7	88
119	Singlet Oxygen Formation during the Charging Process of an Aprotic Lithium–Oxygen Battery. Angewandte Chemie, 2016, 128, 7006-7009.	2.0	87
120	Influence of the Binder on Lithium Ion Battery Electrode Tortuosity and Performance. Journal of the Electrochemical Society, 2018, 165, A1122-A1128.	2.9	87
121	Iridium Oxide Catalyst Supported on Antimony-Doped Tin Oxide for High Oxygen Evolution Reaction Activity in Acidic Media. ACS Applied Nano Materials, 2020, 3, 2185-2196.	5.0	86
122	Artifacts in Measuring Electrode Catalyst Area of Fuel Cells through Cyclic Voltammetry. ECS Transactions, 2007, 11, 403-410.	0.5	85
123	Morphological Changes of Silicon Nanoparticles and the Influence of Cutoff Potentials in Silicon-Graphite Electrodes. Journal of the Electrochemical Society, 2018, 165, A1503-A1514.	2.9	85
124	Understanding Electrolyte Decomposition of Graphite/NCM811 Cells at Elevated Operating Voltage. Journal of the Electrochemical Society, 2019, 166, A1853-A1859.	2.9	83
125	Impact of Microporous Layer Pore Properties on Liquid Water Transport in PEM Fuel Cells: Carbon Black Type and Perforation. Journal of the Electrochemical Society, 2017, 164, F1697-F1711.	2.9	82
126	Bulk-Palladium and Palladium-on-Gold Electrocatalysts for the Oxidation of Hydrogen in Alkaline Electrolyte. Journal of the Electrochemical Society, 2015, 162, F178-F189.	2.9	80

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127	Oxygen Release and Surface Degradation of Li- and Mn-Rich Layered Oxides in Variation of the Li ₂ MnO ₃ Content. Journal of the Electrochemical Society, 2018, 165, A2718-A2731.	2.9	80
128	Underpotential Deposition of Lead on Copper(111): A Study Using a Single-Crystal Rotating Ring Disk Electrode and ex Situ Low-Energy Electron Diffraction and Scanning tunneling Microscopy. Langmuir, 1995, 11, 2221-2230.	3.5	79
129	Unraveling the Correlation between Solvent Properties and Sulfur Redox Behavior in Lithium-Sulfur Batteries. Journal of the Electrochemical Society, 2018, 165, A4027-A4033.	2.9	79
130	Surface Formates as Side Products in the Selective CO Oxidation on Pt/γ-Al2O3. Journal of Catalysis, 1997, 172, 256-258.	6.2	78
131	PEM Fuel Cell Start-up/Shut-down Losses vs Temperature for Non-Graphitized and Graphitized Cathode Carbon Supports. Journal of the Electrochemical Society, 2017, 164, F127-F137.	2.9	78
132	Influence of the Gas Diffusion Layer Compression on the Oxygen Transport in PEM Fuel Cells at High Water Saturation Levels. Journal of the Electrochemical Society, 2017, 164, F591-F599.	2.9	77
133	Determination of Transport Parameters in Liquid Binary Lithium Ion Battery Electrolytes. Journal of the Electrochemical Society, 2017, 164, A826-A836.	2.9	76
134	Voltage Cycling Induced Losses in Electrochemically Active Surface Area and in H ₂ /Air-Performance of PEM Fuel Cells. Journal of the Electrochemical Society, 2016, 163, F492-F498.	2.9	75
135	Editors' Choice—Understanding Chemical Stability Issues between Different Solid Electrolytes in All-Solid-State Batteries. Journal of the Electrochemical Society, 2019, 166, A975-A983.	2.9	75
136	Membrane Degradation at Catalyst Layer Edges in PEMFC MEAs. Journal of the Electrochemical Society, 2007, 154, B1349.	2.9	74
137	Detection of Binder Gradients Using Impedance Spectroscopy and Their Influence on the Tortuosity of Li-Ion Battery Graphite Electrodes. Journal of the Electrochemical Society, 2018, 165, A3459-A3467.	2.9	74
138	The Impact of CO ₂ Evolved from VC and FEC during Formation of Graphite Anodes in Lithium-Ion Batteries. Journal of the Electrochemical Society, 2019, 166, A2035-A2047.	2.9	74
139	Start/Stop and Local H2 Starvation Mechanisms of Carbon Corrosion: Model vs. Experiment. ECS Transactions, 2007, 11, 963-973.	0.5	72
