

Laetitia Dubau

List of Publications by Year in descending order

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73
papers

4,661
citations

94269

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102304

66
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74
times ranked

4805
citing authors

#	ARTICLE	IF	CITATIONS
1	A chemical-mechanical ex-situ aging of perfluorosulfonic-acid membranes for fuel cells: Impact on the structure and the functional properties. <i>Journal of Power Sources</i> , 2022, 520, 230911.	4.0	3
2	Anode defects TM propagation in polymer electrolyte membrane fuel cells. <i>Journal of Power Sources</i> , 2022, 520, 230880.	4.0	6
3	Electrochemical transformation of Fe-N-C catalysts into iron oxides in alkaline medium and its impact on the oxygen reduction reaction activity. <i>Applied Catalysis B: Environmental</i> , 2022, 311, 121366.	10.8	22
4	Approaches Towards Improving Zinc-Nickel Batteries Performance. <i>ECS Meeting Abstracts</i> , 2022, MA2022-01, 21-21.	0.0	0
5	Aerogel-Derived Fe-N-C Catalysts for Oxygen Electro-Reduction. Linking Their Pore Structure and PEMFC Performance. <i>ECS Meeting Abstracts</i> , 2022, MA2022-01, 1428-1428.	0.0	0
6	Unravelling the Influence of Oxygen on the Degradation Mechanisms of Fe-N-C Oxygen Reduction Reaction Catalysts. <i>ECS Meeting Abstracts</i> , 2022, MA2022-01, 2070-2070.	0.0	0
7	Identification of durable and non-durable Fe _N sites in Fe ^N -C materials for proton exchange membrane fuel cells. <i>Nature Catalysis</i> , 2021, 4, 10-19.	16.1	368
8	Fe ^N -C Electrocatalysts TM Durability: Effects of Single Atoms TM Mobility and Clustering. <i>ACS Catalysis</i> , 2021, 11, 484-494.	5.5	53
9	Anode aging in polymer electrolyte membrane fuel Cells I: Anode monitoring by ElectroChemical impedance spectroscopy. <i>Journal of Power Sources</i> , 2021, 481, 228908.	4.0	12
10	Oxygen Evolution Reaction Activity and Stability Benchmarks for Supported and Unsupported IrO ₂ Electrocatalysts. <i>ACS Catalysis</i> , 2021, 11, 4107-4116.	5.5	69
11	Towards comprehensive understanding of proton-exchange membrane fuel cells using high energy x-rays. <i>JPhys Energy</i> , 2021, 3, 031003.	2.3	2
12	Imaging Heterogeneous Electrocatalyst Stability and Decoupling Degradation Mechanisms in Operating Hydrogen Fuel Cells. <i>ACS Energy Letters</i> , 2021, 6, 2742-2749.	8.8	26
13	Disclosing Pt-Bimetallic Alloy Nanoparticle Surface Lattice Distortion with Electrochemical Probes. <i>ACS Energy Letters</i> , 2020, 5, 162-169.	8.8	35
14	On the Influence of Oxygen on the Degradation of Fe ^N -C Catalysts. <i>Angewandte Chemie</i> , 2020, 132, 3261-3269.	1.6	133
15	On the Influence of Oxygen on the Degradation of Fe ^N -C Catalysts. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 3235-3243.	7.2	160
16	Building Practical Descriptors for Defect Engineering of Electrocatalytic Materials. <i>ACS Catalysis</i> , 2020, 10, 9046-9056.	5.5	30
17	Manipulating the Corrosion Resistance of SnO ₂ Aerogels through Doping for Efficient and Durable Oxygen Evolution Reaction Electrocatalysis in Acidic Media. <i>ACS Catalysis</i> , 2020, 10, 7283-7294.	5.5	49
18	Tailoring the Oxygen Reduction Activity of Pt Nanoparticles through Surface Defects: A Simple Top-Down Approach. <i>ACS Catalysis</i> , 2020, 10, 3131-3142.	5.5	50

