FrÃ©dÃ©ric Le Cras

List of Publications by Year
in descending order

65 papers	4,239 citations	109321 35 h-index	114465 63 g-index
67 all docs	67 docs citations	67 times ranked	5079 citing authors

#	Article	IF	Citations
1	Lithium deintercalation in LiFePO4 nanoparticles via a domino-cascade model. Nature Materials, 2008, 7, 665-671.	27.5	811
2	LiFePO[sub 4] Synthesis Routes for Enhanced Electrochemical Performance. Electrochemical and Solid-State Letters, 2002, 5, A231.	2.2	280
3	High voltage spinel oxides for Li-ion batteries: From the material research to the application. Journal of Power Sources, 2009, 189, 344-352.	7.8	268
4	Comparison between different LiFePO4 synthesis routes and their influence on its physico-chemical properties. Journal of Power Sources, 2003, 119-121, 252-257.	7.8	252
5	Comprehensive X-ray Photoelectron Spectroscopy Study of the Conversion Reaction Mechanism of CuO in Lithiated Thin Film Electrodes. Journal of Physical Chemistry C, 2013, 117, 4421-4430.	3.1	223
6	X-Ray Photoelectron Spectroscopy Investigations of Carbon-Coated Li_{<i>x</i>}FePO₄ Materials. Chemistry of Materials, 2008, 20, 7164-7170.	6.7	187
7	High voltage nickel manganese spinel oxides for Li-ion batteries. Electrochimica Acta, 2008, 53, 4137-4145.	5.2	133
8	Structural, magnetic and lithium insertion properties of spinel-type Li2Mn3MO8 oxides (M = Mg, Co, Ni,) Tj ETQq0 0 0 rgBT /Overlock 10	6.7	93
9	Optimized Lithium Iron Phosphate for High-Rate Electrochemical Applications. Journal of the Electrochemical Society, 2004, 151, A1024.	2.9	93
10	Evolution of the Si electrode/electrolyte interface in lithium batteries characterized by XPS and AFM techniques: The influence of vinylene carbonate additive. Solid State Ionics, 2012, 215, 36-44.	2.7	86
11	Highâ€Performance Allâ€Solidâ€State Cells Fabricated With Silicon Electrodes. Advanced Functional Materials, 2012, 22, 2580-2584.	14.9	79
12	Charge/Discharge Simulation of an All-Solid-State Thin-Film Battery Using a One-Dimensional Model. Journal of the Electrochemical Society, 2011, 159, A104-A115.	2.9	70
13	Allâ€Solidâ€State Lithiumâ€Ion Microbatteries Using Silicon Nanofilm Anodes: High Performance and Memory Effect. Advanced Energy Materials, 2015, 5, 1501061.	19.5	69
14	Oxygen Nonstoichiometry in Liâ€"Mnâ€"O Spinel Oxides: A Powder Neutron Diffraction Study. Journal of Solid State Chemistry, 1998, 135, 132-139.	2.9	66
15	The structure of tavorite LiFePO4(OH) from diffraction and GGA + U studies and its preliminary electrochemical characterization. Dalton Transactions, 2010, 39, 5108.	3.3	66
16	Chemistry and electrochemistry of composite LiFePO4 materials for secondary lithium batteries. Journal of Physics and Chemistry of Solids, 2006, 67, 1338-1342.	4.0	65
17	Structural and Electrochemical Study of a New Crystalline Hydrated Iron(III) Phosphate FePO4Â·H2O Obtained from LiFePO4(OH) by Ion Exchange. Chemistry of Materials, 2010, 22, 1854-1861.	6.7	63
18	Investigation on the part played by the solid electrolyte interphase on the electrochemical performances of the silicon electrode for lithium-ion batteries. Journal of Power Sources, 2012, 206, 245-252.	7.8	61