140	Analysis of Vinylene Carbonate (VC) as Additive in Graphite/LiNi _{0.5} Mn _{1.5} O ₄ Cells. Journal of the Electrochemical Society, 2017, 164, A2625-A2635.	2.9	72
141	The effect of chloride on the underpotential deposition of copper on Pt(111): AES, LEED, RRDE, and X-ray scattering studies. Surface Science, 1995, 335, 91-100.	1.9	71
142	PEM Fuel Cell Operation at â^'20°C Journal of the Electrochemical Society, 2008, 155, B625.	2.9	71
143	Origin of Superior HOR/HER Activity of Bimetallic Pt-Ru Catalysts in Alkaline Media Identified via Ru@Pt Core-Shell Nanoparticles. Journal of the Electrochemical Society, 2018, 165, H229-H239.	2.9	69
144	Method Development to Evaluate the Oxygen Reduction Activity of High-Surface-Area Catalysts for Li-Air Batteries. Electrochemical and Solid-State Letters, 2011, 14, A70.	2.2	66

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145	Proton Conduction in PEM Fuel Cell Cathodes: Effects of Electrode Thickness and Ionomer Equivalent Weight. Journal of the Electrochemical Society, 2010, 157, B1154.	2.9	63
146	Comparative study between platinum supported on carbon and non-noble metal cathode catalyst in alkaline direct ethanol fuel cell (ADEFC). International Journal of Hydrogen Energy, 2011, 36, 5110-5116.	7.1	63
147	Slurry-Based Processing of Solid Electrolytes: A Comparative Binder Study. Journal of the Electrochemical Society, 2018, 165, A3993-A3999.	2.9	63
148	Lithium Ion Mobility in Lithium Phosphidosilicates: Crystal Structure, ⁷ Li, ²⁹ Si, and ³¹ Pâ€MAS NMR Spectroscopy, and Impedance Spectroscopy of Li ₈ SiP ₄ and Li ₂ SiP ₂ . Chemistry - A European Journal, 2016, 22, 17635-17645.	3.3	62
149	Novel Method for Monitoring the Electrochemical Capacitance by In Situ Impedance Spectroscopy as Indicator for Particle Cracking of Nickel-Rich NCMs: Part I. Theory and Validation. Journal of the Electrochemical Society, 2020, 167, 100511.	2.9	61
150	OER Catalyst Durability Tests Using the Rotating Disk Electrode Technique: The Reason Why This Leads to Erroneous Conclusions. ACS Applied Energy Materials, 2020, 3, 10323-10327.	5.1	60
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13

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295	Correlating Gas Evolution and Oxygen Release to the Electrochemical Full-Cell Performance of Lithium-Rich Layered Oxides. ECS Meeting Abstracts, 2018, , .	0.0	0
296	Evaluating the Electrolyte Consumption and Cycling Performance of Practical Silicon-Graphite Electrodes. ECS Meeting Abstracts, 2018, , .	0.0	0
297	Surface Contaminants on Ni-Rich Cathode Active Materials: Influence of the Storage Conditions. ECS Meeting Abstracts, 2018, , .	0.0	0
298	Slurry-Based Processing of Solid Electrolytes – a Comparative Binder Study. ECS Meeting Abstracts, 2018, , .	0.0	0
299	Impedance Analysis of Graphite/Lnmo Cells with a Micro-Reference Electrode: Role of the Graphite Anode. ECS Meeting Abstracts, 2018, , .	0.0	0
300	Carbon Supported PtxYz Alloy Catalysts $\hat{a} \in $ from Rde to PEMFC Application. ECS Meeting Abstracts, 2018, , .	0.0	0
301	Investigating the Distribution of Electrolyte Decomposition Products (SEI) in Silicon Electrodes By Neutron Depth Profiling. ECS Meeting Abstracts, 2018, , .	0.0	0
302	Facile Detection of Binder Gradients Using Impedance Spectroscopy and Their Influence on the Tortuosity of Li-Ion Battery Electrode. ECS Meeting Abstracts, 2018, , .	0.0	0
303	Nanometric Fe-substituted ZrO2 on Carbon Black: a Novel PGM-Free ORR Catalyst for PEMFCs. ECS Meeting Abstracts, 2018, , .	0.0	0
304	Lattice Parameter Hysteresis in Li- and Mn-Rich Layered Oxides and Its Dependence on State of Charge and Open Circuit Voltage. ECS Meeting Abstracts, 2019, , .	0.0	0
305	Effect of Microscopic Oxygen Bubbles on Measured OER Catalyst Stability - a Comparative Study between RDE and MEA Measurements. ECS Meeting Abstracts, 2019, , .	0.0	0
