

Ruben-Simon KÃ¼hnel

List of Publications by Year in descending order

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Version: 2024-02-01

41
papers

2,208
citations

257450

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docs citations

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times ranked

2720
citing authors

#	ARTICLE	IF	CITATIONS
1	Mixtures of ionic liquid and organic carbonate as electrolyte with improved safety and performance for rechargeable lithium batteries. <i>Electrochimica Acta</i> , 2011, 56, 4092-4099.	5.2	252
2	A High-Voltage Aqueous Electrolyte for Sodium-Ion Batteries. <i>ACS Energy Letters</i> , 2017, 2, 2005-2006.	17.4	191
3	Suppression of aluminum current collector corrosion in ionic liquid containing electrolytes. <i>Journal of Power Sources</i> , 2012, 214, 178-184.	7.8	169
4	A highly stable sodium solid-state electrolyte based on a dodeca/deca-borate equimolar mixture. <i>Chemical Communications</i> , 2017, 53, 4195-4198.	4.1	137
5	A stable 3 V all-solid-state sodium-ion battery based on a closo-borate electrolyte. <i>Energy and Environmental Science</i> , 2017, 10, 2609-2615.	30.8	120
6	Water-in-salt electrolytes enable the use of cost-effective aluminum current collectors for aqueous high-voltage batteries. <i>Chemical Communications</i> , 2016, 52, 10435-10438.	4.1	109
7	Suppressing Crystallization of Water-in-Salt Electrolytes by Asymmetric Anions Enables Low-Temperature Operation of High-Voltage Aqueous Batteries. , 2019, 1, 44-51.		99
8	A Lithium Amide-Borohydride Solid-State Electrolyte with Lithium-Ion Conductivities Comparable to Liquid Electrolytes. <i>Advanced Energy Materials</i> , 2017, 7, 1700294.	19.5	95
9	Composite LiFePO ₄ /AC high rate performance electrodes for Li-ion capacitors. <i>Journal of Power Sources</i> , 2011, 196, 4136-4142.	7.8	81
10	The beneficial effect of protic ionic liquids on the lithium environment in electrolytes for battery applications. <i>Journal of Materials Chemistry A</i> , 2014, 2, 8258-8265.	10.3	79
11	High-voltage aqueous supercapacitors based on NaTFSI. <i>Sustainable Energy and Fuels</i> , 2017, 1, 2155-2161.	4.9	76
12	Comparison of the anodic behavior of aluminum current collectors in imide-based ionic liquids and consequences on the stability of high voltage supercapacitors. <i>Journal of Power Sources</i> , 2014, 249, 163-171.	7.8	73
13	Going nano with protic ionic liquids—the synthesis of carbon coated Li ₃ V ₂ (PO ₄) ₃ nanoparticles encapsulated in a carbon matrix for high power lithium-ion batteries. <i>Nano Energy</i> , 2015, 12, 207-214.	16.0	69
14	Electrochemical Oxidative Stability of Hydroborate-Based Solid-State Electrolytes. <i>ACS Applied Energy Materials</i> , 2019, 2, 6924-6930.	5.1	68
15	Perspective—Electrochemical Stability of Water-in-Salt Electrolytes. <i>Journal of the Electrochemical Society</i> , 2020, 167, 070544.	2.9	68
16	Lithium Ion Transport and Solvation in N-Butyl-N-methylpyrrolidinium Bis(trifluoromethanesulfonyl)imide-Propylene Carbonate Mixtures. <i>Journal of Physical Chemistry C</i> , 2014, 118, 5742-5748.	3.1	66
17	The influence of the electrochemical and thermal stability of mixtures of ionic liquid and organic carbonate on the performance of high power lithium-ion batteries. <i>Electrochimica Acta</i> , 2013, 90, 641-648.	5.2	59
18	Water-in-salt electrolytes for aqueous lithium-ion batteries with liquidus temperatures below ~10 °C. <i>Chemical Communications</i> , 2019, 55, 12032-12035.	4.1	57

