

Lionel Flandin

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

101
papers

2,846
citations

28
h-index

51
g-index

112
ext. papers

3,175
ext. citations

4.3
avg, IF

4.95
L-index

#	Paper	IF	Citations
101	Perovskite Inverted Solar Cells: Impact of Hole Transport Layer and Anti-Solvent Ejection Time 2021 ,		1
100	Humidity-Induced Mechanical Behavior and Proton Transport Mechanism in Aromatic Multiblock Ionomer Membranes. <i>ACS Applied Energy Materials</i> , 2021 , 4, 5809-5820	6.1	1
99	Custom Synthesis of ZnO Nanowires for Efficient Ambient Air-Processed Solar Cells.. <i>ACS Omega</i> , 2021 , 6, 32365-32378	3.9	2
98	Dynamic degradation of metallic nanowire networks under electrical stress: a comparison between experiments and simulations. <i>Nanoscale Advances</i> , 2021 , 3, 675-681	5.1	7
97	Degradation Mechanisms in a Mixed Cations and Anions Perovskite Solar Cell: Mitigation Effect of the Gold Electrode. <i>ACS Applied Energy Materials</i> , 2021 , 4, 1365-1376	6.1	6
96	Effects of non-homogeneity and oxide coating on silver nanowire networks under electrical stress: comparison between experiment and modeling. <i>Nanotechnology</i> , 2021 , 32,	3.4	5
95	Encapsulation Effect on Performance and Stability of Organic Solar Cells. <i>Advanced Materials Interfaces</i> , 2020 , 7, 2000293	4.6	6
94	Effect of the Hole Transporting/Active Layer Interface on the Perovskite Solar Cell Stability. <i>ACS Applied Energy Materials</i> , 2020 , 3, 3282-3292	6.1	10
93	Influence of Chloride/Iodide Ratio in MAPbI ₃ -xCl _x Perovskite Solar Devices: Case of Low Temperature Processable AZO Sub-Layer. <i>Energies</i> , 2020 , 13, 1927	3.1	8
92	A key progress in introducing single walled carbon nanotubes to photovoltaic devices. <i>Applied Nanoscience (Switzerland)</i> , 2020 , 1	3.3	5
91	A Comparison of the Structure and Properties of Opaque and Semi-Transparent NIP/PIN-Type Scalable Perovskite Solar Cells. <i>Energies</i> , 2020 , 13, 3794	3.1	5
90	Alternative Electron Transport Layer Based on Al-Doped ZnO and SnO ₂ for Perovskite Solar Cells: Impact on Microstructure and Stability. <i>ACS Applied Energy Materials</i> , 2019 , 2, 7183-7195	6.1	20
89	Investigation and modelling of the water transport properties in unfilled EPDM elastomers. <i>Polymer Degradation and Stability</i> , 2019 , 168, 108949	4.7	4
88	Fine tuning of optoelectronic properties of single-walled carbon nanotubes from conductors to semiconductors. <i>Carbon</i> , 2019 , 153, 337-346	10.4	7
87	New Antimony-Based Organic-Inorganic Hybrid Material as Electron Extraction Layer for Efficient and Stable Polymer Solar Cells. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 44820-44828	9.5	2
86	Absolute Quantification of Photo-/Electroluminescence Imaging for Solar Cells: Definition and Application to Organic and Perovskite Devices. <i>ACS Applied Electronic Materials</i> , 2019 , 1, 2489-2501	4	9
85	Sliding Angle Characterization of Physicochemical and Roughness Changes of GDL Surfaces after Fuel Cell Operation. <i>Fuel Cells</i> , 2018 , 18, 148-159	2.9	6

