

# Bernard Lestriez

## List of Publications by Citations

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46  
papers

1,660  
citations

22  
h-index

40  
g-index

57  
ext. papers

2,002  
ext. citations

10  
avg, IF

4.85  
L-index

#	Paper	IF	Citations
46	A low-cost and high performance ball-milled Si-based negative electrode for high-energy Li-ion batteries. <i>Energy and Environmental Science</i> , <b>2013</b> , 6, 2145	35.4	246
45	Lithium-ion batteries [Current state of the art and anticipated developments. <i>Journal of Power Sources</i> , <b>2020</b> , 479, 228708	8.9	146
44	Non-aqueous carbon black suspensions for lithium-based redox flow batteries: rheology and simultaneous rheo-electrical behavior. <i>Physical Chemistry Chemical Physics</i> , <b>2013</b> , 15, 14476-86	3.6	109
43	Functions of polymers in composite electrodes of lithium ion batteries. <i>Comptes Rendus Chimie</i> , <b>2010</b> , 13, 1341-1350	2.7	108
42	Heterogeneous behaviour of the lithium battery composite electrode LiFePO <sub>4</sub> . <i>Journal of Power Sources</i> , <b>2013</b> , 229, 16-21	8.9	80
41	CMC as a binder in LiNi <sub>0.4</sub> Mn <sub>1.6</sub> O <sub>4</sub> 5 V cathodes and their electrochemical performance for Li-ion batteries. <i>Electrochimica Acta</i> , <b>2012</b> , 62, 77-83	6.7	76
40	An electrochemically roughened Cu current collector for Si-based electrode in Li-ion batteries. <i>Journal of Power Sources</i> , <b>2013</b> , 239, 308-314	8.9	62
39	A Facile and Very Effective Method to Enhance the Mechanical Strength and the Cyclability of Si-Based Electrodes for Li-Ion Batteries. <i>Advanced Energy Materials</i> , <b>2018</b> , 8, 1701787	21.8	58
38	Mechanism of Silicon Electrode Aging upon Cycling in Full Lithium-Ion Batteries. <i>ChemSusChem</i> , <b>2016</b> , 9, 841-8	8.3	56
37	Nanosilicon-Based Thick Negative Composite Electrodes for Lithium Batteries with Graphene as Conductive Additive. <i>Advanced Energy Materials</i> , <b>2013</b> , 3, 1351-1357	21.8	56
36	Very High Surface Capacity Observed Using Si Negative Electrodes Embedded in Copper Foam as 3D Current Collectors. <i>Advanced Energy Materials</i> , <b>2014</b> , 4, 1301718	21.8	53
35	Multiscale Morphological and Electrical Characterization of Charge Transport Limitations to the Power Performance of Positive Electrode Blends for Lithium-Ion Batteries. <i>Advanced Energy Materials</i> , <b>2017</b> , 7, 1602239	21.8	50
34	Study of Immersion of LiNiMnCoO Material in Water for Aqueous Processing of Positive Electrode for Li-Ion Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 18331-18341	9.5	46
33	A Multiscale Description of the Electronic Transport within the Hierarchical Architecture of a Composite Electrode for Lithium Batteries. <i>Advanced Functional Materials</i> , <b>2009</b> , 19, 2749-2758	15.6	46
32	Dynamics of the Morphological Degradation of Si-Based Anodes for Li-Ion Batteries Characterized by In Situ Synchrotron X-Ray Tomography. <i>Advanced Energy Materials</i> , <b>2019</b> , 9, 1803947	21.8	43
31	Surfactant for Enhanced Rheological, Electrical, and Electrochemical Performance of Suspensions for Semisolid Redox Flow Batteries and Supercapacitors. <i>ChemPlusChem</i> , <b>2015</b> , 80, 396-401	2.8	39
30	In situ redox functionalization of composite electrodes for high power/high energy electrochemical storage systems via a non-covalent approach. <i>Energy and Environmental Science</i> , <b>2012</b> , 5, 5379-5386	35.4	35

