Olivier Lottin

List of Publications by Year
in descending order

78	2,448	186265 28	206112 48
papers	citations	h-index	g-index

78	78	78	1850
all docs	docs citations	times ranked	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. Journal of Power Sources, 2022, 520, 230911.	7.8	3
2	Anode defectsâ€™ propagation in polymer electrolyte membrane fuel cells. Journal of Power Sources, 2022, 520, 230880.	7.8	6
3	A General Equivalent Electrical Circuit Model for the characterization of MXene/graphene oxide hybrid-fiber supercapacitors by electrochemical impedance spectroscopy â€“ Impact of fiber length. Electrochimica Acta, 2022, 404, 139740.	5.2	14
4	Impact of Sulfonated Poly(Ether Ether Ketone) Pretreatments on Proton Exchange Membrane Fuel Cells Performances and Durability. ECS Meeting Abstracts, 2022, MA2022-01, 1406-1406.	0.0	0
5	A General Equivalent Electrical Circuit Model for the Characterization of MXene/Graphene Oxide Hybrid-Fiber Supercapacitors By Electrochemical Impedance Spectroscopy. ECS Meeting Abstracts, 2022, MA2022-01, 152-152.	0.0	0
6	Anode Defectsâ€™ Propagation to the Electrolyte and Catalyst Layers in Polymer Electrolyte Membrane Fuel Cells. ECS Meeting Abstracts, 2022, MA2022-01, 1540-1540.	0.0	0
7	Time-resolved monitoring of composite Nafionâ„¢ XL membrane degradation induced by Fenton's reaction. Journal of Membrane Science, 2021, 621, 118977.	8.2	21
8	Anode aging in polymer electrolyte membrane fuel Cells I: Anode monitoring by ElectroChemical impedance spectroscopy. Journal of Power Sources, 2021, 481, 228908.	7.8	12
9	The Impact of Chemical-Mechanical Ex Situ Aging on PFSA Membranes for Fuel Cells. Membranes, 2021, 11, 366.	3.0	12
10	Oxygen Transport Impedance in a Polymer Electrolyte Membrane Fuel Cell Equivalent Electrical Circuit. , 2021, , .		1
11	Effects of conjoint mechanical and chemical stress on perfluorosulfonic-acid membranes for fuel cells. Journal of Power Sources, 2020, 476, 228662.	7.8	20
12	Transmission Line Impedance Models Considering Oxygen Transport Limitations in Polymer Electrolyte Membrane Fuel Cells. Journal of the Electrochemical Society, 2019, 166, F1209-F1217.	2.9	25
13	Towards a NMR-Based Method for Characterizing the Degradation of Nafion XL Membranes for PEMFC. Journal of the Electrochemical Society, 2018, 165, F3209-F3216.	2.9	30
14	Direct Hybridization of Polymer Exchange Membrane Surface Fuel Cell with Small Aqueous Supercapacitors. Fuel Cells, 2018, 18, 299-305.	2.4	8
15	Measurement of protonic resistance of catalyst layers as a tool for degradation monitoring. International Journal of Hydrogen Energy, 2017, 42, 1800-1812.	7.1	41
16	Local potential evolutions during proton exchange membrane fuel cell operation with dead-ended anode â€“ Part I: Impact of water diffusion and nitrogen crossover. Journal of Power Sources, 2017, 340, 337-346.	7.8	54
17	In Operando and Local Estimation of the Effective Humidity of PEMFC Electrodes and Membranes. Journal of the Electrochemical Society, 2017, 164, F1535-F1542.	2.9	17
18	Local potential evolutions during proton exchange membrane fuel cell operation with dead-ended anode â€“ Part II: Aging mitigation strategies based on water management and nitrogen crossover. Journal of Power Sources, 2017, 340, 419-427.	7.8	40