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19	Closing the loop: life cycle assessment and optimization of a PEMFC platinum-based catalyst recycling process. <i>Green Chemistry</i> , 2020, 22, 1919-1933.	4.6	32
20	Durability of Alternative Metal Oxide Supports for Application at a Proton-Exchange Membrane Fuel Cell Cathode—Comparison of Antimony- and Niobium-Doped Tin Oxide. <i>Energies</i> , 2020, 13, 403.	1.6	13
21	(Invited) Assessing Corrosion Resistance of Antimony-, Niobium- and Tantalum-Doped Tin Oxide Aerogels As Oxygen Evolution Reaction Catalyst Supports in Acidic Media. <i>ECS Meeting Abstracts</i> , 2020, MA2020-01, 2798-2798.	0.0	0
22	Anode Monitoring By Electrochemical Impedance Spectroscopy in Polymer Electrolyte Membrane Fuel Cells. <i>ECS Meeting Abstracts</i> , 2020, MA2020-01, 1803-1803.	0.0	0
23	(Invited) Optimizing Iridium Utilization for Oxygen Evolution Reaction — Viability of the Supported Ir Oxide Nanoparticles Strategy. <i>ECS Meeting Abstracts</i> , 2020, MA2020-01, 2825-2825.	0.0	0
24	(Invited) Unveiling Changes in Surface Chemistry of Iridium Single Crystals and Metal Oxide Supported IrOx Nanoparticles in Oxygen Evolution Reaction Conditions. <i>ECS Meeting Abstracts</i> , 2020, MA2020-01, 1833-1833.	0.0	0
25	Probing Surface Oxide Formation and Dissolution on/of Ir Single Crystals via X-ray Photoelectron Spectroscopy and Inductively Coupled Plasma Mass Spectrometry. <i>ACS Catalysis</i> , 2019, 9, 9859-9869.	5.5	36
26	Carbon Corrosion in Proton-Exchange Membrane Fuel Cells: Spectrometric Evidence for Pt-Catalysed Decarboxylation at Anode-Relevant Potentials. <i>ChemPhysChem</i> , 2019, 20, 3106-3111.	1.0	44
27	Degradation of Carbon-Supported Platinum-Group-Metal Electrocatalysts in Alkaline Media Studied by in Situ Fourier Transform Infrared Spectroscopy and Identical-Location Transmission Electron Microscopy. <i>ACS Catalysis</i> , 2019, 9, 5613-5622.	5.5	80
28	Degradation Mechanisms of Oxygen Evolution Reaction Electrocatalysts: A Combined Identical-Location Transmission Electron Microscopy and X-ray Photoelectron Spectroscopy Study. <i>ACS Catalysis</i> , 2019, 9, 4688-4698.	5.5	100
29	Top-Down Synthesis of Nanostructured Platinum—Lanthanide Alloy Oxygen Reduction Reaction Catalysts: Pt _x Pr/C as an Example. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 5129-5135.	4.0	60
30	Disentangling the Degradation Pathways of Highly Defective PtNi/C Nanostructures — An Operando Wide and Small Angle X-ray Scattering Study. <i>ACS Catalysis</i> , 2019, 9, 160-167.	5.5	22
31	Ubiquitous Borane Fuel Electrooxidation on Pd/C and Pt/C Electrocatalysts: Toward Promising Direct Hydrazine—Borane Fuel Cells. <i>ACS Catalysis</i> , 2018, 8, 3150-3163.	5.5	25
32	Tools and Electrochemical In Situ and On-Line Characterization Techniques for Nanomaterials. , 2018, , 383-439.		0
33	A Review on Recent Developments and Prospects for the Oxygen Reduction Reaction on Hollow Pt-Alloy Nanoparticles. <i>ChemPhysChem</i> , 2018, 19, 1552-1567.	1.0	64
34	Accelerated Stress Test of Pt/C Nanoparticles in an Interface with an Anion-Exchange Membrane—An Identical-Location Transmission Electron Microscopy Study. <i>ACS Catalysis</i> , 2018, 8, 1278-1286.	5.5	69
35	Porous Hollow PtNi/C Electrocatalysts: Carbon Support Considerations To Meet Performance and Stability Requirements. <i>ACS Catalysis</i> , 2018, 8, 893-903.	5.5	67
36	Utilization of graphitized and fluorinated carbon as platinum nanoparticles supports for application in proton exchange membrane fuel cell cathodes. <i>Journal of Power Sources</i> , 2018, 404, 28-38.	4.0	16

