Roswitha Zeis

List of Publications by Year
in descending order

69 papers	3,666 citations	172207 29 h-index	128067 60 g-index
71 all docs	71 docs citations	71 times ranked	4963 citing authors

#	Article	IF	Citations
1	Microstructure reconstruction using fiber tracking technique and pore-scale simulations of heterogeneous gas diffusion layer. International Journal of Hydrogen Energy, 2022, 47, 20218-20231.	3.8	7
2	Experimental validation of pore-scale models for gas diffusion layers. Journal of Power Sources, 2022, 536, 231515.	4.0	10
3	High-density and low-density gas diffusion layers for proton exchange membrane fuel cells: Comparison of mechanical and transport properties. International Journal of Hydrogen Energy, 2022, 47, 22532-22544.	3.8	5
4	Investigating Electrode Reactions in Vanadium Redox Flow Batteries - a Distribution of Relaxation Times Analysis. ECS Meeting Abstracts, 2022, MA2022-01, 2012-2012.	0.0	0
5	Impact of catalyst layer morphology on the operation of high temperature PEM fuel cells. Journal of Power Sources Advances, 2021, 7, 100042.	2.6	29
6	NMR analysis of phosphoric acid distribution in porous fuel cell catalysts. Chemical Communications, 2021, 57, 2547-2550.	2.2	4
7	Synchrotron X-Ray radiography of vanadium redox flow batteries â€“ Time and spatial resolved electrolyte flow in porous carbon electrodes. Journal of Power Sources, 2021, 492, 229660.	4.0	19
8	Multiphase and Pore Scale Modeling on Catalyst Layer of High-Temperature Polymer Electrolyte Membrane Fuel Cell. Journal of the Electrochemical Society, 2021, 168, 054521.	1.3	8
9	Microstructure reconstruction of the gas diffusion layer and analyses of the anisotropic transport properties. Energy Conversion and Management, 2021, 241, 114293.	4.4	45
10	Nitrogen-functionalized carbon-supported Pt catalysts implemented in high-temperature polymer electrolyte membrane fuel cell. Journal of Power Sources, 2021, 507, 229971.	4.0	13
11	Degradation Characteristics of Electrospun Gas Diffusion Layers with Custom Pore Structures for Polymer Electrolyte Membrane Fuel Cells. ACS Applied Materials & Interfaces, 2021, 13, 2414-2427.	4.0	8
12	Localizing Phosphoric Acid in High-Temperature PEM Fuel Cell Catalyst Layers Using Cryostatic Focused Ion Beam Scanning Electron Microscopy. ECS Meeting Abstracts, 2021, MA2021-02, 1058-1058.	0.0	0
13	(Invited) Diagnostic Tools to Evaluate Materials for High-Performance PBI Systems. ECS Meeting Abstracts, 2021, MA2021-02, 1099-1099.	0.0	0
14	Side reactions and stability of pre-treated carbon felt electrodes for vanadium redox flow batteries: A DEMS study. Carbon, 2020, 158, 580-587.	5.4	45
15	The impact of the catalyst layer structure on phosphoric acid migration in HT-PEFC â€“ An operando X-ray tomographic microscopy study. Journal of Electroanalytical Chemistry, 2020, 859, 113832.	1.9	22
16	Deconvolution of electrochemical impedance data for the monitoring of electrode degradation in VRFB. Electrochimica Acta, 2020, 336, 135510.	2.6	23
17	Mesoscopic modeling and characterization of the porous electrodes for vanadium redox flow batteries. Journal of Energy Storage, 2020, 32, 101782.	3.9	15
18	Understanding the role of the anode on the polarization losses in high-temperature polymer electrolyte membrane fuel cells using the distribution of relaxation times analysis. Journal of Power Sources, 2020, 471, 228469.	4.0	35

