

Frédéric Le Cras

List of Publications by Year in descending order

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5079
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#	ARTICLE	IF	CITATIONS
1	High-Throughput Experimentation and Computational Freeway Lanes for Accelerated Battery Electrolyte and Interface Development Research. <i>Advanced Energy Materials</i> , 2022, 12, 2102678.	19.5	40
2	Data Management Plans: the Importance of Data Management in the BIG-EMAP Project**. <i>Batteries and Supercaps</i> , 2021, 4, 1803-1812.	4.7	19
3	Lithium-rich layered titanium sulfides: Cobalt- and Nickel-free high capacity cathode materials for lithium-ion batteries. <i>Energy Storage Materials</i> , 2020, 26, 213-222.	18.0	43
4	Evaluation of chemical stability of conducting ceramics to protect metallic lithium in Li/S batteries. <i>Solid State Ionics</i> , 2020, 354, 115402.	2.7	1
5	Composition Dependence of Ionic Conductivity in LiSiPO(N) Thin-Film Electrolytes for Solid-State Batteries. <i>ACS Applied Energy Materials</i> , 2019, 2, 4782-4791.	5.1	26
6	Iron molybdate thin films prepared by sputtering and their electrochemical behavior in Li batteries. <i>Journal of Alloys and Compounds</i> , 2018, 735, 1454-1462.	5.5	8
7	Insight Into the Formation of Lithium Alloys in All-Solid-State Thin Film Lithium Batteries. <i>Frontiers in Energy Research</i> , 2018, 6, .	2.3	12
8	An X-ray photoelectron spectroscopy study of the electrochemical behaviour of iron molybdate thin films in lithium and sodium cells. <i>Journal of Power Sources</i> , 2017, 342, 796-807.	7.8	21
9	Thorough XPS analyses on overlithiated manganese spinel cycled around the 3V plateau. <i>Applied Surface Science</i> , 2017, 411, 449-456.	6.1	48
10	Dual Cation- and Anion-Based Redox Process in Lithium Titanium Oxysulfide Thin Film Cathodes for All-Solid-State Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 2275-2284.	8.0	12
11	Nanoscale Chemical Characterization of Solid-State Microbattery Stacks by Means of Auger Spectroscopy and Ion-Milling Cross Section Preparation. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 33238-33249.	8.0	17
12	Comprehensive characterization of all-solid-state thin films commercial microbatteries by Electrochemical Impedance Spectroscopy. <i>Journal of Power Sources</i> , 2016, 319, 139-146.	7.8	56
13	Fast deposition of conformal LiCoO ₂ thin film electrodes for high capacity 3D batteries. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2016, 213, 163-168.	3.5	8
14	All-Solid-State Lithium-Ion Microbatteries Using Silicon Nanofilm Anodes: High Performance and Memory Effect. <i>Advanced Energy Materials</i> , 2015, 5, 1501061.	19.5	69
15	Direct fabrication of LiCoO ₂ thin-films in water-ethanol solutions by electrochemical-hydrothermal method. <i>Electrochimica Acta</i> , 2015, 160, 145-151.	5.2	14
16	Lithium-rich manganese oxide spinel thin films as 3 V electrode for lithium batteries. <i>Electrochimica Acta</i> , 2015, 180, 528-534.	5.2	10
17	Perfect reversibility of the lithium insertion in FeS ₂ : The combined effects of all-solid-state and thin film cell configurations. <i>Electrochemistry Communications</i> , 2015, 51, 81-84.	4.7	28
18	Characterization of Lithium Thin Film Batteries by Electrochemical Impedance Spectroscopy. <i>ECS Transactions</i> , 2014, 61, 165-171.	0.5	2

