

Karen E Swider-Lyons

List of Publications by Year in descending order

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73
papers

3,544
citations

147801

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133252

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73
all docs

73
docs citations

73
times ranked

4316
citing authors

#	ARTICLE	IF	CITATIONS
1	Dual-layer catalyst layers for increased proton exchange membrane fuel cell performance. <i>Journal of Power Sources</i> , 2021, 514, 230574.	7.8	19
2	Evaluation of carbon-supported palladium electrocatalysts for the borohydride oxidation reaction in conditions relevant to fuel cell operation. <i>Electrochimica Acta</i> , 2020, 341, 135971.	5.2	12
3	Effect of GDM Pairing on PEMFC Performance in Flow-Through and Dead-Ended Anode Mode. <i>Molecules</i> , 2020, 25, 1469.	3.8	3
4	Improved Borohydride Oxidation Reaction Activity and Stability for Carbon-Supported Platinum Nanoparticles with Tantalum Oxyphosphate Interlayers. <i>Journal of the Electrochemical Society</i> , 2020, 167, 164508.	2.9	3
5	Impact of the Anode Catalyst Layer Design on the Performance of H ₂ O ₂ -Direct Borohydride Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2019, 166, F1218-F1228.	2.9	14
6	The Role of Compressive Stress on Gas Diffusion Media Morphology and Fuel Cell Performance. <i>ACS Applied Energy Materials</i> , 2018, 1, 191-201.	5.1	66
7	Improving PEMFC Performance Using Short-Side-Chain Low-Equivalent-Weight PFSA Ionomer in the Cathode Catalyst Layer. <i>Journal of the Electrochemical Society</i> , 2018, 165, F381-F391.	2.9	57
8	Innovating Safe Lithium-Ion Batteries Through Basic to Applied Research. <i>Journal of Electrochemical Energy Conversion and Storage</i> , 2018, 15, .	2.1	12
9	The Influence of Gas Diffusion Media Morphology on Hydrogen Fuel Cell Performance. <i>Materials Science Forum</i> , 2018, 941, 2226-2231.	0.3	0
10	Improvement of the Borohydride Oxidation Reaction by Electrocatalysis on Pt/[TaOPO ₄ /VC]. <i>ECS Transactions</i> , 2018, 86, 659-670.	0.5	1
11	High power, Low-Pt membrane electrode assemblies for proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2018, 408, 38-45.	7.8	33
12	Lithium-Ion Cell Fault Detection by Single-Point Impedance Diagnostic and Degradation Mechanism Validation for Series-Wired Batteries Cycled at 0 °C. <i>Energies</i> , 2018, 11, 834.	3.1	16
13	Internal Morphologies of Cycled Li-Metal Electrodes Investigated by Nano-Scale Resolution X-ray Computed Tomography. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 18748-18757.	8.0	32
14	Fabrication Method for Laboratory-Scale High-Performance Membrane Electrode Assemblies for Fuel Cells. <i>Analytical Chemistry</i> , 2017, 89, 511-518.	6.5	89
15	Sodium Borohydride Oxidation on Pt and/or Pd-Based Electrodes in Hydrogen Peroxide Direct Borohydride Fuel Cells (H ₂ O ₂ -DBFCs). <i>ECS Transactions</i> , 2017, 80, 1033-1042.	0.5	10
16	Bromomethane Contamination in the Cathode of Proton Exchange Membrane Fuel Cells. <i>Electrochimica Acta</i> , 2016, 213, 482-489.	5.2	5
17	Oxygen character in the density of states as an indicator of the stability of Li-ion battery cathode materials. <i>Solid State Ionics</i> , 2016, 286, 83-89.	2.7	43
18	Effective Strategy for Improving Electrocatalyst Durability by Adhesive Immobilization of Catalyst Nanoparticles on Graphitic Carbon Supports. <i>ACS Catalysis</i> , 2015, 5, 3662-3674.	11.2	13

