Bernard Lestriez

List of Publications by Year
in descending order

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57	2,355	257357	254106
papers	citations	24 h-index	43 g-index

57	57	57	2997
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Lithium-ion batteries â€“ Current state of the art and anticipated developments. Journal of Power Sources, 2020, 479, 228708.	4.0	401
2	A low-cost and high performance ball-milled Si-based negative electrode for high-energy Li-ion batteries. Energy and Environmental Science, 2013, 6, 2145.	15.6	274
3	Non-aqueous carbon black suspensions for lithium-based redox flow batteries: rheology and simultaneous rheo-electrical behavior. Physical Chemistry Chemical Physics, 2013, 15, 14476.	1.3	145
4	Functions of polymers in composite electrodes of lithium ion batteries. Comptes Rendus Chimie, 2010, 13, 1341-1350.	0.2	137
5	CMC as a binder in LiNi0.4Mn1.6O4 5V cathodes and their electrochemical performance for Li-ion batteries. Electrochimica Acta, 2012, 62, 77-83.	2.6	96
6	Heterogeneous behaviour of the lithium battery composite electrode LiFePO4. Journal of Power Sources, 2013, 229, 16-21.	4.0	87
7	A Facile and Very Effective Method to Enhance the Mechanical Strength and the Cyclability of Siâ€Based Electrodes for Liâ€Ion Batteries. Advanced Energy Materials, 2018, 8, 1701787.	10.2	80
8	An electrochemically roughened Cu current collector for Si-based electrode in Li-ion batteries. Journal of Power Sources, 2013, 239, 308-314.	4.0	78
9	Study of Immersion of LiNi_{0.5}Mn_{0.3}Co_{0.2}O₂ Material in Water for Aqueous Processing of Positive Electrode for Li-Ion Batteries. ACS Applied Materials & Interfaces, 2019, 11, 18331-18341.	4.0	71
10	Multiscale Morphological and Electrical Characterization of Charge Transport Limitations to the Power Performance of Positive Electrode Blends for Lithiumâ€Ion Batteries. Advanced Energy Materials, 2017, 7, 1602239.	10.2	69
11	Mechanism of Silicon Electrode Aging upon Cycling in Full Lithiumâ€Ion Batteries. ChemSusChem, 2016, 9, 841-848.	3.6	67
12	Nanosiliconâ€Based Thick Negative Composite Electrodes for Lithium Batteries with Graphene as Conductive Additive. Advanced Energy Materials, 2013, 3, 1351-1357.	10.2	66
13	Very High Surface Capacity Observed Using Si Negative Electrodes Embedded in Copper Foam as 3D Current Collectors. Advanced Energy Materials, 2014, 4, 1301718.	10.2	64
14	Dynamics of the Morphological Degradation of Siâ€Based Anodes for Liâ€Ion Batteries Characterized by In Situ Synchrotron Xâ€Ray Tomography. Advanced Energy Materials, 2019, 9, 1803947.	10.2	59
15	Surfactant for Enhanced Rheological, Electrical, and Electrochemical Performance of Suspensions for Semisolid Redox Flow Batteries and Supercapacitors. ChemPlusChem, 2015, 80, 396-401.	1.3	52
16	A Multiscale Description of the Electronic Transport within the Hierarchical Architecture of a Composite Electrode for Lithium Batteries. Advanced Functional Materials, 2009, 19, 2749-2758.	7.8	49
17	Formulation of flowable anolyte for redox flow batteries: Rheo-electrical study. Journal of Power Sources, 2015, 274, 424-431.	4.0	49
18	Thermomechanical Polymer Binder Reactivity with Positive Active Materials for Li Metal Polymer and Li-Ion Batteries: An XPS and XPS Imaging Study. ACS Applied Materials & Interfaces, 2019, 11, 18368-18376.	4.0	40