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19	Direct observation of important morphology and composition changes at the surface of the CuO conversion material in lithium batteries. <i>Journal of Power Sources</i> , 2014, 248, 861-873.	7.8	58
20	Thorough Characterization of Sputtered CuO Thin Films Used as Conversion Material Electrodes for Lithium Batteries. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 3413-3420.	8.0	40
21	Memory effect highlighting in silicon anodes for high energy density lithium-ion batteries. <i>Electrochemistry Communications</i> , 2013, 27, 22-25.	4.7	10
22	Comprehensive X-ray Photoelectron Spectroscopy Study of the Conversion Reaction Mechanism of CuO in Lithiated Thin Film Electrodes. <i>Journal of Physical Chemistry C</i> , 2013, 117, 4421-4430.	3.1	223
23	Raman study of the spinel-to-layered phase transformation in sol-gel LiCoO ₂ cathode powders as a function of the post-annealing temperature. <i>Vibrational Spectroscopy</i> , 2012, 62, 152-158.	2.2	52
24	First principles calculations of solid-solid interfaces: an application to conversion materials for lithium-ion batteries. <i>Journal of Materials Chemistry</i> , 2012, 22, 22063.	6.7	29
25	Iron(III) Phosphates Obtained by Thermal Treatment of the Tavorite-Type FePO ₄ ·H ₂ O Material: Structures and Electrochemical Properties in Lithium Batteries. <i>Inorganic Chemistry</i> , 2012, 51, 3146-3155.	4.0	15
26	High-Performance All-Solid-State Cells Fabricated With Silicon Electrodes. <i>Advanced Functional Materials</i> , 2012, 22, 2580-2584.	14.9	79
27	Investigation on the part played by the solid electrolyte interphase on the electrochemical performances of the silicon electrode for lithium-ion batteries. <i>Journal of Power Sources</i> , 2012, 206, 245-252.	7.8	61
28	Evolution of the Si electrode/electrolyte interface in lithium batteries characterized by XPS and AFM techniques: The influence of vinylene carbonate additive. <i>Solid State Ionics</i> , 2012, 215, 36-44.	2.7	86
29	Characterization of all-solid-state Li/LiPONB/TiOS microbatteries produced at the pilot scale. <i>Journal of Power Sources</i> , 2011, 196, 10289-10296.	7.8	52
30	One step synthesis of lamellar R-3m LiCoO ₂ thin films by an electrochemical-hydrothermal method. <i>Electrochimica Acta</i> , 2011, 56, 7580-7585.	5.2	15
31	Charge/Discharge Simulation of an All-Solid-State Thin-Film Battery Using a One-Dimensional Model. <i>Journal of the Electrochemical Society</i> , 2011, 159, A104-A115.	2.9	70
32	The structure of tavorite LiFePO ₄ (OH) from diffraction and GGA + U studies and its preliminary electrochemical characterization. <i>Dalton Transactions</i> , 2010, 39, 5108.	3.3	66
33	Structural and Electrochemical Study of a New Crystalline Hydrated Iron(III) Phosphate FePO ₄ ·H ₂ O Obtained from LiFePO ₄ (OH) by Ion Exchange. <i>Chemistry of Materials</i> , 2010, 22, 1854-1861.	6.7	63
34	Synthesis of LiCoO ₂ thin films by sol/gel process. <i>Journal of Power Sources</i> , 2010, 195, 6262-6267.	7.8	44
35	Structure solution of the new titanate Li ₄ Ti ₈ Ni ₃ O ₂₁ using precession electron diffraction. <i>Acta Crystallographica Section B: Structural Science</i> , 2010, 66, 60-68.	1.8	29
36	Lithium deintercalation in LiFePO ₄ nanoparticles via a domino-cascade model. , 2010, , 180-186.		5

