RenÃ© Hausbrand

List of Publications by Year
in descending order

42 papers	1,637 citations	361413 20 h-index	302126 39 g-index
44 all docs	44 docs citations	44 times ranked	2397 citing authors

#	Article	IF	Citations
1	Interface reactivity of in-situ formed LiCoO2 - PEO solid-state interfaces investigated by X-ray photoelectron spectroscopy: Reaction products, energy level offsets and double layer formation. Applied Surface Science, 2022, 571, 151218.	6.1	6
2	Impedance Modeling of Solid-State Electrolytes: Influence of the Contacted Space Charge Layer. ACS Applied Materials & Interfaces, 2021, 13, 5895-5906.	8.0	15
3	The role of covalent bonding and anionic redox for the performance of sodium cobaltate electrode materials. Energy Storage Materials, 2021, 37, 190-198.	18.0	4
4	Compositional Dependence of Li-Ion Conductivity in Garnet-Rich Composite Electrolytes for All-Solid-State Lithium-Ion Batteriesâ€"Toward Understanding the Drawbacks of Ceramic-Rich Composites. ACS Applied Materials & Interfaces, 2021, 13, 31111-31128.	8.0	17
5	Electronic energy levels at Li-ion cathodeâ€"liquid electrolyte interfaces: Concepts, experimental insights, and perspectives. Journal of Chemical Physics, 2020, 152, 180902.	3.0	7
6	Interface equilibrium modeling of all-solid-state lithium-ion thin film batteries. Journal of Power Sources, 2020, 454, 227892.	7.8	16
7	Stabilizing Na₃Zr₂Si₂PO₁₂/Na Interfacial Performance by Introducing a Clean and Na-Deficient Surface. Chemistry of Materials, 2020, 32, 3970-3979.	6.7	72
8	Electronic Structure and Reactivity of Cathodeâ€"Liquid Electrolyte Interfaces. SpringerBriefs in Physics, 2020, , 35-54.	0.7	0
9	Electronic Structure and Reactivity of Electrodeâ€"Solid Electrolyte Interfaces. SpringerBriefs in Physics, 2020, , 55-71.	0.7	0
10	Li-Ion Energy Levels, Li-Ion Transfer and Electrode Potential. SpringerBriefs in Physics, 2020, , 83-99.	0.7	0
11	The effect of calcium impurities of Î²â€³-alumina on the degradation of NaxCoO2 cathodes in all solid state sodium-ion batteries. Solid State Ionics, 2019, 341, 115041.	2.7	5
12	Electrochemical Performance of All-Solid-State Sodium-Ion Model Cells with Crystalline Na_xCoO₂ Thin-Film Cathodes. Journal of the Electrochemical Society, 2019, 166, A5328-A5332.	2.9	16
13	Characterization of the Interfaces in LiFePO₄/PEO-LiTFSI Composite Cathodes and to the Adjacent Layers. Journal of the Electrochemical Society, 2019, 166, A5410-A5420.	2.9	38
14	Performance of Li-Ion Batteries: Contribution of Electronic Factors to the Battery Voltage. Journal of the Electrochemical Society, 2019, 166, A5308-A5312.	2.9	27
15	Interaction of Ultrathin Films of Ethylene Carbonate with Oxidized and Reduced Lithium Cobalt Oxideâ€"A Model Study of the Cathode | Electrolyte Interface in Liâ€Ion Batteries. Advanced Materials Interfaces, 2019, 6, 1801650.	3.7	12
16	Sc-substituted Nasicon solid electrolyte for an all-solid-state NaxCoO2/Nasicon/Na sodium model battery with stable electrochemical performance. Journal of Power Sources, 2019, 409, 86-93.	7.8	50
17	Interfaces in solid-state sodium-ion batteries: NaCoO2 thin films on solid electrolyte substrates. Electrochimica Acta, 2018, 268, 226-233.	5.2	23
18	XPS-Surface Analysis of SEI Layers on Li-Ion Cathodes: Part I. Investigation of Initial Surface Chemistry. Journal of the Electrochemical Society, 2018, 165, A819-A832.	2.9	81