#	Article	IF	Citations
19	C-containing LiFePO4 materials â€" Part I: Mechano-chemical synthesis and structural characterization. Solid State Ionics, 2008, 179, 2020-2026.	2.7	58
20	Continuous hydrothermal synthesis of inorganic nanopowders in supercritical water: Towards a better control of the process. Powder Technology, 2009, 190, 99-106.	4.2	58
21	Direct observation of important morphology and composition changes at the surface of the CuO conversion material in lithium batteries. Journal of Power Sources, 2014, 248, 861-873.	7.8	58
22	Comprehensive characterization of all-solid-state thin films commercial microbatteries by Electrochemical Impedance Spectroscopy. Journal of Power Sources, 2016, 319, 139-146.	7.8	56
23	Characterization of all-solid-state Li/LiPONB/TiOS microbatteries produced at the pilot scale. Journal of Power Sources, 2011, 196, 10289-10296.	7.8	52
24	Raman study of the spinel-to-layered phase transformation in solâ€"gel LiCoO2 cathode powders as a function of the post-annealing temperature. Vibrational Spectroscopy, 2012, 62, 152-158.	2.2	52
25	Stability of LiFePO4 in water and consequence on the Li battery behaviour. Ionics, 2008, 14, 583-587.	2.4	49
26	Lithium intercalation in Li_Mg_Mn_O and Li_Al_Mn_O spinels. Solid State Ionics, 1996, 89, 203-213.	2.7	48
27	Raman and FTIR Spectroscopy Investigations of Carbon-Coated Li[sub x]FePO[sub 4] Materials. Journal of the Electrochemical Society, 2008, 155, A879.	2.9	48
28	Thorough XPS analyses on overlithiated manganese spinel cycled around the 3V plateau. Applied Surface Science, 2017, 411, 449-456.	6.1	48
29	Synthesis of LiCoO2 thin films by sol/gel process. Journal of Power Sources, 2010, 195, 6262-6267.	7.8	44
30	Lithium-rich layered titanium sulfides: Cobalt- and Nickel-free high capacity cathode materials for lithium-ion batteries. Energy Storage Materials, 2020, 26, 213-222.	18.0	43
31	Electrochemical performances in temperature for a C-containing LiFePO4 composite synthesized at high temperature. Journal of Power Sources, 2008, 183, 411-417.	7.8	42
32	Characteristics of LiFePO4 obtained through a one step continuous hydrothermal synthesis process working in supercritical water. Solid State Ionics, 2009, 180, 861-866.	2.7	41
33	Thorough Characterization of Sputtered CuO Thin Films Used as Conversion Material Electrodes for Lithium Batteries. ACS Applied Materials & Interfaces, 2014, 6, 3413-3420.	8.0	40
34	Highâ€Throughput Experimentation and Computational Freeway Lanes for Accelerated Battery Electrolyte and Interface Development Research. Advanced Energy Materials, 2022, 12, 2102678.	19.5	40
35	In SituStructural Study of 4V-Range Lithium Extraction/Insertion in Fluorine-Substituted LiMn2O4. Journal of Solid State Chemistry, 1999, 144, 361-371.	2.9	35
36	Reversibility of lithium intercalation in lithium and sodium phyllomanganates. Journal of Power Sources, 1995, 54, 319-322.	7.8	33