84	Effect of viscosity and surface tension on dynamic percolation in liquid media. <i>Journal of Applied Polymer Science</i> , 2018 , 135, 46313	2.9	5
83	Electrical Mapping of Silver Nanowire Networks: A Versatile Tool for Imaging Network Homogeneity and Degradation Dynamics during Failure. <i>ACS Nano</i> , 2018 , 12, 4648-4659	16.7	55
82	Predictive durability of polyethylene terephthalate toward hydrolysis over large temperature and relative humidity ranges. <i>Polymer</i> , 2018 , 142, 285-292	3.9	18
81	Water vapour permeation through high barrier materials: numerical simulation and comparison with experiments. <i>Journal of Materials Science</i> , 2018 , 53, 9076-9090	4.3	4
80	Chemical degradation of PFSA ionomer binder in PEMFC catalyst layer. <i>International Journal of Hydrogen Energy</i> , 2018 , 43, 15386-15397	6.7	8
79	Prediction method of the long-term thermal performance of Vacuum Insulation Panels installed in building thermal insulation applications. <i>Energy and Buildings</i> , 2018 , 178, 1-10	7	21
78	Mechanical Reliability of Flexible Encapsulated Organic Solar Cells: Characterization and Improvement. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 29805-29813	9.5	9
77	Durability of Polymer Metal Multilayer: Focus on the Adhesive Chemical Degradation. <i>Frontiers in Chemistry</i> , 2018 , 6, 459	5	0
76	Modelling of long-term hygro-thermal behaviour of vacuum insulation panels. <i>Energy and Buildings</i> , 2018 , 173, 252-267	7	13
75	Water Vapor Sorption Properties of Polyethylene Terephthalate over a Wide Range of Humidity and Temperature. <i>Journal of Physical Chemistry B</i> , 2017 , 121, 1953-1962	3.4	16
74	Modeling the dynamic percolation of carbon nanotubes and revisiting critical exponents. <i>Materials Chemistry and Physics</i> , 2017 , 191, 89-95	4.4	7
73	Development of Dithienosilole-Pyridalithiadiazole-Based Copolymer as an Electron Donor in Organic Photovoltaic Cells. <i>IEEE Nanotechnology Magazine</i> , 2017 , 16, 574-581	2.6	2
72	The hygrothermal degradation of PET in laminated multilayer. <i>European Polymer Journal</i> , 2017 , 87, 1-13	5.2	16
71	Extrusion of a nano-ordered active layer for organic photovoltaic cells. <i>Sustainable Energy and Fuels</i> , 2017 , 1, 2016-2027	5.8	3
70	Compatibility of C60 grafted polystyrene/P3OT: Towards the extrusion of photoactive materials. <i>European Polymer Journal</i> , 2017 , 96, 1-9	5.2	1
69	Dimensional instabilities of polyester and polyolefin films as origin of delamination in laminated multilayer. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2017 , 55, 309-319	2.6	1
68	Optimization and control of dynamic percolation in nanostructured silicon oils. <i>EPJ Applied Physics</i> , 2017 , 79, 10401	1.1	1
67	Electric field as a tuning key to process carbon nanotube suspensions with controlled conductivity. <i>Polymer</i> , 2016 , 82, 198-205	3.9	13

66	Perfluorosulfonic acid membrane degradation in the hydrogen inlet region: A macroscopic approach. <i>International Journal of Hydrogen Energy</i> , 2016 , 41, 483-496	6.7	28
65	Determination of the fracture energy in polymeric films by in situ photoelasticity on double edge notch specimen. <i>Journal of Applied Polymer Science</i> , 2016 , 133, n/a-n/a	2.9	2
64	Investigation of perfluorosulfonic acid ionomer solutions by ¹⁹ F NMR and DLS: Establishment of an accurate quantification protocol. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2016 , 54, 2210-2222	2.6	3
63	In Situ Quantification of Electronic Short Circuits in PEM Fuel Cell Stacks. <i>IEEE Transactions on Industrial Electronics</i> , 2015 , 62, 5275-5282	8.9	12
62	CNT aggregation mechanisms probed by electrical and dielectric measurements. <i>Journal of Materials Chemistry C</i> , 2015 , 3, 5769-5774	7.1	21
61	Various Scales of Aging Heterogeneities upon PEMFC Operation - A Link between Local MEA Materials Degradation and the Cell Performance. <i>ECS Transactions</i> , 2015 , 69, 133-146	1	4
60	Carbon/polymer composites with extreme electrical conductivity. <i>Journal of Applied Polymer Science</i> , 2015 , 132, n/a-n/a	2.9	2
59	Optimizing formulations of polymer composite with high filler content: Application to bipolar plate. <i>Composites Science and Technology</i> , 2015 , 110, 17-25	8.6	6
58	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	4.7	211
57	Understanding dynamic percolation mechanisms in carbonaceous polymer nanocomposites through impedance spectroscopy: Experiments and modeling. <i>Journal of Applied Physics</i> , 2014 , 116, 034103	2.5	9
56	Fluorinated benzothiadiazole-based low band gap copolymers to enhance open-circuit voltage and efficiency of polymer solar cells. <i>European Polymer Journal</i> , 2014 , 59, 25-35	5.2	18
55	Interfacial polarization and layer thickness effect on electrical insulation in multilayered polysulfone/poly(vinylidene fluoride) films. <i>Polymer</i> , 2014 , 55, 8-14	3.9	91
54	Understanding the formation of pinholes in PFSA membranes with the essential work of fracture (EWF). <i>International Journal of Hydrogen Energy</i> , 2014 , 39, 2717-2723	6.7	36
53	Extrusion as plausible processing method for production of organic photovoltaic solar cells 2014 ,		1
52	Fracture phenomena in micro- and nano-layered polycarbonate/poly(vinylidene fluoride-co-hexafluoropropylene) films under electric field for high energy density capacitors. <i>Journal of Applied Polymer Science</i> , 2014 , 131, n/a-n/a	2.9	10
51	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	6.7	59
50	Chemical degradation of the encapsulation system in flexible PV panel as revealed by infrared and Raman microscopies. <i>Solar Energy Materials and Solar Cells</i> , 2014 , 122, 15-23	6.4	20
49	Structure and transport properties of polyethylene terephthalate and poly(vinylidene fluoride-co-tetrafluoroethylene) multilayer films. <i>Polymer</i> , 2013 , 54, 1679-1690	3.9	29