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19	Impact of a Compressive Stress on Water Sorption and Diffusion in Ionomer Membranes for Fuel Cells. A ¹H NMR Study in Vapor-Equilibrated Nafion. Macromolecules, 2016, 49, 7296-7307.	4.8	6
20	Perfluorosulfonic acid membrane degradation in the hydrogen inlet region: A macroscopic approach. International Journal of Hydrogen Energy, 2016, 41, 483-496.	7.1	35
21	Various Scales of Aging Heterogeneities upon PEMFC Operation â€“ A Link between Local MEA Materials Degradation and the Cell Performance. ECS Transactions, 2015, 69, 133-146.	0.5	5
22	Influence of the Interfacial Water Transfer on the Analysis of Dynamic Sorption and Desorption Experiments in Nafion(R) Membrane. ECS Transactions, 2015, 69, 927-941.	0.5	1
23	Impact of Water Management on Local Potential Evolutions during PEM Fuel Cell Operation with Dead-Ended Anode. ECS Transactions, 2015, 69, 1267-1276.	0.5	12
24	High Potential Excursions during PEM Fuel Cell Operation with Dead-Ended Anode. Journal of the Electrochemical Society, 2015, 162, F1212-F1220.	2.9	40
25	Startup (and Shutdown) Model for Polymer Electrolyte Membrane Fuel Cells. Journal of the Electrochemical Society, 2015, 162, F694-F706.	2.9	19
26	An ex-situ experiment to study the two-phase flow induced by water condensation into the channels of proton exchange membrane fuel cells (PEMFC). International Journal of Hydrogen Energy, 2015, 40, 7192-7203.	7.1	10
27	Experimental Results with Fuel Cell Start-up and Shut-down. Impact of Type of Carbon for Cathode Catalyst Support. ECS Transactions, 2015, 69, 1065-1074.	0.5	10
28	Theoretical evidence of the difference in kinetics of water sorption and desorption in NafionÂ® membrane and experimental validation. Journal of Power Sources, 2015, 300, 50-56.	7.8	10
29	Carbon corrosion induced by membrane failure: The weak link of PEMFC long-term performance. International Journal of Hydrogen Energy, 2014, 39, 21902-21914.	7.1	75
30	On the estimation of high frequency parameters of Proton Exchange Membrane Fuel Cells via Electrochemical Impedance Spectroscopy. Journal of Power Sources, 2014, 253, 381-391.	7.8	35
31	A review of <scp>PEM</scp> fuel cell durability: materials degradation, local heterogeneities of aging and possible mitigation strategies. Wiley Interdisciplinary Reviews: Energy and Environment, 2014, 3, 540-560.	4.1	257
32	Impact of flow rates and electrode specifications on degradations during repeated startups and shutdowns in polymer-electrolyte membrane fuel cells. Journal of Power Sources, 2014, 250, 68-79.	7.8	69
33	Thermal and water transfer in PEMFCs: Investigating the role of the microporous layer. International Journal of Hydrogen Energy, 2014, 39, 2649-2658.	7.1	73
34	Degradation heterogeneities induced by repetitive start/stop events in proton exchange membrane fuel cell: Inlet vs. outlet and channel vs. land. Applied Catalysis B: Environmental, 2013, 138-139, 416-426.	20.2	124
35	Anisotropy of Water Self-Diffusion in a Nafion Membrane under Traction. Macromolecules, 2013, 46, 9259-9269.	4.8	20
36	Time Evolution of Local Potentials during PEM Fuel Cell Operation with Dead-Ended Anode. ECS Transactions, 2013, 58, 1631-1642.	0.5	22

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37	Spatially and Temporally Resolved Measurement of Water Distribution in Nafion Using NMR Imaging. ECS Transactions, 2013, 58, 283-289.	0.5	9
38	Numerical Model of Polymer Electrolyte Membrane Fuel Cell Startup and Shutdown. ECS Transactions, 2013, 58, 1619-1630.	0.5	0
39	NMR Investigation of Water Diffusion in a Nafion Membrane under Traction. ECS Transactions, 2013, 58, 781-788.	0.5	1
40	Internal Currents, CO2 Emissions and Decrease of the Pt Electrochemical Surface Area during Fuel Cell Start-Up and Shut-Down. ECS Transactions, 2013, 50, 701-710.	0.5	7
41	Heat fluxes and electrodes temperature in a proton exchange membrane fuel cell. Mechanics and Industry, 2012, 13, 255-260.	1.3	3
42	Oneâ€dimensional Model of Oxygen Transport Impedance Accounting for Convection Perpendicular to the Electrode. Fuel Cells, 2012, 12, 848-861.	2.4	28
43	Local Degradations Resulting from Repeated Start-ups and Shut-downs in Proton Exchange Membrane Fuel Cell (PEMFC). Energy Procedia, 2012, 29, 318-324.	1.8	25
44	A proton exchange membrane fuel cell impedance model taking into account convection along the air channel: On the bias between the low frequency limit of the impedance and the slope of the polarization curve. Electrochimica Acta, 2012, 83, 13-27.	5.2	50
45	Thermal Effect on Water Transport in Proton Exchange Membrane Fuel Cell. Fuel Cells, 2012, 12, 212-224.	2.4	32
46	Internal currents in response to a load change during fuel cell start-up. International Journal of Hydrogen Energy, 2012, 37, 6798-6807.	7.1	17
47	Experimental study of the start-up of a fuel cell stack for backup power application. International Journal of Hydrogen Energy, 2012, 37, 9193-9201.	7.1	9
48	Characterization of polymer electrolyte Nafion membranes: Influence of temperature, heat treatment and drying protocol on sorption and transport properties. Journal of Membrane Science, 2012, 389, 43-56.	8.2	100
49	Experimental characterization of internal currents during the start-up of a proton exchange membrane fuel cell. Journal of Power Sources, 2011, 196, 9451-9458.	7.8	69
50	Impact of chemical treatments on the behavior of water in NafionÂ® NRE-212 by 1H NMR: Self-diffusion measurements and proton quantization. Journal of Membrane Science, 2011, 371, 148-154.	8.2	22
51	About internal currents during start-up in proton exchange membrane fuel cell. Journal of Power Sources, 2010, 195, 5990-5995.	7.8	46
52	Direct observation of the two-phase flow in the air channel of a proton exchange membrane fuel cell and of the effects of a clogging/unclogging sequence on the current density distribution. Journal of Power Sources, 2010, 195, 2795-2799.	7.8	17
53	Numerical investigation of the impact of gas and cooling flow configurations on current and water distributions in a polymer membrane fuel cell through a pseudo-two-dimensional diphasic model. Journal of Power Sources, 2010, 195, 5213-5227.	7.8	25
54	Effect of Oxygen Depletion Along the Air Channel of a PEMFC on the Warburg Diffusion Impedance. Journal of the Electrochemical Society, 2010, 157, B1561.	2.9	33