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37	Structure solution of the new titanate Li₄Ti₈Ni₃O₂₁using precession electron diffraction. Acta Crystallographica Section B: Structural Science, 2010, 66, 60-68.	1.8	29
38	First principles calculations of solidâ€“solid interfaces: an application to conversion materials for lithium-ion batteries. Journal of Materials Chemistry, 2012, 22, 22063.	6.7	29
39	Perfect reversibility of the lithium insertion in FeS2: The combined effects of all-solid-state and thin film cell configurations. Electrochemistry Communications, 2015, 51, 81-84.	4.7	28
40	Composition Dependence of Ionic Conductivity in LiSiPO(N) Thin-Film Electrolytes for Solid-State Batteries. ACS Applied Energy Materials, 2019, 2, 4782-4791.	5.1	26
41	Electrochemical behaviour of natural and synthetic ramsdellite. Journal of Materials Chemistry, 1995, 5, 1183.	6.7	25
42	Compositionâ€“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
43	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
44	An X-ray photoelectron spectroscopy study of the electrochemical behaviour of iron molybdate thin films in lithium and sodium cells. Journal of Power Sources, 2017, 342, 796-807.	7.8	21
45	C-containing LiFePO4 materials â€" Part II: Electrochemical characterization. Solid State Ionics, 2008, 179, 2383-2389.	2.7	20
46	Silicon/graphite nanocomposite electrodes prepared by low pressure chemical vapor deposition. Journal of Power Sources, 2007, 174, 900-904.	7.8	19
47	Data Management Plans: the Importance of Data Management in the BIGâ€MAP Project**. Batteries and Supercaps, 2021, 4, 1803-1812.	4.7	19
48	Structural in-situ study of Li intercalation in Li1+Î±Mn2âˆ’Î±O4 spinel-type oxides. Solid State Ionics, 1998, 106, 1-10.	2.7	17
49	Nanoscale Chemical Characterization of Solid-State Microbattery Stacks by Means of Auger Spectroscopy and Ion-Milling Cross Section Preparation. ACS Applied Materials & Interfaces, 2017, 9, 33238-33249.	8.0	17
50	One step synthesis of lamellar R-3m LiCoO2 thin films by an electrochemicalâ€“hydrothermal method. Electrochimica Acta, 2011, 56, 7580-7585.	5.2	15
51	Iron(III) Phosphates Obtained by Thermal Treatment of the Tavorite-Type FePO₄Â·H₂O Material: Structures and Electrochemical Properties in Lithium Batteries. Inorganic Chemistry, 2012, 51, 3146-3155.	4.0	15
52	Direct fabrication of LiCoO2 thin-films in waterâ€“ethanol solutions by electrochemicalâ€“hydrothermal method. Electrochimica Acta, 2015, 160, 145-151.	5.2	14
53	Low-temperature lithium-manganese oxide cathode materials for polymer batteries. Journal of Power Sources, 1996, 63, 71-77.	7.8	12
54	Dual Cation- and Anion-Based Redox Process in Lithium Titanium Oxysulfide Thin Film Cathodes for All-Solid-State Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2017, 9, 2275-2284.	8.0	12

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55	Insight Into the Formation of Lithium Alloys in All-Solid-State Thin Film Lithium Batteries. Frontiers in Energy Research, 2018, 6, .	2.3	12
56	Memory effect highlighting in silicon anodes for high energy density lithium-ion batteries. Electrochemistry Communications, 2013, 27, 22-25.	4.7	10
57	Lithium-rich manganese oxide spinel thin films as 3 V electrode for lithium batteries. Electrochimica Acta, 2015, 180, 528-534.	5.2	10
58	Fast deposition of conformal LiCoO2 thin film electrodes for high capacity 3D batteries. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2016, 213, 163-168.	3.5	8
59	Iron molybdate thin films prepared by sputtering and their electrochemical behavior in Li batteries. Journal of Alloys and Compounds, 2018, 735, 1454-1462.	5.5	8
60	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
61	Lithium deintercalation in LiFePO4 nanoparticles via a domino-cascademodel. , 2010, , 180-186.		5
62	Synthesis and chimie douce reactions in lithium phyllomanganate. Materials Research Bulletin, 1996, 31, 1417-1426.	5.2	2
63	Characterization of Lithium Thin Film Batteries by Electrochemical Impedance Spectroscopy. ECS Transactions, 2014, 61, 165-171.	0.5	2
64	Evaluation of chemical stability of conducting ceramics to protect metallic lithium in Li/S batteries. Solid State Ionics, 2020, 354, 115402.	2.7	1
65	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