

Renaud Bouchet

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.

82
papers

5,053
citations

30
h-index

70
g-index

95
ext. papers

5,610
ext. citations

7.3
avg, IF

5.48
L-index

#	Paper	IF	Citations
82	Operando X-ray absorption tomography for the characterization of lithium metal electrode morphology and heterogeneity in a liquid Li/S cell. <i>Journal of Power Sources</i> , 2022 , 520, 230854	8.9	1
81	Flash sintering of cationic conductive ceramics: A way to build multilayer systems. <i>Journal of the American Ceramic Society</i> , 2021 , 104, 3845-3854	3.8	0
80	Tomography Imaging of Lithium Electrodeposits Using Neutron, Synchrotron X-Ray, and Laboratory X-Ray Sources: A Comparison. <i>Frontiers in Energy Research</i> , 2021 , 9,	3.8	1
79	Novel single-ion conducting electrolytes based on vinylidene fluoride copolymer for lithium metal batteries. <i>Journal of Power Sources</i> , 2021 , 498, 229920	8.9	9
78	Operando XPS: A Novel Approach for Probing the Lithium/Electrolyte Interphase Dynamic Evolution. <i>Journal of Physical Chemistry A</i> , 2021 , 125, 1069-1081	2.8	5
77	Operando investigation of the lithium/sulfur battery system by coupled X-ray absorption tomography and X-ray diffraction computed tomography. <i>Journal of Power Sources</i> , 2020 , 468, 228287	8.9	11
76	Kinetics analysis of the electro-catalyzed degradation of high potential LiNi _{0.5} Mn _{1.5} O ₄ active materials. <i>Journal of Power Sources</i> , 2020 , 469, 228337	8.9	2
75	Fingerprinting Mean Composition of Lithium Polysulfide Standard Solutions by Applying High-Energy Resolution Fluorescence Detected X-ray Absorption Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 5446-5450	6.4	5
74	Effect of Electrode and Electrolyte Thicknesses on All-Solid-State Battery Performance Analyzed With the Sand Equation. <i>Frontiers in Energy Research</i> , 2020 , 7,	3.8	11
73	Magic-angle-spinning-induced local ordering in polymer electrolytes and its effects on solid-state diffusion and relaxation NMR measurements. <i>Magnetic Resonance in Chemistry</i> , 2020 , 58, 1118-1129	2.1	2
72	Simultaneous Monitoring of Structural Changes and Phase Distribution of LiFePO ₄ Along the Cathode Thickness of Li Metal Polymer Battery. <i>Journal of the Electrochemical Society</i> , 2020 , 167, 160517-9	7.9	1
71	Electrochemical impedance spectroscopy study of lithium-sulfur batteries: Useful technique to reveal the Li/S electrochemical mechanism. <i>Electrochimica Acta</i> , 2020 , 359, 136944	6.7	30
70	New Interpretation of X-ray Photoelectron Spectroscopy of Imidazolium Ionic Liquid Electrolytes Based on Ionic Transport Analyses. <i>Journal of Physical Chemistry B</i> , 2020 , 124, 7625-7635	3.4	1
69	Quantification of the Local Topological Variations of Stripped and Plated Lithium Metal by X-ray Tomography. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 41390-41397	9.5	5
68	Electrochemical Impedance Spectroscopy and X-ray Photoelectron Spectroscopy Study of Lithium Metal Surface Aging in Imidazolium-Based Ionic Liquid Electrolytes Performed at Open-Circuit Voltage. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 21955-21964	9.5	15
67	Comparison of single-ion-conductor block-copolymer electrolytes with Polystyrene-TFSI and Polymethacrylate-TFSI structural blocks. <i>Electrochimica Acta</i> , 2018 , 269, 250-261	6.7	36
66	A 1,2,3-triazolate lithium salt with ionic liquid properties at room temperature. <i>Chemical Communications</i> , 2018 , 54, 9035-9038	5.8	7