48	Infrared and thermal behaviour of proton exchange membrane (PEM) after cationic contamination. <i>Journal of Membrane Science</i> , 2013 , 431, 105-112	9.6	8
47	Optical density as a probe of carbon nanotubes dispersion in polymers. <i>Journal of Applied Polymer Science</i> , 2013 , 130, 1778-1786	2.9	14
46	Fullerene-based processable polymers as plausible acceptors in photovoltaic applications. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2013 , 51, 291-302	2.6	15
45	Effect of filler auto-assembly on percolation transition in carbon nanotube/polymer composites. <i>Applied Physics Letters</i> , 2013 , 102, 011907	3.4	25
44	Effect of biaxial orientation on dielectric and breakdown properties of poly(ethylene terephthalate)/poly(vinylidene fluoride-co-tetrafluoroethylene) multilayer films. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2013 , 51, 882-896	2.6	67
43	Spatial distribution of the electrical conductivity in highly filled polymers: Experiment, modeling, and application to bipolar plates. <i>Journal of Applied Physics</i> , 2013 , 114, 223710	2.5	6
42	Investigation of ionomer structure through its dependence on ion exchange capacity (IEC). <i>Journal of Membrane Science</i> , 2012 , 389, 294-304	9.6	62
41	Dynamic percolation as a tool for tailoring the electrical properties of carbon nanotube / polymer composites 2012 ,		1
40	Polymer Composites Bipolar Plates for PEMFCs. <i>Energy Procedia</i> , 2012 , 20, 311-323	2.3	58
39	Multilayered polycarbonate/poly(vinylidene fluoride-co-hexafluoropropylene) for high energy density capacitors with enhanced lifetime. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2012 , 50, 993-1003	2.6	36
38	Understanding Membrane Failure in PEMFC: Comparison of Diagnostic Tools at Different Observation Scales. <i>Fuel Cells</i> , 2012 , 12, 356-364	2.9	33
37	Reduction of Dielectric Hysteresis in Multilayered Films via Nanoconfinement. <i>Macromolecules</i> , 2012 , 45, 1954-1962	5.5	144
36	Synthesis and characterization of fullerene based systems for photovoltaic applications: Evidence for percolation threshold. <i>Polymer</i> , 2011 , 52, 6066-6073	3.9	17
35	Optimizing the heat sealing parameters of multilayers polymeric films. <i>Journal of Materials Science</i> , 2011 , 46, 5948-5958	4.3	16
34	Interest and durability of multilayers: from model films to complex films. <i>Polymers for Advanced Technologies</i> , 2011 , 22, 847-856	3.2	26
33	Confined crystallization of PVDF and a PVDF-TFE copolymer in nanolayered films. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2011 , 49, 1750-1761	2.6	56
32	Understanding the degradation of MEA in PEMFC: Definition of structural markers and comparison between laboratory and on-site ageing. <i>Journal of Applied Polymer Science</i> , 2011 , 120, 3501-3510	2.9	9
31	Influence of ageing in fuel cell on membrane/electrodes interfaces. <i>Journal of Power Sources</i> , 2011 , 196, 3479-3484	8.9	15