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19	Anion Selection Criteria for Water-in-Salt Electrolytes. <i>Advanced Energy Materials</i> , 2021, 11, 2002913.	19.5	47
20	Stability of aqueous electrolytes based on LiFSI and NaFSI. <i>Electrochimica Acta</i> , 2019, 321, 134644.	5.2	46
21	The Hydrotropic Effect of Ionic Liquids in Water-in-Salt Electrolytes**. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 14100-14108.	13.8	45
22	The Influence of Anion-Cation Combinations on the Physicochemical Properties of Advanced Electrolytes for Supercapacitors and the Capacitance of Activated Carbons. <i>ChemElectroChem</i> , 2014, 1, 1301-1311.	3.4	43
23	Evaluation of the wetting time of porous electrodes in electrolytic solutions containing ionic liquid. <i>Journal of Applied Electrochemistry</i> , 2013, 43, 697-704.	2.9	37
24	Anodic stability of aluminum current collectors in an ionic liquid based on the (fluorosulfonyl)(trifluoromethanesulfonyl)imide anion and its implication on high voltage supercapacitors. <i>Electrochemistry Communications</i> , 2014, 38, 117-119.	4.7	36
25	Revisiting $\text{Li}_3\text{V}_2(\text{PO}_4)_3$ as an anode – an outstanding negative electrode for high power energy storage devices. <i>Journal of Materials Chemistry A</i> , 2014, 2, 17906-17913.	10.3	29
26	Impact of Anion Asymmetry on Local Structure and Supercooling Behavior of Water-in-Salt Electrolytes. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 4720-4725.	4.6	20
27	Reorientational Hydrogen Dynamics in Complex Hydrides with Enhanced Li^+ Conduction. <i>Journal of Physical Chemistry C</i> , 2017, 121, 17693-17702.	3.1	11
28	Water/Ionic Liquid/Succinonitrile Hybrid Electrolytes for Aqueous Batteries. <i>Advanced Functional Materials</i> , 2022, 32, .	14.9	11
29	“Double-Salt” Electrolytes for High Voltage Electrochemical Double-Layer Capacitors. <i>Journal of Solution Chemistry</i> , 2015, 44, 528-537.	1.2	10
30	The Hydrotropic Effect of Ionic Liquids in Water-in-Salt Electrolytes**. <i>Angewandte Chemie</i> , 2021, 133, 14219-14227.	2.0	1
31	A Stable 3 V All-Solid-State Sodium-Ion Battery Based on a Closo-Borate Electrolyte. <i>ECS Meeting Abstracts</i> , 2018, , .	0.0	0
32	A High-Voltage Aqueous Electrolyte for Sodium-Ion Batteries. <i>ECS Meeting Abstracts</i> , 2018, , .	0.0	0
33	A High-Voltage Aqueous Electrolyte for Sodium-Ion Batteries. <i>ECS Meeting Abstracts</i> , 2018, , .	0.0	0
34	High-Voltage Aqueous Supercapacitors Based on Natfsi. <i>ECS Meeting Abstracts</i> , 2018, , .	0.0	0
35	A Water-in-Salt Electrolyte for High-Voltage Aqueous Sodium-Ion Batteries. <i>ECS Meeting Abstracts</i> , 2019, , .	0.0	0
36	Towards High-Voltage Sodium-Ion Batteries Based on Aqueous Electrolytes. <i>ECS Meeting Abstracts</i> , 2019, , .	0.0	0

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37	A Stable 3 V All-Solid-State Battery Based on a Closo-Borate Electrolyte. ECS Meeting Abstracts, 2019, , .	0.0	0
38	2 V Class Aqueous Sodium-Ion Batteries with Low Temperature Cycling Capabilities. ECS Meeting Abstracts, 2019, , .	0.0	0
39	The Hydrotropic Effect of Ionic Liquids in Water-in-Salt Electrolytes. ECS Meeting Abstracts, 2021, MA2021-02, 287-287.	0.0	0
40	Unraveling the Mechanism of Enhanced Lithium Salt Solubility in Water-in-Salt Electrolytes Containing Ionic Liquids. ECS Meeting Abstracts, 2020, MA2020-02, 682-682.	0.0	0
41	Towards Stable Water-in-Salt Electrolytes for Sodium-Ion Batteries. ECS Meeting Abstracts, 2020, MA2020-02, 3806-3806.	0.0	0