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19	Performance and Limitations of 3D-Printed Bipolar Plates in Fuel Cells. ECS Journal of Solid State Science and Technology, 2015, 4, P3063-P3068.	1.8	29
20	Chlorobenzene Poisoning and Recovery of Platinum-Based Cathodes in Proton Exchange Membrane Fuel Cells. Journal of Physical Chemistry C, 2015, 119, 20328-20338.	3.1	14
21	The Influence of Cell Voltage on the Performance of a PEM Fuel Cell in the Presence of HCl in Air. Journal of the Electrochemical Society, 2014, 161, F365-F372.	2.9	13
22	Hydrogen Fuel Cells for Small Unmanned Air Vehicles. ECS Transactions, 2014, 64, 963-972.	0.5	10
23	Structure-Stability Correlations in Li-ion Battery Cathode Materials. Materials Research Society Symposia Proceedings, 2014, 1655, 1.	0.1	0
24	Analytical Procedure for Accurate Comparison of Rotating Disk Electrode Results for the Oxygen Reduction Activity of Pt/C. Journal of the Electrochemical Society, 2014, 161, F628-F640.	2.9	131
25	Liquid hydrogen fuel system design and demonstration in a small long endurance air vehicle. International Journal of Hydrogen Energy, 2014, 39, 11279-11290.	7.1	80
26	Assessing fuel-cell coolant flow fields with numerical models and infrared thermography. International Journal of Hydrogen Energy, 2014, 39, 14061-14070.	7.1	26
27	A calibrated hydrogen-peroxide direct-borohydride fuel cell model. Journal of Power Sources, 2014, 271, 421-430.	7.8	17
28	State-of-health monitoring of 18650 4S packs with a single-point impedance diagnostic. Journal of Power Sources, 2014, 266, 512-519.	7.8	86
29	In-situ X-ray absorption spectroscopy analysis of capacity fade in nanoscale-LiCoO ₂ . Journal of Solid State Chemistry, 2013, 203, 134-144.	2.9	47
30	SO ₂ adsorption products on Pt nanoparticles as a function of electrode potential and oxidative properties of carrier gas: In situ sulfur K-edge XANES approach. Catalysis Today, 2013, 205, 106-110.	4.4	15
31	Decreasing contact resistance in proton-exchange membrane fuel cells with metal bipolar plates. Journal of Power Sources, 2013, 227, 137-144.	7.8	87
32	Review of LiFePO ₄ Phase Transition Mechanisms and New Observations from X-ray Absorption Spectroscopy. Journal of the Electrochemical Society, 2013, 160, A3153-A3161.	2.9	57
33	Physical Chemistry Research Toward Proton Exchange Membrane Fuel Cell Advancement. Journal of Physical Chemistry Letters, 2013, 4, 393-401.	4.6	36
34	ORR Measurements Reproducibility Using a RRDE. ECS Transactions, 2013, 58, 1233-1241.	0.5	14
35	Impedance Diagnostic for Overcharged Lithium-Ion Batteries. Electrochemical and Solid-State Letters, 2012, 15, A53.	2.2	41
36	Understanding Oxygen Reduction on Tantalum Oxyphosphate and Tantalum Oxide Supported Platinum by X-ray Absorption Spectroscopy. Journal of Physical Chemistry C, 2012, 116, 18175-18183.	3.1	22

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37	Effect of glycol-based coolants on the suppression and recovery of platinum fuel cell electrocatalysts. <i>Journal of Power Sources</i> , 2012, 216, 515-525.	7.8	8
38	Impact of film drying procedures on RDE characterization of Pt/VC electrocatalysts. <i>Journal of Electroanalytical Chemistry</i> , 2011, 662, 396-406.	3.8	192
39	Structural originations of irreversible capacity loss from highly lithiated copper oxides. <i>Journal of Solid State Chemistry</i> , 2011, 184, 2412-2419.	2.9	25
40	Insights into PEMFC Performance Degradation from HCl in Air. <i>Journal of the Electrochemical Society</i> , 2011, 158, B1198.	2.9	23
41	Insights on the SO ₂ poisoning of Pt ₃ Co/VC and Pt/VC fuel cell catalysts. <i>Electrochimica Acta</i> , 2010, 55, 6676-6686.	5.2	42
42	Resolving Sulfur Oxidation and Removal from Pt and Pt ₃ Co Electrocatalysts Using in Situ X-ray Absorption Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2010, 114, 11886-11897.	3.1	42
43	High-Activity, Durable Oxygen Reduction Electrocatalyst: Nanoscale Composite of Platinum-Tantalum Oxophosphate on Vulcan Carbon. <i>Journal of Physical Chemistry Letters</i> , 2010, 1, 1977-1981.	4.6	32
44	Experimental Methods for Quantifying the Activity of Platinum Electrocatalysts for the Oxygen Reduction Reaction. <i>Analytical Chemistry</i> , 2010, 82, 6321-6328.	6.5	572
45	Comparison of the Sulfur Poisoning of PBI and Nafion PEMFC Cathodes. <i>Electrochemical and Solid-State Letters</i> , 2009, 12, B138.	2.2	35
46	Oxygen Reduction Reaction Kinetics of SO ₂ -Contaminated Pt ₃ Co and Pt/Vulcan Carbon Electrocatalysts. <i>Journal of the Electrochemical Society</i> , 2009, 156, B848.	2.9	37
47	Deactivation of Pt/VC proton exchange membrane fuel cell cathodes by SO ₂ , H ₂ S and COS. <i>Journal of Power Sources</i> , 2009, 188, 89-95.	7.8	90
48	Pechini synthesis and characterization of molybdenum carbide and nickel molybdenum carbide. <i>Journal of Solid State Chemistry</i> , 2008, 181, 2741-2747.	2.9	27
49	Characterization of Ligand Effects on Water Activation in Triarylphosphine-Stabilized Pt Nanoparticle Catalysts by X-ray Absorption Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2008, 112, 4961-4970.	3.1	24
50	Support Effects on Water Activation and Oxygen Reduction over Au-SnO _x Electrocatalysts Observed with X-Ray Absorption Spectroscopy. <i>Journal of the Electrochemical Society</i> , 2008, 155, B834.	2.9	19
51	Oxygen Reduction Reaction on Platinum/Tantalum Oxide Electrocatalysts for PEM Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2008, 155, B1314.	2.9	53
52	Impact of SO ₂ on the Kinetics of Pt ₃ Co/Vulcan Carbon Electrocatalysts for Oxygen Reduction. <i>ECS Transactions</i> , 2007, 11, 863-875.	0.5	3
53	Impact of Sulfur Dioxide on the Oxygen Reduction Reaction at Pt/Vulcan Carbon Electrocatalysts. <i>Journal of the Electrochemical Society</i> , 2007, 154, B670.	2.9	109
54	Establishing the Mechanism for Oxygen Reduction on Au/SnO _x Using In Situ X-ray Absorption Spectroscopy. <i>ECS Transactions</i> , 2007, 11, 271-276.	0.5	4