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19	High-Capacity Retention of Si Anodes Using a Mixed Lithium/Phosphonium Bis(fluorosulfonyl)imide Ionic Liquid Electrolyte. ACS Energy Letters, 2017, 2, 1804-1809.	8.8	38
20	In situ redox functionalization of composite electrodes for high powerâ€“high energy electrochemical storage systems via a non-covalent approach. Energy and Environmental Science, 2012, 5, 5379-5386.	15.6	37
21	Brownian Dynamics Simulations of Colloidal Suspensions Containing Polymers as Precursors of Composite Electrodes for Lithium Batteries. Langmuir, 2012, 28, 10713-10724.	1.6	36
22	Numerical and Experimental Study of Suspensions Containing Carbon Blacks Used as Conductive Additives in Composite Electrodes for Lithium Batteries. Langmuir, 2014, 30, 2660-2669.	1.6	32
23	Understanding the Structure of Electrodes in Li-Ion Batteries: A Numerical Study. Journal of the Electrochemical Society, 2015, 162, A1485-A1492.	1.3	28
24	Nanoscale compositional changes during first delithiation of Si negative electrodes. Journal of Power Sources, 2013, 227, 237-242.	4.0	25
25	Editorsâ€™ Choiceâ€”Understanding the Superior Cycling Performance of Si Anode in Highly Concentrated Phosphonium-Based Ionic Liquid Electrolyte. Journal of the Electrochemical Society, 2020, 167, 120520.	1.3	23
26	Tuning the Formation and Structure of the Silicon Electrode/Ionic Liquid Electrolyte Interphase in Superconcentrated Ionic Liquids. ACS Applied Materials & Interfaces, 2021, 13, 28281-28294.	4.0	21
27	Influence of the Polyacrylic Acid Binder Neutralization Degree on the Initial Electrochemical Behavior of a Silicon/Graphite Electrode. ACS Applied Materials & Interfaces, 2021, 13, 28304-28323.	4.0	21
28	An Innovative Process for Ultraâ€Thick Electrodes Elaboration: Toward Lowâ€Cost and Highâ€Energy Batteries. Energy Technology, 2019, 7, 1900025.	1.8	20
29	Suspensions of carbon nanofibers in organic medium: rheo-electrical properties. Physical Chemistry Chemical Physics, 2015, 17, 32316-32327.	1.3	19
30	Electronic and Ionic Dynamics Coupled at Solidâ€“Liquid Electrolyte Interfaces in Porous Nanocomposites of Carbon Black, Poly(vinylidene fluoride), and Î³-Alumina. Journal of Physical Chemistry C, 2017, 121, 8364-8377.	1.5	19
31	Multiscale Characterization of Composite Electrode Microstructures for High Density Lithium-ion Batteries Guided by the Specificities of Their Electronic and Ionic Transport Mechanisms. Journal of the Electrochemical Society, 2020, 167, 100521.	1.3	18
32	An In Situ Multiscale Study of Ion and Electron Motion in a Lithiumâ€Ion Battery Composite Electrode. Advanced Energy Materials, 2015, 5, 1400903.	10.2	16
33	Numerical Prediction of Multiscale Electronic Conductivity of Lithium-Ion Battery Positive Electrodes. Journal of the Electrochemical Society, 2019, 166, A1692-A1703.	1.3	16
34	Effective Electronic and Ionic Conductivities of Dense EV-Designed NMC-Based Positive Electrodes using Fourier Based Numerical Simulations on FIB/SEM Volumes. Journal of the Electrochemical Society, 2020, 167, 140504.	1.3	15
35	Interest in broadband dielectric spectroscopy to study the electronic transport in materials for lithium batteries. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2016, 213, 190-198.	1.7	13
36	Sequential focused ion beam scanning electron microscopy analyses for monitoring cycled-induced morphological evolution in battery composite electrodes. Silicon-graphite electrode as exemplary case. Journal of Power Sources, 2021, 498, 229904.	4.0	12