65	In Operando Small-Angle Neutron Scattering Study of Single-Ion Copolymer Electrolyte for Li-Metal Batteries. <i>ACS Energy Letters</i> , 2018 , 3, 1-6	20.1	18
64	XPS and SEM-EDX Study of Electrolyte Nature Effect on Li Electrode in Lithium Metal Batteries. <i>ACS Applied Energy Materials</i> , 2018 ,	6.1	12
63	Remarkable impact of grains boundaries on the chemical delithiation kinetics of LiFePO ₄ . <i>Solid State Ionics</i> , 2017 , 300, 187-194	3.3	12
62	Effect of composite electrode thickness on the electrochemical performances of all-solid-state li-ion batteries. <i>Journal of Electroceramics</i> , 2017 , 38, 189-196	1.5	14
61	Electrochemical impedance spectroscopy of a LiS battery: Part 1. Influence of the electrode and electrolyte compositions on the impedance of symmetric cells. <i>Electrochimica Acta</i> , 2017 , 244, 61-68	6.7	50
60	Direct observation of lithium polysulfides in lithium-sulfur batteries using operando X-ray diffraction. <i>Nature Energy</i> , 2017 , 2,	62.3	182
59	New approach to design solid block copolymer electrolytes for 40 °C lithium metal battery operation. <i>Electrochimica Acta</i> , 2017 , 238, 21-29	6.7	16
58	Electrochemical impedance spectroscopy of a LiS battery: Part 2. Influence of separator chemistry on the lithium electrode/electrolyte interface. <i>Electrochimica Acta</i> , 2017 , 255, 379-390	6.7	21
57	Restricted lithium ion dynamics in PEO-based block copolymer electrolytes measured by high-field nuclear magnetic resonance relaxation. <i>Journal of Chemical Physics</i> , 2017 , 147, 134902	3.9	6
56	Multiscale characterization of a lithium/sulfur battery by coupling operando X-ray tomography and spatially-resolved diffraction. <i>Scientific Reports</i> , 2017 , 7, 2755	4.9	40
55	Non-trivial network driven modifications of ion transport in an ionic liquid confined inside a polymer system. <i>Molecular Systems Design and Engineering</i> , 2016 , 1, 391-401	4.6	3
54	Vinyl monomers bearing a sulfonyl(trifluoromethane sulfonyl) imide group: synthesis and polymerization using nitroxide-mediated polymerization. <i>Polymer Chemistry</i> , 2016 , 7, 6901-6910	4.9	15
53	Investigation of non-woven carbon paper as a current collector for sulfur positive electrode—Understanding of the mechanism and potential applications for Li/S batteries. <i>Electrochimica Acta</i> , 2016 , 211, 697-703	6.7	18
52	Flash sintering of ionic conductors: The need of a reversible electrochemical reaction. <i>Journal of the European Ceramic Society</i> , 2016 , 36, 1253-1260	6	31
51	Influence of the binder and preparation process on the positive electrode electrochemical response and Li/S system performances. <i>Electrochimica Acta</i> , 2016 , 210, 492-501	6.7	29
50	Optimization of Block Copolymer Electrolytes for Lithium Metal Batteries. <i>Chemistry of Materials</i> , 2015 , 27, 4682-4692	9.6	93
49	A comprehensive multiscale moisture transport analysis: From porous reference silicates to cement-based materials. <i>European Physical Journal: Special Topics</i> , 2015 , 224, 1749-1768	2.3	5
48	Lithium/Sulfur Batteries Upon Cycling: Structural Modifications and Species Quantification by In Situ and Operando X-Ray Diffraction Spectroscopy. <i>Advanced Energy Materials</i> , 2015 , 5, 1500165	21.8	126