29	Formulation of flowable anolyte for redox flow batteries: Rheo-electrical study. <i>Journal of Power Sources</i> , <b>2015</b> , 274, 424-431	8.9	34
28	Brownian dynamics simulations of colloidal suspensions containing polymers as precursors of composite electrodes for lithium batteries. <i>Langmuir</i> , <b>2012</b> , 28, 10713-24	4	31
27	Numerical and experimental study of suspensions containing carbon blacks used as conductive additives in composite electrodes for lithium batteries. <i>Langmuir</i> , <b>2014</b> , 30, 2660-9	4	28
26	High-Capacity Retention of Si Anodes Using a Mixed Lithium/Phosphonium Bis(fluorosulfonyl)imide Ionic Liquid Electrolyte. <i>ACS Energy Letters</i> , <b>2017</b> , 2, 1804-1809	20.1	26
25	Understanding the Structure of Electrodes in Li-Ion Batteries: A Numerical Study. <i>Journal of the Electrochemical Society</i> , <b>2015</b> , 162, A1485-A1492	3.9	22
24	Thermomechanical Polymer Binder Reactivity with Positive Active Materials for Li Metal Polymer and Li-Ion Batteries: An XPS and XPS Imaging Study. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 18368-18376	9.5	21
23	Nanoscale compositional changes during first delithiation of Si negative electrodes. <i>Journal of Power Sources</i> , <b>2013</b> , 227, 237-242	8.9	19
22	Electronic and Ionic Dynamics Coupled at Solid-Liquid Electrolyte Interfaces in Porous Nanocomposites of Carbon Black, Poly(vinylidene fluoride), and $\gamma$ -Alumina. <i>Journal of Physical Chemistry C</i> , <b>2017</b> , 121, 8364-8377	3.8	17
21	Suspensions of carbon nanofibers in organic medium: rheo-electrical properties. <i>Physical Chemistry Chemical Physics</i> , <b>2015</b> , 17, 32316-27	3.6	15
20	An In Situ Multiscale Study of Ion and Electron Motion in a Lithium-Ion Battery Composite Electrode. <i>Advanced Energy Materials</i> , <b>2015</b> , 5, 1400903	21.8	14
19	Editors'Choice Understanding the Superior Cycling Performance of Si Anode in Highly Concentrated Phosphonium-Based Ionic Liquid Electrolyte. <i>Journal of the Electrochemical Society</i> , <b>2020</b> , 167, 120520	3.9	14
18	Numerical Prediction of Multiscale Electronic Conductivity of Lithium-Ion Battery Positive Electrodes. <i>Journal of the Electrochemical Society</i> , <b>2019</b> , 166, A1692-A1703	3.9	13
17	An Innovative Process for Ultra-Thick Electrodes Elaboration: Toward Low-Cost and High-Energy Batteries. <i>Energy Technology</i> , <b>2019</b> , 7, 1900025	3.5	12
16	Interest in broadband dielectric spectroscopy to study the electronic transport in materials for lithium batteries. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , <b>2016</b> , 213, 190-198	3.1	11
15	Multiscale Characterization of Composite Electrode Microstructures for High Density Lithium-ion Batteries Guided by the Specificities of Their Electronic and Ionic Transport Mechanisms. <i>Journal of the Electrochemical Society</i> , <b>2020</b> , 167, 100521	3.9	10
14	Diagnostic of the failure mechanism in NiSb <sub>2</sub> electrode for Li battery through analysis of its polarization on galvanostatic cycling. <i>Electrochimica Acta</i> , <b>2012</b> , 78, 177-182	6.7	9
13	Influence of the Polyacrylic Acid Binder Neutralization Degree on the Initial Electrochemical Behavior of a Silicon/Graphite Electrode. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 28304-28323	9.5	9
12	Effective Electronic and Ionic Conductivities of Dense EV-Designed NMC-Based Positive Electrodes using Fourier Based Numerical Simulations on FIB/SEM Volumes. <i>Journal of the Electrochemical Society</i> , <b>2020</b> , 167, 140504	3.9	7

11	Aqueous Processing and Formulation of Indigo Carmine Positive Electrode for Lithium Organic Battery. <i>Journal of the Electrochemical Society</i> , <b>2019</b> , 166, A747-A753	3.9	6
10	Self-diffusion of electrolyte species in model battery electrodes using Magic Angle Spinning and Pulsed Field Gradient Nuclear Magnetic Resonance. <i>Journal of Power Sources</i> , <b>2017</b> , 362, 315-322	8.9	6
9	The Concept of Effective Porosity in the Discharge Rate Performance of High-Density Positive Electrodes for Automotive Application. <i>Journal of the Electrochemical Society</i> , <b>2020</b> , 167, 160509	3.9	6
8	Sequential focused ion beam scanning electron microscopy analyses for monitoring cycled-induced morphological evolution in battery composite electrodes. Silicon-graphite electrode as exemplary case. <i>Journal of Power Sources</i> , <b>2021</b> , 498, 229904	8.9	6
7	Tuning the Formation and Structure of the Silicon Electrode/Ionic Liquid Electrolyte Interphase in Superconcentrated Ionic Liquids. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 28281-28294	9.5	5
6	Performance and ageing behavior of water-processed LiNi <sub>0.5</sub> Mn <sub>0.3</sub> Co <sub>0.2</sub> O <sub>2</sub> /Graphite lithium-ion cells. <i>Journal of Power Sources</i> , <b>2021</b> , 483, 229097	8.9	5
5	From the Direct Observation of a PAA-Based Binder Using STEM-VEELS to the Ageing Mechanism of Silicon/Graphite Anode with High Areal Capacity Cycled in an FEC-Rich and EC-Free Electrolyte. <i>Advanced Energy Materials</i> , 2103348	21.8	2
4	Charge Transport Limitations to the Power Performance of LiNi <sub>0.5</sub> Mn <sub>0.3</sub> Co <sub>0.2</sub> O <sub>2</sub> Composite Electrodes with Carbon Nanotubes. <i>Journal of the Electrochemical Society</i> ,	3.9	2
3	Influence of a Liquid Electrolyte on Electronic and Ionic Transfers in a LiNi <sub>0.5</sub> Mn <sub>0.3</sub> Co <sub>0.2</sub> O <sub>2</sub> /Poly(vinylidene Fluoride-co-hexafluoropropylene)-Based Composite Material. <i>Journal of Physical Chemistry C</i> , <b>2021</b> , 125, 17629-17646	3.8	1
2	Multiscale Characterization By Dielectric Spectroscopy of Ionic and Electronic Transfers in Composite Electrodes for Lithium Batteries. <i>ECS Meeting Abstracts</i> , <b>2020</b> , MA2020-01, 2731-2731	0	
1	Modification of the Electronic Transport By Liquid Electrolytes in Mixtures Based on LiNi <sub>0.5</sub> Mn <sub>0.3</sub> Co <sub>0.2</sub> O <sub>2</sub> and Polyvinylidene Fluoride. <i>ECS Meeting Abstracts</i> , <b>2020</b> , MA2020-01, 222-222	0	