306	Smart Neutrons for in-Situ and Operando Characterization of Battery Components and Cells. ECS Meeting Abstracts, 2019, , .	0.0	0

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307	Voltage Cycling Degradation Dependence on O2 Pressure: A Comparative Voltage-Loss Analysis. ECS Meeting Abstracts, 2019, , .	0.0	Ο
308	A Novel Reference Electrode for EIS Measurements in Sodium-Ion Batteries. ECS Meeting Abstracts, 2019, , .	0.0	0
309	(Invited) Materials and MEA Design Impact on the High-Current Density Performance of PEMFCs. ECS Meeting Abstracts, 2019, , .	0.0	0
310	Understanding Graphite Impedance: Determining Solid Electrolyte Interphase, Charge Transfer, and Pore Resistance. ECS Meeting Abstracts, 2020, MA2020-01, 414-414.	0.0	0
311	(Vittorio de Nora Award Address) Analysis of the Catalyst Requirements with Regards to Catalyst Structure and Catalyst Durability Studies for PEM Water Electrolysis. ECS Meeting Abstracts, 2020, MA2020-01, 1838-1838.	0.0	Ο
312	Drifts (Diffuse Reflectance Infrared Fourier Transform Spectroscopy) - a Way to Assess the Reactivity of Solid Electrolytes with Ambient Air. ECS Meeting Abstracts, 2020, MA2020-01, 417-417.	0.0	0
313	Washing of Ni-Rich Cathode Active Materials for Lithium-Ion-Batteries: Mechanistic Understanding. ECS Meeting Abstracts, 2020, MA2020-01, 214-214.	0.0	Ο
314	Spatially and Time-Resolved Investigation of Lithium Plating on a Graphite Electrode during Fast Charging Using Operando Neutron Depth Profiling (NDP). ECS Meeting Abstracts, 2020, MA2020-01, 144-144.	0.0	0
315	Entropy Measurements of Cells with Li- and Mn-Rich Layered Oxides Measured Via Linear Temperature Variation. ECS Meeting Abstracts, 2020, MA2020-01, 188-188.	0.0	Ο
316	Towards Ni-Rich Single Crystal Materials: Synthesis of the Model Material LiNiO2 and Their Electrochemical Performance Trade-Offs. ECS Meeting Abstracts, 2021, MA2021-02, 1883-1883.	0.0	0
317	Beneficial Effects of Oxide-Based Additives on Li-and Mn-Rich Cathode Active Materials. ECS Meeting Abstracts, 2021, MA2021-02, 372-372.	0.0	Ο
318	Mitigation of the Start-up and Shut-down Degradation in Pemfcs By Means of a Selective H2 Oxidation Catalyst. ECS Meeting Abstracts, 2021, MA2021-02, 1185-1185.	0.0	0
319	Selective Oxidation of PEMFC Catalyst Supports: Overcoming the Trade-Off between Kinetics and Mass Transport Limitations. ECS Meeting Abstracts, 2021, MA2021-02, 1184-1184.	0.0	0
320	Pressure Dependency of the Hydrogen Oxidation and Evolution Reaction Kinetics on Carbon Supported Pt Catalysts Using a PEMFC Based Hydrogen Pump Approach. ECS Meeting Abstracts, 2020, MA2020-02, 2337-2337.	0.0	0
321	Role of Redox Active Ligand of a Cobalt-Mabiq Complex in the Hydrogen Evolution Reaction. ECS Meeting Abstracts, 2020, MA2020-02, 2760-2760.	0.0	0
322	Structural and Electrochemical Properties of "Disordered, Spinel-like" Structures Derived from NCM111 Materials By Chemical Delithiation. ECS Meeting Abstracts, 2020, MA2020-02, 253-253.	0.0	0
323	Fast Lithium Ionic Conductors Li14SiP6, Li14GeP6, and Li14SnP6 – Structure-Property-Relationships in the Newly Discovered Family of Lithium Phosphidotetrelates. ECS Meeting Abstracts, 2020, MA2020-02, 874-874.	0.0	0
324	Layer Design for PGM-Free Catalysts for Pemfcs: Impact of Electrical Conductivity & Diagnostic Tools. ECS Meeting Abstracts, 2020, MA2020-02, 2139-2139.	0.0	0

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325	Entropy in Li- and Mn-Rich Layered Oxides Measured Via Linear Temperature Variation. ECS Meeting Abstracts, 2020, MA2020-02, 2851-2851.	0.0	0
326	(Vittorio de Nora Award Address) Analysis of the Catalyst Requirements with Regards to Catalyst Structure and Catalyst Durability Studies for PEM Water Electrolysis. ECS Meeting Abstracts, 2020, MA2020-02, 2454-2454.	0.0	0