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19	XPS-Surface Analysis of SEI Layers on Li-Ion Cathodes: Part II. SEI-Composition and Formation inside Composite Electrodes. Journal of the Electrochemical Society, 2018, 165, A833-A846.	2.9	124
20	Experimental Studies on Work Functions of Li⁺ Ions and Electrons in the Battery Electrode Material LiCoO₂: A Thermodynamic Cycle Combining Ionic and Electronic Structure. Advanced Energy Materials, 2018, 8, 1703411.	19.5	28
21	In-operando photoelectron spectroscopy for batteries: Set-up using pristine thin film cathode and first results on NaxCoO2. Review of Scientific Instruments, 2018, 89, 073104.	1.3	24
22	Surface and bulk properties of Li-ion electrodes â€“ A surface science approach. Journal of Electron Spectroscopy and Related Phenomena, 2017, 221, 65-78.	1.7	18
23	Adsorption of ethylene carbonate on lithium cobalt oxide thin films: A synchrotron-based spectroscopic study of the surface chemistry. Chemical Physics, 2017, 498-499, 19-24.	1.9	16
24	Understanding the SEI Formation at Pristine Liâ€Ion Cathodes: Chemisorption and Reaction of DEC on LiCoO₂ Surfaces Studied by a Combined SXPS/HREELS Approach. Advanced Materials Interfaces, 2017, 4, 1700567.	3.7	24
25	Reaction and Space Charge Layer Formation at the LiCoO₂â€“LiPON Interface: Insights on Defect Formation and Ion Energy Level Alignment by a Combined Surface Scienceâ€“Simulation Approach. Chemistry of Materials, 2017, 29, 7675-7685.	6.7	81
26	Evidence of the chemical stability of the garnet-type solid electrolyte Li5La3Ta2O12 towards lithium by a surface science approach. Journal of Power Sources, 2017, 366, 72-79.	7.8	26
27	Energy level offsets and space charge layer formation at electrode-electrolyte interfaces: X-ray photoelectron spectroscopy analysis of Li-ion model electrodes. Thin Solid Films, 2017, 643, 43-52.	1.8	22
28	Adsorption of Dimethyl Sulfoxide on LiCoO₂ Thin Films: Interface Formation Studied by Photoemission Spectroscopy. Journal of Physical Chemistry C, 2016, 120, 20142-20148.	3.1	10
29	Interfacial energy level alignment and energy level diagrams for all-solid Li-ion cells: Impact of Li-ion transfer and double layer formation. Solid State Ionics, 2016, 288, 224-228.	2.7	33
30	Phosphate structure and lithium environments in lithium phosphorus oxynitride amorphous thin films. Ionics, 2016, 22, 471-481.	2.4	27
31	Investigation of sodium insertion into tetracyanoquinodimethane (TCNQ): results for a TCNQ thin film obtained by a surface science approach. Physical Chemistry Chemical Physics, 2016, 18, 3056-3064.	2.8	52
32	Photoemission Study on the Interaction Between LiCoO₂ Thin Films and Adsorbed Water. Journal of Physical Chemistry C, 2015, 119, 23407-23412.	3.1	26
33	Surface and Interface Analysis of LiCoO₂ and LiPON Thin Films by Photoemission: Implications for Li-Ion Batteries. Zeitschrift Fur Physikalische Chemie, 2015, 229, 1387-1414.	2.8	20
34	Fundamental degradation mechanisms of layered oxide Li-ion battery cathode materials: Methodology, insights and novel approaches. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2015, 192, 3-25.	3.5	357
35	Interface reactions between LiPON and lithium studied by in-situ X-ray photoemission. Solid State Ionics, 2015, 273, 51-54.	2.7	205
36	A surface science approach to cathode/electrolyte interfaces in Li-ion batteries: Contact properties, charge transfer and reactions. Progress in Solid State Chemistry, 2014, 42, 175-183.	7.2	52

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37	Determination of the valence band structure of an alkali phosphorus oxynitride glass: A synchrotron XPS study on LiPON. Applied Surface Science, 2014, 321, 55-60.	6.1	17
38	Adsorption of Diethyl Carbonate on LiCoO₂ Thin Films: Formation of the Electrochemical Interface. Journal of Physical Chemistry C, 2014, 118, 962-967.	3.1	35
39	On the use of energy level diagrams for semiconducting ionic electrodes. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 2049-2051.	1.8	5
40	XPS study of diethyl carbonate adsorption on LiCoO2 thin films. Solid State Ionics, 2013, 230, 83-85.	2.7	18
41	Synthesis and characterization of LiMn1-x Fe x PO4/carbon nanotubes composites as cathodes for Li-ion batteries. Ionics, 2013, 19, 1229-1240.	2.4	16
42	Temperature induced reduction of the trivalent Ni ions in LiMO2 (M = Ni, Co) thin films. Surface Science, 2013, 608, L1-L4.	1.9	12