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37	Characteristics of LiFePO ₄ obtained through a one step continuous hydrothermal synthesis process working in supercritical water. <i>Solid State Ionics</i> , 2009, 180, 861-866.	2.7	41
38	Continuous hydrothermal synthesis of inorganic nanopowders in supercritical water: Towards a better control of the process. <i>Powder Technology</i> , 2009, 190, 99-106.	4.2	58
39	High voltage spinel oxides for Li-ion batteries: From the material research to the application. <i>Journal of Power Sources</i> , 2009, 189, 344-352.	7.8	268
40	Electrochemical performances in temperature for a C-containing LiFePO ₄ composite synthesized at high temperature. <i>Journal of Power Sources</i> , 2008, 183, 411-417.	7.8	42
41	High voltage nickel manganese spinel oxides for Li-ion batteries. <i>Electrochimica Acta</i> , 2008, 53, 4137-4145.	5.2	133
42	C-containing LiFePO ₄ materials – Part I: Mechano-chemical synthesis and structural characterization. <i>Solid State Ionics</i> , 2008, 179, 2020-2026.	2.7	58
43	Stability of LiFePO ₄ in water and consequence on the Li battery behaviour. <i>Ionics</i> , 2008, 14, 583-587.	2.4	49
44	C-containing LiFePO ₄ materials – Part II: Electrochemical characterization. <i>Solid State Ionics</i> , 2008, 179, 2383-2389.	2.7	20
45	Lithium deintercalation in LiFePO ₄ nanoparticles via a domino-cascade model. <i>Nature Materials</i> , 2008, 7, 665-671.	27.5	811
46	X-Ray Photoelectron Spectroscopy Investigations of Carbon-Coated Li _x FePO ₄ Materials. <i>Chemistry of Materials</i> , 2008, 20, 7164-7170.	6.7	187
47	Raman and FTIR Spectroscopy Investigations of Carbon-Coated Li _x FePO ₄ Materials. <i>Journal of the Electrochemical Society</i> , 2008, 155, A879.	2.9	48
48	Silicon/graphite nanocomposite electrodes prepared by low pressure chemical vapor deposition. <i>Journal of Power Sources</i> , 2007, 174, 900-904.	7.8	19
49	Chemistry and electrochemistry of composite LiFePO ₄ materials for secondary lithium batteries. <i>Journal of Physics and Chemistry of Solids</i> , 2006, 67, 1338-1342.	4.0	65
50	Optimized Lithium Iron Phosphate for High-Rate Electrochemical Applications. <i>Journal of the Electrochemical Society</i> , 2004, 151, A1024.	2.9	93
51	Comparison between different LiFePO ₄ synthesis routes and their influence on its physico-chemical properties. <i>Journal of Power Sources</i> , 2003, 119-121, 252-257.	7.8	252
52	LiFePO ₄ Synthesis Routes for Enhanced Electrochemical Performance. <i>Electrochemical and Solid-State Letters</i> , 2002, 5, A231.	2.2	280
53	Structural, magnetic and lithium insertion properties of spinel-type Li ₂ Mn ₃ MO ₈ oxides (M = Mg, Co, Ni). Tj ETQq1 1 0.784314 rgBT /Ov	6.7	93
54	In Situ Structural Study of 4V-Range Lithium Extraction/Insertion in Fluorine-Substituted LiMn ₂ O ₄ . <i>Journal of Solid State Chemistry</i> , 1999, 144, 361-371.	2.9	35

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55	Oxygen Nonstoichiometry in Li ⁺ Mn ²⁺ O Spinel Oxides: A Powder Neutron Diffraction Study. Journal of Solid State Chemistry, 1998, 135, 132-139.	2.9	66
56	Structural in-situ study of Li intercalation in Li _{1+x} Mn _{2-2x} O ₄ spinel-type oxides. Solid State Ionics, 1998, 106, 1-10.	2.7	17
57	Lithium intercalation in low temperature Li-Mn-O compounds: a new monoclinic phase and structural in situ studies. Journal of Power Sources, 1997, 65, 225.	7.8	0
58	Low-temperature synthesis and electrochemical lithium intercalation behaviour of defect Li-Mn-O spinel oxide. Journal of Materials Chemistry, 1996, 6, 1591.	6.7	6
59	Synthesis and chimie douce reactions in lithium phylломanganate. Materials Research Bulletin, 1996, 31, 1417-1426.	5.2	2
60	Composition-Valence Diagrams: A New Representation of Topotactic Reactions in Ternary Transition Metal Oxide Systems. Application to Lithium Intercalation. Journal of Solid State Chemistry, 1996, 124, 83-94.	2.9	24
61	Lithium intercalation in Li _{Mg} Mn ₂ O and Li _{Al} Mn ₂ O spinels. Solid State Ionics, 1996, 89, 203-213.	2.7	48
62	Low-temperature lithium-manganese oxide cathode materials for polymer batteries. Journal of Power Sources, 1996, 63, 71-77.	7.8	12
63	Reversibility of lithium intercalation in lithium and sodium phylломanganates. Journal of Power Sources, 1995, 54, 319-322.	7.8	33
64	The electrochemical incorporation of molybdenum in the passive layer of a 17% Cr ferritic stainless steel. Its influence on film stability in sulphuric acid and on pitting corrosion in chloride media. Corrosion Science, 1995, 37, 271-291.	6.6	23
65	Electrochemical behaviour of natural and synthetic ramsdellite. Journal of Materials Chemistry, 1995, 5, 1183.	6.7	25