47	Non-woven carbon paper as current collector for Li-ion/Li ₂ S system: Understanding of the first charge mechanism. <i>Electrochimica Acta</i> , 2015 , 180, 178-186	6.7	28
46	Photo-Cross-Linked Diblock Copolymer Micelles: Quantitative Study of Photochemical Efficiency, Micelles Morphologies and their Thermal Behavior. <i>Macromolecules</i> , 2014 , 47, 2420-2429	5.5	9
45	Charge Transport in Nanostructured PS-PEO-PS Triblock Copolymer Electrolytes. <i>Macromolecules</i> , 2014 , 47, 2659-2665	5.5	88
44	Impact of the solute exclusion on the bed longitudinal diffusion coefficient and particle intra-tortuosity determined by ISEC. <i>Journal of Chromatography A</i> , 2014 , 1325, 179-85	4.5	8
43	Elaboration of controlled size Li _{1.5} Al _{0.5} Ge _{1.5} (PO ₄) ₃ crystallites from glass-ceramics. <i>Solid State Ionics</i> , 2014 , 266, 44-50	3.3	33
42	Effect of interfaces on the melting of PEO confined in triblock PS-b-PEO-b-PS copolymers. <i>Langmuir</i> , 2013 , 29, 10874-80	4	27
41	Single-ion BAB triblock copolymers as highly efficient electrolytes for lithium-metal batteries. <i>Nature Materials</i> , 2013 , 12, 452-7	27	965
40	Separation of Bulk, Surface, and Topological Contributions to the Conductivity of Suspensions of Porous Particles. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 5090-5096	3.8	4
39	Mechanism of ion transport in PEO/LiTFSI complexes: Effect of temperature, molecular weight and end groups. <i>Solid State Ionics</i> , 2012 , 227, 119-127	3.3	153
38	The Stone Age Revisited: Building a Monolithic Inorganic Lithium-Ion Battery. <i>Advanced Functional Materials</i> , 2012 , 22, 2140-2147	15.6	86
37	Morphology and reactivity of aluminium nanocrystalline powders. <i>International Journal of Nanotechnology</i> , 2012 , 9, 618	1.5	2
36	A New Approach to Develop Safe All-Inorganic Monolithic Li-Ion Batteries. <i>Advanced Energy Materials</i> , 2011 , 1, 179-183	21.8	116
35	Influence of the structure of mesoporous adsorbents on transport properties. <i>Microporous and Mesoporous Materials</i> , 2011 , 140, 97-102	5.3	2
34	Influence of molecule size on its transport properties through a porous medium. <i>Analytical Chemistry</i> , 2010 , 82, 2668-79	7.8	42
33	Structural changes and thermal properties of aluminium micro- and nano-powders. <i>Acta Materialia</i> , 2010 , 58, 4224-4232	8.4	40
32	Structure and Chemical Bonding in Zr-Doped Anatase TiO ₂ Nanocrystals. <i>Journal of Physical Chemistry C</i> , 2008 , 112, 43-47	3.8	40
31	Tortuosity of porous particles. <i>Analytical Chemistry</i> , 2007 , 79, 9115-21	7.8	174
30	Hot pressing of nanocrystalline TiO ₂ (anatase) ceramics with controlled microstructure. <i>Journal of the European Ceramic Society</i> , 2007 , 27, 2641-2646	6	37