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19	Designing Tailored Gas Diffusion Layers with Pore Size Gradients via Electrospinning for Polymer Electrolyte Membrane Fuel Cells. ACS Applied Energy Materials, 2020, 3, 2695-2707.	2.5	31
20	Porous electrospun carbon nanofibers network as an integrated electrode@gas diffusion layer for high temperature polymer electrolyte membrane fuel cells. Electrochimica Acta, 2020, 345, 136192.	2.6	27
21	Synchrotron Xâ€ray Radiography and Tomography of Vanadium Redox Flow Batteriesâ€"Cell Design, Electrolyte Flow Geometry, and Gas Bubble Formation. ChemSusChem, 2020, 13, 3154-3165.	3.6	24
22	Pore-Scale Characterization and Simulation of Porous Electrode Material for Vanadium Redox Flow Battery: Effects of Compression on Transport Properties. Journal of the Electrochemical Society, 2020, 167, 110545.	1.3	13
23	The Impact of Electrode Aging on the Structural and Mechanical Properties of Carbon Felt Electrodes for Vanadium Redox Flow Batteries. ECS Meeting Abstracts, 2020, MA2020-02, 1097-1097.	0.0	0
24	Flow Geometry of the Electrolyte and Gas Bubble Formation in Redox Flow Batteries - a Synchrotron Imaging Study. ECS Meeting Abstracts, 2020, MA2020-02, 1040-1040.	0.0	0
25	Carbon felt electrodes for redox flow battery: Impact of compression on transport properties. Journal of Energy Storage, 2019, 26, 100997.	3.9	62
26	Visualization of electrolyte flow in vanadium redox flow batteries using synchrotron X-ray radiography and tomography â€“ Impact of electrolyte species and electrode compression. Journal of Power Sources, 2019, 439, 227071.	4.0	43
27	Porous N- and S-doped carbonâ€“carbon composite electrodes by soft-templating for redox flow batteries. Beilstein Journal of Nanotechnology, 2019, 10, 1131-1139.	1.5	12
28	Solid Mechanics Simulation of Reconstructed Gas Diffusion Layers for PEMFCs. Journal of the Electrochemical Society, 2019, 166, F377-F385.	1.3	24
29	Comparison of Electrospun Carbonâ^'Carbon Composite and Commercial Felt for Their Activity and Electrolyte Utilization in Vanadium Redox Flow Batteries. ChemElectroChem, 2019, 6, 130-135.	1.7	27
30	Comparison of Electrospun Carbonâ^'Carbon Composite and Commercial Felt for Their Activity and Electrolyte Utilization in Vanadium Redox Flow Batteries. ChemElectroChem, 2019, 6, 6-6.	1.7	5
31	Characterization of carbon felt electrodes for vanadium redox flow batteries â€“ A pore network modeling approach. Journal of Energy Storage, 2019, 21, 163-171.	3.9	50
32	Electrolyte Flow in Vanadium Redox Flow Batteries. ECS Meeting Abstracts, 2019, , .	0.0	0
33	Characterizing Carbon Felt Electrodes for Vanadium Redox Flow Batteries Using Differential Electrochemical Mass Spectrometry. ECS Meeting Abstracts, 2019, , .	0.0	0
34	Modifying Carbon Felt Electrodes By Poly(o-toluidine) to Enhance the Performance of All-Vanadium Redox Flow Batteries. ECS Meeting Abstracts, 2019, , .	0.0	0
35	Effects of compression on water distribution in gas diffusion layer materials of PEMFC in a point injection device by means of synchrotron X-ray imaging. International Journal of Hydrogen Energy, 2018, 43, 391-406.	3.8	72
36	Microporous Layer Degradation in Polymer Electrolyte Membrane Fuel Cells. Journal of the Electrochemical Society, 2018, 165, F3271-F3280.	1.3	30