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37	Physical and Chemical Considerations for Improving Catalytic Activity and Stability of Non-Precious-Metal Oxygen Reduction Reaction Catalysts. ACS Catalysis, 2018, 8, 11264-11276.	5.5	101
38	Surface distortion as a unifying concept and descriptor in oxygen reduction reaction electrocatalysis. Nature Materials, 2018, 17, 827-833.	13.3	344
39	Activity and Durability of Platinum-Based Electrocatalysts Supported on Bare or Fluorinated Nanostructured Carbon Substrates. Journal of the Electrochemical Society, 2018, 165, F3346-F3358.	1.3	27
40	Effect of Atomic Vacancies on the Structure and the Electrocatalytic Activity of Pt ₂ Ni/C Nanoparticles: A Combined Experimental and Density Functional Theory Study. ChemCatChem, 2017, 9, 2324-2338.	1.8	23
41	Insights into the stability of Pt nanoparticles supported on antimony-doped tin oxide in different potential ranges. Electrochimica Acta, 2017, 245, 993-1004.	2.6	37
42	Stability of carbon-supported palladium nanoparticles in alkaline media: A case study of graphitized and more amorphous supports. Electrochemistry Communications, 2017, 78, 33-37.	2.3	24
43	Atomic-Scale Snapshots of the Formation and Growth of Hollow PtNi/C Nanocatalysts. Nano Letters, 2017, 17, 2447-2453.	4.5	40
44	Implementing Structural Disorder as a Promising Direction for Improving the Stability of PtNi/C Nanoparticles. ACS Catalysis, 2017, 7, 3072-3081.	5.5	61
45	(Invited) Porous Hollow PtNi/C Nanoparticles and Their Many Facets. ECS Transactions, 2017, 80, 731-741.	0.3	2
46	Elucidating the Mechanisms Driving the Aging of Porous Hollow PtNi/C Nanoparticles by Means of CO _{ads} Stripping. ACS Applied Materials & Interfaces, 2017, 9, 25298-25307.	4.0	19
47	Benefits and limitations of Pt nanoparticles supported on highly porous antimony-doped tin dioxide aerogel as alternative cathode material for proton-exchange membrane fuel cells. Applied Catalysis B: Environmental, 2017, 201, 381-390.	10.8	70
48	Beyond Strain and Ligand Effects: Microstrain-Induced Enhancement of the Oxygen Reduction Reaction Kinetics on Various PtNi/C Nanostructures. ACS Catalysis, 2017, 7, 398-408.	5.5	140
49	Effects of Pd Nanoparticle Size and Solution Reducer Strength on Pd/C Electrocatalyst Stability in Alkaline Electrolyte. Journal of the Electrochemical Society, 2016, 163, F781-F787.	1.3	53
50	Unveiling the crucial role of temperature on the stability of oxygen reduction reaction electrocatalysts. Electrochemistry Communications, 2016, 63, 65-69.	2.3	39
51	Structure-Activity Relationships for the Oxygen Reduction Reaction in Porous Hollow PtNi/C Nanoparticles. ChemElectroChem, 2016, 3, 1591-1600.	1.7	16
52	Defects do Catalysis: CO Monolayer Oxidation and Oxygen Reduction Reaction on Hollow PtNi/C Nanoparticles. ACS Catalysis, 2016, 6, 4673-4684.	5.5	107
53	Atomic-scale restructuring of hollow PtNi/C electrocatalysts during accelerated stress tests. Catalysis Today, 2016, 262, 146-154.	2.2	25
54	Accelerated degradation of Pt ₃ Co/C and Pt/C electrocatalysts studied by identical-location transmission electron microscopy in polymer electrolyte environment. Applied Catalysis B: Environmental, 2015, 176-177, 486-499.	10.8	40