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37	Performance and ageing behavior of water-processed LiNi0.5Mn0.3Co0.2O2/Graphite lithium-ion cells. Journal of Power Sources, 2021, 483, 229097.	4.0	11
38	From the Direct Observation of a PAAâ€Based Binder Using STEMâ€VEELS to the Ageing Mechanism of Silicon/Graphite Anode with High Areal Capacity Cycled in an FECâ€Rich and ECâ€Free Electrolyte. Advanced Energy Materials, 2022, 12, 2103348.	10.2	11
39	Self-diffusion of electrolyte species in model battery electrodes using Magic Angle Spinning and Pulsed Field Gradient Nuclear Magnetic Resonance. Journal of Power Sources, 2017, 362, 315-322.	4.0	10
40	Diagnostic of the failure mechanism in NiSb2 electrode for Li battery through analysis of its polarization on galvanostatic cycling. Electrochimica Acta, 2012, 78, 177-182.	2.6	9
41	The Concept of Effective Porosity in the Discharge Rate Performance of High-Density Positive Electrodes for Automotive Application. Journal of the Electrochemical Society, 2020, 167, 160509.	1.3	9
42	Aqueous Processing and Formulation of Indigo Carmine Positive Electrode for Lithium Organic Battery. Journal of the Electrochemical Society, 2019, 166, A747-A753.	1.3	7
43	Influence of a Liquid Electrolyte on Electronic and Ionic Transfers in a LiNi_{0.5}Mn_{0.3}Co_{0.2}O₂/Poly(vinylidene) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 5 2021, 125, 17629-17646.	1.5	3
44	Charge Transport Limitations to the Power Performance of LiNi0.5Mn0.3Co0.2O2 Composite Electrodes with Carbon Nanotubes. Journal of the Electrochemical Society, 0, , .	1.3	2
45	Si Anode in High-Salt Concentration Ionic Liquid Electrolytes Based on Pyrrolidinium and Phosphonium Systems for High-Energy Li-Ion Batteries. ECS Meeting Abstracts, 2019, , .	0.0	0
46	Self-Diffusion of Electrolyte Species in Composite Battery Electrodes Using PFG-SE MAS NMR for Better Understanding of Their Electrochemical Performance. ECS Meeting Abstracts, 2019, , .	0.0	0
47	Impact of a Maturation Procedure on the Morphological Dynamics of Si-Based Anodes for Li-Ion Batteries Characterized By I n-Situ Synchrotron X-Ray Tomography. ECS Meeting Abstracts, 2019, , .	0.0	0
48	Optimization of Si/Gr Based Anode Formulation for High Energy Density Li-Ion Batteries. ECS Meeting Abstracts, 2019, , .	0.0	0
49	Multiscale Interfacial Characterisation of Transport Properties in Composite Li-Ion NMC532 Electrodes. ECS Meeting Abstracts, 2019, , .	0.0	0
50	Multiscale Characterization By Dielectric Spectroscopy of Ionic and Electronic Transfers in Composite Electrodes for Lithium Batteries. ECS Meeting Abstracts, 2020, MA2020-01, 2731-2731.	0.0	0
51	Modification of the Electronic Transport By Liquid Electrolytes in Mixtures Based on LiNi0.5Mn0.3Co0.2O2 and Polyvinylidene Fluoride. ECS Meeting Abstracts, 2020, MA2020-01, 222-222.	0.0	0
52	(Invited) Charge Transport Limitations to the Power Performance of LiNi0.5Mn0.3Co0.2O2 Composite Electrodes. ECS Meeting Abstracts, 2020, MA2020-01, 147-147.	0.0	0
53	Carbon-Coated Aluminium Current Collectors for New Li-Ion Battery Generation. ECS Meeting Abstracts, 2020, MA2020-01, 158-158.	0.0	0
54	Study of the Impact of Microstructure on the Effective Electrical Properties of Composite Electrodes for Lithium-Ion Batteries; Acquisition Andsimulations on Real Microstructures. ECS Meeting Abstracts, 2020, MA2020-01, 2727-2727.	0.0	0

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55	Cross-Linked Binders with Metallic Ions for Si-Based Electrodes in Li-Ion Batteries. ECS Meeting Abstracts, 2020, MA2020-01, 532-532.	0.0	0
56	Smart Binders for Silicon Based Composite Electrode in Li-Ion Batteries. ECS Meeting Abstracts, 2020, MA2020-01, 2898-2898.	0.0	0
57	(Invited) Charge Transport Limitations to the Power Performance of LiNi0.5Mn0.3Co0.2O2 Composite Electrodes with Carbon Nanotubes. ECS Transactions, 2020, 97, 89-100.	0.3	0