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37	Differential Electrochemical Mass Spectrometry of Carbon Felt Electrodes for Vanadium Redox Flow Batteries. ACS Applied Energy Materials, 2018, 1, 6714-6718.	2.5	18
38	Comparing Novel PGM-Free, Platinum, and Alloyed Platinum Catalysts for HT-PEMFCs. ECS Transactions, 2018, 86, 221-229.	0.3	11
39	Characterization of Carbon Felt Electrodes for Vanadium Redox Flow Batteries: Impact of Treatment Methods. Journal of the Electrochemical Society, 2018, 165, A2577-A2586.	1.3	82
40	Distribution of Relaxation Times Analysis of High-Temperature PEM Fuel Cell Impedance Spectra. Electrochimica Acta, 2017, 230, 391-398.	2.6	146
41	Interplay between structure and properties in acid-base blend PBI-based membranes for HT-PEM fuel cells. Journal of Membrane Science, 2017, 535, 122-131.	4.1	54
42	Accelerated Degradation of Polymer Electrolyte Membrane Fuel Cell Gas Diffusion Layers. Journal of the Electrochemical Society, 2017, 164, F695-F703.	1.3	30
43	Accelerated Degradation of Polymer Electrolyte Membrane Fuel Cell Gas Diffusion Layers. Journal of the Electrochemical Society, 2017, 164, F704-F713.	1.3	42
44	Accelerated Degradation of Polymer Electrolyte Membrane Fuel Cell Gas Diffusion Layers. Journal of the Electrochemical Society, 2017, 164, F714-F721.	1.3	30
45	Phosphoric Acid Invasion in High Temperature PEM Fuel Cell Gas Diffusion Layers. Electrochimica Acta, 2017, 257, 89-98.	2.6	56
46	The Impacts of Microporous Layer Degradation on Liquid Water Distributions in Polymer Electrolyte Membrane Fuel Cells Using Synchrotron Imaging. ECS Transactions, 2017, 80, 155-164.	0.3	5
47	Phosphoric Acid Distribution Patterns in High Temperature PEM Fuel Cells. ECS Transactions, 2017, 80, 409-417.	0.3	13
48	Influence of the polytetrafluoroethylene content on the performance of high-temperature polymer electrolyte membrane fuel cell electrodes. International Journal of Hydrogen Energy, 2016, 41, 7475-7483.	3.8	43
49	Accelerated Degradation of Polymer Electrolyte Membrane Fuel Cell Gas Diffusion Layers: Performance Degradation and Steady State Liquid Water Distributions with in Operando Synchrotron X-ray Radiography. ECS Transactions, 2016, 75, 289-300.	0.3	3
50	Accelerated Degradation of Polymer Electrolyte Membrane Fuel Cell Gas Diffusion Layers: Mass Transport Resistance and Liquid Water Accumulation at Limiting Current Density with in operando Synchrotron X-ray Radiography. ECS Transactions, 2016, 75, 89-100.	0.3	3
51	Role of the microporous layer in the redistribution of phosphoric acid in high temperature PEM fuel cell gas diffusion electrodes. Electrochimica Acta, 2016, 212, 187-194.	2.6	40
52	Evaluation of Electrolyte Additives for Highâ€Temperature Polymer Electrolyte Fuel Cells. ChemElectroChem, 2016, 3, 770-773.	1.7	15
53	Electrochemical Impedance Spectroscopy as a Diagnostic Tool for High-Temperature PEM Fuel Cells. ECS Transactions, 2015, 69, 1075-1087.	0.3	10
54	Materials and characterization techniques for high-temperature polymer electrolyte membrane fuel cells. Beilstein Journal of Nanotechnology, 2015, 6, 68-83.	1.5	159

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55	Perfluoroalkyl-Phosphonic Acid Adsorption on Polycrystalline Platinum and Its Influence on the Oxygen Reduction Reaction. Journal of Physical Chemistry C, 2015, 119, 18859-18869.	1.5	13
56	Novel phosphoric acid-doped PBI-blends as membranes for high-temperature PEM fuel cells. Journal of Materials Chemistry A, 2015, 3, 10864-10874.	5.2	89
57	Phosphoric acid distribution and its impact on the performance of polybenzimidazole membranes. Journal of Power Sources, 2014, 270, 627-633.	4.0	44
58	Fluoroalkyl phosphoric acid derivatives â€" Model compounds to study the adsorption of electrolyte species on polycrystalline platinum. Electrochemistry Communications, 2014, 48, 24-27.	2.3	10
59	Morphology studies on high-temperature polymer electrolyte membrane fuel cell electrodes. Journal of Power Sources, 2014, 255, 431-438.	4.0	53
60	PTFE Distribution in High-Temperature PEM Electrodes and Its Effect on the Cell Performance. ECS Transactions, 2013, 58, 881-888.	0.3	20
61	Enhanced Pt stability in MO2 (M=Ce, Zr or Ce0.9Zr0.1)-promoted Pt/C electrocatalysts for oxygen reduction reaction in PAFCs. Applied Catalysis A: General, 2010, 381, 54-65.	2.2	34
62	Catalytic reduction of oxygen and hydrogen peroxide by nanoporous gold. Journal of Catalysis, 2008, 253, 132-138.	3.1	225
63	Platinum-plated nanoporous gold: An efficient, low Pt loading electrocatalyst for PEM fuel cells. Journal of Power Sources, 2007, 165, 65-72.	4.0	196
64	Organization of Acenes with a Cruciform Assembly Motif. Journal of the American Chemical Society, 2006, 128, 1340-1345.	6.6	214
65	Field Effect Studies on Rubrene and Impurities of Rubrene. Chemistry of Materials, 2006, 18, 244-248.	3.2	173
66	Single-Crystal Field-Effect Transistors Based on Organic Selenium-Containing Semiconductor. Japanese Journal of Applied Physics, 2005, 44, 3712-3714.	0.8	20
67	Pentacene Disproportionation during Sublimation for Field-Effect Transistors. Journal of the American Chemical Society, 2005, 127, 3069-3075.	6.6	191
68	Synthesis, Crystal Structure, and Transistor Performance of Tetracene Derivatives. Journal of the American Chemical Society, 2004, 126, 15322-15323.	6.6	353
69	High-mobility field-effect transistors based on transition metal dichalcogenides. Applied Physics Letters, 2004, 84, 3301-3303.	1.5	497