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55	Oxygen Reduction Reaction on Platinum/Tantalum Oxide Electrocatalysts for PEM Fuel Cells. ECS Transactions, 2007, 11, 197-204.	0.5	3
56	Organometallic Supramolecular Mixed-Valence Cobalt(I)/Cobalt(II) Aquo Complexes Stabilized with the Water-Soluble Phosphine Ligandp-TPPTP (p-triphenylphosphine triphosphonic acid). Organometallics, 2007, 26, 2272-2276.	2.3	24
57	High-Performance Solid Oxide Fuel Cell Cathodes with Lanthanum-Nickelate-Based Composites. Electrochemical and Solid-State Letters, 2007, 10, B170.	2.2	51
58	Improved high power Li-ion batteries with Li ₂ RuO ₃ addition: A fast charging and fast cycling study. Journal of Power Sources, 2007, 165, 635-639.	7.8	7
59	Triarylphosphine-Stabilized Platinum Nanoparticles in Three-Dimensional Nanostructured Films as Active Electrocatalysts. Journal of Physical Chemistry B, 2006, 110, 21487-21496.	2.6	52
60	Enhanced Oxygen Reduction Activity in Acid by Tin-Oxide Supported Au Nanoparticle Catalysts. Journal of the Electrochemical Society, 2006, 153, A1702.	2.9	53
61	Impact of Sulfur Dioxide on the Performance of the PEMFC Cathodes. ECS Transactions, 2006, 3, 685-694.	0.5	7
62	Impact of Sulfur Dioxide on the Performance of PEMFC Cathodes. ECS Transactions, 2006, 1, 103-109.	0.5	0
63	Metal Carbide-Based Hydrodesulfurization Catalysts as Sulfur-Tolerant Electrocatalysts for PEMFC Anodes. ECS Transactions, 2006, 3, 471-477.	0.5	7
64	Li-Ion Capacity Enhancement in Composite Blends of LiCoO ₂ and Li ₂ RuO ₃ . Journal of the Electrochemical Society, 2005, 152, A2009.	2.9	30
65	Selective Vapor Deposition of Hydrous RuO ₂ Thin Films. Journal of the Electrochemical Society, 2005, 152, C158.	2.9	19
66	Platinum-Iron Phosphate Electrocatalysts for Oxygen Reduction in PEMFCs. Journal of the Electrochemical Society, 2004, 151, A1989.	2.9	40
67	Li-ion microbatteries generated by a laser direct-write method. Journal of Power Sources, 2004, 126, 193-202.	7.8	76
68	Direct-Write Planar Microultracapacitors by Laser Engineering. Journal of the Electrochemical Society, 2003, 150, A571.	2.9	49
69	Local Atomic Structure and Conduction Mechanism of Nanocrystalline Hydrous RuO ₂ from X-ray Scattering. Journal of Physical Chemistry B, 2002, 106, 12677-12683.	2.6	275
70	Modifying nanoscale silica with itself: a method to control surface properties of silica aerogels independently of bulk structure. Journal of Non-Crystalline Solids, 2001, 285, 29-36.	3.1	24
71	Nanoscale Structural and Chemical Segregation in Pt ₅₀ Ru ₅₀ Electrocatalysts. Microscopy and Microanalysis, 2001, 7, 1112-1113.	0.4	0
72	Laser Direct Writing of Hydrous Ruthenium Dioxide Micro-Pseudocapacitors. Materials Research Society Symposia Proceedings, 2001, 698, 321.	0.1	4

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73	How To Make Electrocatalysts More Active for Direct Methanol Oxidation Avoid PtRu Bimetallic Alloys!. Journal of Physical Chemistry B, 2000, 104, 9772-9776.	2.6	333