30	Influence of structural feature of aluminum coatings on mechanical and water barrier properties of metallized PET films. <i>Journal of Applied Polymer Science</i> , 2010 , 115, 3110-3119	2.9	9
29	Changes in the chemical structure and properties of a perfluorosulfonated acid membrane induced by fuel-cell operation. <i>Journal of Applied Polymer Science</i> , 2010 , 117, 2121-2132	2.9	21
28	Effects of contaminant on thermal properties in perfluorinated sulfonic acid membranes. <i>Journal of Membrane Science</i> , 2010 , 363, 67-71	9.6	16
27	Enhanced breakdown strength of multilayered films fabricated by forced assembly microlayer coextrusion. <i>Journal Physics D: Applied Physics</i> , 2009 , 42, 175304	3	91
26	Characterization of the Degradation in Membrane Electrode Assemblies Through Passive Electrical Measurements. <i>Journal of the Electrochemical Society</i> , 2009 , 156, B1117	3.9	7
25	Development of an experimental technique to assess the permeability of metal coated polymer films. <i>Journal of Materials Science</i> , 2009 , 44, 4692-4699	4.3	9
24	On the essential work of fracture in polymer/metal multilayers. <i>Journal of Materials Science</i> , 2009 , 44, 5537-5543	4.3	9
23	Key counter ion parameters governing polluted nafion membrane properties. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2009 , 47, 1381-1392	2.6	27
22	Dielectric response of structured multilayered polymer films fabricated by forced assembly. <i>Applied Physics Letters</i> , 2008 , 92, 113301	3.4	70
21	Influence of fibre clustering on the transverse mechanical behaviour of polypropylene/glass fibre composites: experimental approach and modelling. <i>Journal Physics D: Applied Physics</i> , 2007 , 40, 6768-6777	3.7	4
20	Evolutions of microstructure and dielectric behavior of epoxy based insulator-insulator composites over long periods of time. <i>Journal of Applied Polymer Science</i> , 2006 , 100, 3454-3464	2.9	4
19	Dielectric breakdown of epoxy-based composites: relative influence of physical and chemical aging. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2006 , 13, 282-292	2.3	22
18	Influences of degree of curing and presence of inorganic fillers on the ultimate electrical properties of epoxy-based composites: experiment and simulation. <i>Journal Physics D: Applied Physics</i> , 2005 , 38, 1443-155	3.55	36
17	Influence of the processing on the completion of curing in epoxy-based composites. <i>Journal of Applied Polymer Science</i> , 2005 , 96, 1368-1376	2.9	2
16	Coupled mechanical and conductivity measurements: Damage detection. <i>International Journal of Applied Electromagnetics and Mechanics</i> , 2005 , 21, 183-192	0.4	
15	Dynamic Mechanical Properties of Precipitated Silica Filled Rubber: Influence of Morphology and Coupling Agent. <i>Rubber Chemistry and Technology</i> , 2003 , 76, 145-159	1.7	38
14	Prediction of the Crystalline Structure of a Novel Polythiophene Using Molecular Dynamics Simulations. <i>Soft Materials</i> , 2002 , 1, 93-113	1.7	4
13	Electrically conductive polymer nanocomposites as deformation sensors. <i>Composites Science and Technology</i> , 2001 , 61, 895-901	8.6	93

12	Interrelationships between electrical and mechanical properties of a carbon black-filled ethylene-butene elastomer. <i>Polymer</i> , 2001 , 42, 827-838	3.9	149
11	Effect of strain on the properties of an ethylene-butene elastomer with conductive carbon fillers. <i>Journal of Applied Polymer Science</i> , 2000 , 76, 894-905	2.9	134
10	New nanocomposite materials made of an insulating matrix and conducting fillers: Processing and properties. <i>Polymer Composites</i> , 2000 , 21, 165-174	3	80
9	AC electrical properties as a sensor of the microstructural evolution in nanocomposite materials: experiment and simulation. <i>Modelling and Simulation in Materials Science and Engineering</i> , 1999 , 7, 865-874	2.7	12
8	Characterization of the damage in nanocomposite materials by a.c. electrical properties: experiment and simulation. <i>Journal of Materials Science</i> , 1999 , 34, 1753-1759	4.3	24
7	A 3-D numerical simulation of AC electrical properties of short fiber composites. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1999 , 37, 805-814	2.6	40
6	Anomalous percolation transition in carbon-black/epoxy composite materials. <i>Physical Review B</i> , 1999 , 59, 14349-14355	3.3	108
5	In situ observation of electric field induced agglomeration of carbon black in epoxy resin. <i>Applied Physics Letters</i> , 1998 , 72, 2903-2905	3.4	85
4	A deformation-based model for recrystallization of anisotropic materials. <i>Acta Materialia</i> , 1997 , 45, 3283-3296	3.2	94
3	Dislocation densities and stored energy after cold rolling of Al-Mg alloys: Investigations by resistivity and differential scanning calorimetry. <i>Scripta Materialia</i> , 1997 , 37, 449-454	5.6	43
2	Stability of mixed cation perovskite solar cells: understanding of involved mechanisms		2
1	Innovative PIN-type perovskite solar cells with 17% efficiency: processing and characterization. <i>Materials Advances</i> ,	3.3	1