29	Evolution of the electrode-electrolyte interface in a lithium polymer battery. <i>Solid State Ionics</i> , 2006 , 177, 141-143	3.3	6
28	Dendrite short-circuit and fuse effect on Li/polymer/Li cells. <i>Electrochimica Acta</i> , 2006 , 51, 5334-5340	6.7	384
27	Local atomic and electronic structure in nanocrystalline Sn-doped anatase TiO ₂ . <i>ChemPhysChem</i> , 2006 , 7, 2377-83	3.2	26
26	Critical Role of Polymeric Binders on the Electronic Transport Properties of Composites Electrode. <i>Journal of the Electrochemical Society</i> , 2006 , 153, A679	3.9	97
25	Hot compaction of nanocrystalline TiO ₂ (anatase) ceramics. Mechanisms of densification: Grain size and doping effects. <i>Acta Materialia</i> , 2006 , 54, 3575-3583	8.4	23
24	Novel architecture of composite electrode for optimization of lithium battery performance. <i>Journal of Power Sources</i> , 2006 , 157, 438-442	8.9	18
23	Evaluation of GPE performances in lithium metal battery technology by means of simple polarization tests. <i>Journal of Power Sources</i> , 2006 , 158, 564-570	8.9	28
22	Electrical properties and defect chemistry of anatase (TiO ₂). <i>Solid State Ionics</i> , 2006 , 177, 229-236	3.3	79
21	Theoretical analysis of the impedance spectra of electroceramics Part 2: isotropic grain boundaries. <i>Journal of Electroceramics</i> , 2006 , 16, 229-238	1.5	22
20	Toward Understanding of Electrical Limitations (Electronic, Ionic) in LiMPO ₄ (M=Fe, Mn) Electrode Materials. <i>Journal of the Electrochemical Society</i> , 2005 , 152, A913	3.9	539
19	The Big Problem of Small Particles: A Comparison of Methods for Determination of Particle Size in Nanocrystalline Anatase Powders. <i>Chemistry of Materials</i> , 2005 , 17, 2378-2385	9.6	227
18	Room temperature lithium metal batteries based on a new Gel Polymer Electrolyte membrane. <i>Journal of Power Sources</i> , 2005 , 144, 231-237	8.9	25
17	Inter-electrode in situ concentration cartography in lithium/polymer electrolyte/lithium cells. <i>Journal of Electroanalytical Chemistry</i> , 2005 , 584, 70-74	4.1	24
16	Tailoring the Binder of Composite Electrode for Battery Performance Optimization. <i>Electrochemical and Solid-State Letters</i> , 2005 , 8, A17		43
15	Study and tailoring of composite and nanocomposite materials for lithium battery electrode application. <i>Materials Research Society Symposia Proceedings</i> , 2004 , 856, BB12.4.1		
14	Improved composite electrode and lithium battery performance From smart use of the polymers and their properties. <i>Materials Research Society Symposia Proceedings</i> , 2004 , 835, K10.3.1		1
13	Lithium Metal Batteries Operating at Room Temperature Based on Different PEO-PVdF Separator Configurations. <i>Journal of the Electrochemical Society</i> , 2004 , 151, A873	3.9	25
12	Improvement of lithium battery performance through composite electrode microstructure optimization. <i>Ionics</i> , 2004 , 10, 443-449	2.7	4

11	Theoretical Analysis of IS of Polycrystalline Materials with Blocking or Conducting Grain Boundaries: From Microcrystals to Nanocrystals. <i>Journal of the Electrochemical Society</i> , 2003 , 150, E348	3.9	26
10	Mixed potential type hydrogen sensor. <i>Ionics</i> , 2003 , 9, 168-175	2.7	10
9	EXAFS Study of Dopant Segregation (Zn, Nb) in Nanocrystalline Anatase (TiO ₂). <i>Chemistry of Materials</i> , 2003 , 15, 4996-5002	9.6	45
8	An EIS Study of the Anode Li/PEO-LiTFSI of a Li Polymer Battery. <i>Journal of the Electrochemical Society</i> , 2003 , 150, A1385	3.9	93
7	A Solid-State Potentiometric Sensor Based on Polybenzimidazole for Hydrogen Determination in Air. <i>Journal of the Electrochemical Society</i> , 2002 , 149, H119	3.9	9
6	A thermodynamic approach to proton conductivity in acid-doped polybenzimidazole. <i>Solid State Ionics</i> , 2001 , 145, 69-78	3.3	73
5	Solid-state hydrogen sensor based on acid-doped polybenzimidazole. <i>Sensors and Actuators B: Chemical</i> , 2001 , 76, 610-616	8.5	19
4	Polybenzimidazole-Based Hydrogen Sensors I. Mechanism of Response with an E-TEK Gas Diffusion Electrode. <i>Journal of the Electrochemical Society</i> , 2000 , 147, 3125	3.9	19
3	Polybenzimidazole-Based Hydrogen Sensors II. Effect of the Electrode Preparation. <i>Journal of the Electrochemical Society</i> , 2000 , 147, 3548	3.9	12
2	Proton conduction in acid doped polybenzimidazole. <i>Solid State Ionics</i> , 1999 , 118, 287-299	3.3	409
1	Acid-Doped Polybenzimidazole as the Membrane of Electrochemical Hydrogen Sensors. <i>Journal of the Electrochemical Society</i> , 1997 , 144, L95-L97	3.9	40