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55	Tuning the Performance and the Stability of Porous Hollow PtNi/C Nanostructures for the Oxygen Reduction Reaction. <i>ACS Catalysis</i> , 2015, 5, 5333-5341.	5.5	125
56	Huge Instability of Pt/C Catalysts in Alkaline Medium. <i>ACS Catalysis</i> , 2015, 5, 4819-4824.	5.5	325
57	Carbon Corrosion in Proton-Exchange Membrane Fuel Cells: Effect of the Carbon Structure, the Degradation Protocol, and the Gas Atmosphere. <i>ACS Catalysis</i> , 2015, 5, 2184-2194.	5.5	318
58	First Insight into Fluorinated Pt/Carbon Aerogels as More Corrosion-Resistant Electrocatalysts for Proton Exchange Membrane Fuel Cell Cathodes. <i>Electrocatalysis</i> , 2015, 6, 521-533.	1.5	27
59	Carbon corrosion induced by membrane failure: The weak link of PEMFC long-term performance. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 21902-21914.	3.8	75
60	Atomic-scale structure and composition of Pt ₃ Co/C nanocrystallites during real PEMFC operation: A STEM-EELS study. <i>Applied Catalysis B: Environmental</i> , 2014, 152-153, 300-308.	10.8	54
61	The role of water in the degradation of Pt ₃ Co/C nanoparticles: An Identical Location Transmission Electron Microscopy study in polymer electrolyte environment. <i>Applied Catalysis B: Environmental</i> , 2014, 156-157, 301-306.	10.8	36
62	A review of PEM fuel cell durability: materials degradation, local heterogeneities of aging and possible mitigation strategies. <i>Wiley Interdisciplinary Reviews: Energy and Environment</i> , 2014, 3, 540-560.	1.9	257
63	Beyond conventional electrocatalysts: hollow nanoparticles for improved and sustainable oxygen reduction reaction activity. <i>Journal of Materials Chemistry A</i> , 2014, 2, 18497-18507.	5.2	39
64	When cubic nanoparticles get spherical: An Identical Location Transmission Electron Microscopy case study with Pd in alkaline media. <i>Electrochemistry Communications</i> , 2014, 48, 1-4.	2.3	34
65	Carbon Corrosion in Proton-Exchange Membrane Fuel Cells: From Model Experiments to Real-Life Operation in Membrane Electrode Assemblies. <i>ACS Catalysis</i> , 2014, 4, 2258-2267.	5.5	188
66	Reversibility of Pt-Skin and Pt-Skeleton Nanostructures in Acidic Media. <i>Journal of Physical Chemistry Letters</i> , 2014, 5, 434-439.	2.1	48
67	Degradation heterogeneities induced by repetitive start/stop events in proton exchange membrane fuel cell: Inlet vs. outlet and channel vs. land. <i>Applied Catalysis B: Environmental</i> , 2013, 138-139, 416-426.	10.8	124
68	Probing the structure, the composition and the ORR activity of Pt ₃ Co/C nanocrystallites during a 3422h PEMFC ageing test. <i>Applied Catalysis B: Environmental</i> , 2013, 142-143, 801-808.	10.8	109
69	Identical-Location Transmission Electron Microscopy Study of Pt/C and Pt-Co/C Nanostructured Electrocatalyst Aging: Effects of Morphological and Compositional Changes on the Oxygen Reduction Reaction Activity. <i>Electrocatalysis</i> , 2013, 4, 104-116.	1.5	44
70	Heterogeneities of Aging Through-The-Plane of a Proton-Exchange Membrane Fuel Cell Cathode. <i>ECS Transactions</i> , 2011, 41, 827-836.	0.3	2
71	The (electro)catalyst membrane interface in the Proton Exchange Membrane Fuel Cell: Similarities and differences with non-electrochemical Catalytic Membrane Reactors. <i>Catalysis Today</i> , 2010, 156, 76-86.	2.2	31
72	Influence of PEMFC Operating Conditions on the Durability of Pt ₃ Co/C Electrocatalysts. <i>ECS Transactions</i> , 2010, 33, 399-405.	0.3	4

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73	Durability of Pt ₃ Co/C Cathodes in a 16 Cells PEMFC Stack: Degradation Mechanisms and Modification of the ORR Electrocatalytic Activity. ECS Transactions, 2010, 33, 407-417.	0.3	5