327	From Zn-N-C to Fe-N-C: Active-Site Imprinting As a New Method for the Synthesis of Highly Active PGM-Free Catalysts for PEMFC. ECS Meeting Abstracts, 2020, MA2020-02, 2271-2271.	0.0	0
328	Study on the Effect of Crystal Size on the Performance of Ni-Rich Cathode Active Materials: Poly- Vs. Single Crystalline NCM622. ECS Meeting Abstracts, 2020, MA2020-02, 144-144.	0.0	0
329	(Battery Division Research Award) Electrolyte Oxidation Mechanisms in Lithium-Ion Batteries and Related Follow-Up Reactions. ECS Meeting Abstracts, 2020, MA2020-02, 28-28.	0.0	0
330	Comparison between Washing and Ambient Storage of Ni-Rich Active Materials By TGA-MS and XPS. ECS Meeting Abstracts, 2020, MA2020-02, 830-830.	0.0	0
331	Spatially and Time-Resolved Investigation of Lithium Plating on a Graphite Electrode during Fast Charging Using Operando Neutron Depth Profiling (NDP). ECS Meeting Abstracts, 2020, MA2020-02, 595-595.	0.0	0
332	Understanding the Effect of Lithium Nitrate As Additive in Carbonate Based Electrolytes for Silicon Anodes. ECS Meeting Abstracts, 2021, MA2021-02, 379-379.	0.0	0
333	Elucidating the Effect of the Morphology of Ni-Rich Cathode Active Materials on Their Long-Term Cycling Performance: Poly- Vs. Single Crystalline NCM851005. ECS Meeting Abstracts, 2021, MA2021-02, 368-368.	0.0	0
334	(Invited) Ambient Storage and Washing of NCMs: Formation/Removal of Surface Contaminants and NCM Structural Changes upon Heating of Washed/Stored NCMs. ECS Meeting Abstracts, 2021, MA2021-02, 389-389.	0.0	0
335	Neutrons for Battery Research (in-situ and operando studies): An Overview. ECS Meeting Abstracts, 2020, MA2020-02, 3173-3173.	0.0	0
336	ORR Activity and Stability of a Carbon-Supported Pt _x y Alloy Catalyst Evaluated in a PEM Fuel Cell. ECS Meeting Abstracts, 2022, MA2022-01, 1438-1438.	0.0	0
337	Investigation of IrO ₂ Stability As a Cell-Reversal Mitigation Catalyst in PEMFC Anodes. ECS Meeting Abstracts, 2022, MA2022-01, 1458-1458.	0.0	0
338	Monitoring the Electrochemical Capacitance By in Situ Impedance Spectroscopy As Indicator for Particle Cracking of (Nickel-Rich) Cathode Active Materials: Development of a Simplified Measurement Setup. ECS Meeting Abstracts, 2022, MA2022-01, 368-368.	0.0	0
339	Aqueous-Based Post-Treatment of Li- and Mn-Rich Ncm. ECS Meeting Abstracts, 2022, MA2022-01, 415-415.	0.0	0
340	Spatially Resolved Operando X-Ray Absorption Spectroscopy in NCA/Graphite to Quantify the Potential-Dependent Transition Metal Dissolution and Its Effect on Capacity Fading. ECS Meeting Abstracts, 2022, MA2022-01, 172-172.	0.0	0
341	Developing Microporous Transport Layers for Polymer Electrolyte Membrane (PEM) Water Electrolyzer Anodes. ECS Meeting Abstracts, 2022, MA2022-01, 1750-1750.	0.0	0
342	Determination of the Ï,,/ε-Ratio for Gas Diffusion Substrates and Microporous Layers in an Operating Fuel Cell. ECS Meeting Abstracts, 2022, MA2022-01, 1456-1456.	0.0	0

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343	(Invited) Design, Performance Characterization, and Durability of an Iridium-Based OER Catalyst for PEM Water Electrolysis. ECS Meeting Abstracts, 2022, MA2022-01, 1339-1339.	0.0	0
344	Temperature Dependent Formation of the Graphite SEI with Vinylene Carbonate Electrolyte Additive. ECS Meeting Abstracts, 2022, MA2022-01, 432-432.	0.0	0
345	Universal Correlation between the Roughness Factor and PEMFC Performance Losses in Voltage Cycling Based Accelerated Stress Tests. ECS Meeting Abstracts, 2022, MA2022-01, 1427-1427.	0.0	0
346	From Powder to Sheets – a Comparative Study for Solution-Cast Solid Electrolyte/Binder-Sheets As Separators in All-Solid-State Batteries. ECS Meeting Abstracts, 2022, MA2022-01, 161-161.	0.0	0
347	A Micro-Reference Electrode for Impedance and Potential Measurements in All-Solid-State Battery Pouch Cells. ECS Meeting Abstracts, 2022, MA2022-01, 207-207.	0.0	0