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55	Heat sources in proton exchange membrane (PEM) fuel cells. Journal of Power Sources, 2009, 192, 435-441.	7.8	86
56	Experimental study on water transport coefficient in Proton Exchange Membrane Fuel Cell. Journal of Power Sources, 2009, 190, 230-240.	7.8	46
57	Genetic algorithm based correlations for heat transfer calculation on concave surfaces. Applied Thermal Engineering, 2009, 29, 3476-3481.	6.0	17
58	A Simple Alternative to the Expression of Finite Warburg Diffusion Impedance in Porous Electrodes by Considering Oxygen Consumption Along the Air Channel. ECS Transactions, 2009, 19, 33-46.	0.5	0
59	PEM fuel cell voltage transient response to a thermal perturbation. Electrochimica Acta, 2008, 53, 7313-7320.	5.2	21
60	A multi-instrumented polymer exchange membrane fuel cell: Observation of the in-plane non-homogeneities. Journal of Power Sources, 2008, 180, 748-754.	7.8	51
61	Ã‰tude du comportement de l'eau dans une pile Ã combustible Ã membrane Ã©changeuse d'ions (PEMFC)â€‰: Ã©tude par RMN et IRM. Comptes Rendus Chimie, 2008, 11, 465-473.	0.5	7
62	Estimation of the effective thermal conductivity of carbon felts used as PEMFC Gas Diffusion Layers. International Journal of Thermal Sciences, 2008, 47, 1-6.	4.9	88
63	Magnetic resonance imaging of water distribution and production in a 6cm2 PEMFC under operation. International Journal of Hydrogen Energy, 2008, 33, 3146-3149.	7.1	59
64	Natural gas electric generator powered by polymer exchange membrane fuel cell: Numerical model and experimental results. Energy Conversion and Management, 2008, 49, 326-335.	9.2	10
65	Transport in PFSA Membranes. Journal of the Electrochemical Society, 2008, 155, B244.	2.9	18
66	Criteria for Characterizing the Performances of Fuel Cell Humidifiers: Theoretical Approach and Experimental Results. , 2008, , .		0
67	Experimental and theoretical analysis of the operation of a natural gas cogeneration system using a polymer exchange membrane fuel cell. Chemical Engineering Science, 2006, 61, 743-752.	3.8	23
68	Experimental results with a natural gas cogeneration system using a polymer exchange membrane fuel cell. Journal of Power Sources, 2006, 159, 1142-1146.	7.8	30
69	Crystallisation of undercooled aqueous solutions: Experimental study of free dendritic growth in cylindrical geometry. International Journal of Heat and Mass Transfer, 2006, 49, 1876-1884.	4.8	29
70	Modelling of heat, mass and charge transfer in a PEMFC single cell. Journal of Power Sources, 2005, 145, 416-427.	7.8	116
71	Using undercooling to measure the freezing points of aqueous solutions. International Journal of Thermal Sciences, 2005, 44, 11-20.	4.9	14
72	ModÃ©lisation des Ã©quilibres liquideâ€“vapeur, application aux mÃ©langes d'huile et de fluides frigorigÃ¨nes HFC. International Journal of Refrigeration, 2004, 27, 102-110.	3.4	2

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73	Optimum control of the gas overheat in the evaporator of a vapour compression refrigeration system when the refrigerant is polluted. International Journal of Refrigeration, 2004, 27, 1003-1006.	3.4	4
74	Rheology, flow behaviour and heat transfer of ice slurries. International Journal of Refrigeration, 2003, 26, 95-107.	3.4	123
75	Effects of synthetic oil in a compression refrigeration system using R410A. Part I: modelling of the whole system and analysis of its response to an increase in the amount of circulating oil. International Journal of Refrigeration, 2003, 26, 772-782.	3.4	52
76	Effects of synthetic oil in a compression refrigeration system using R410A. Part II: quality of heat transfer and pressure losses within the heat exchangers. International Journal of Refrigeration, 2003, 26, 783-794.	3.4	18
77	Dependence of the thermodynamic properties of ice slurries on the characteristics of marketed antifreezes. International Journal of Refrigeration, 2001, 24, 455-467.	3.4	12
78	Influence des caractÃ©ristiques de modÃ¨les d'absorbeur et de dÃ©sorbeur sur les rÃ©sultats d'un programme de simulation de pompe Ã chaleur Ã compression-absorption. International Journal of Refrigeration, 1998, 21, 295-307.	3.4	2