

Daniel Buchholz

List of Publications by Citations

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47
papers

4,856
citations

31
h-index

50
g-index

50
ext. papers

5,660
ext. citations

11.3
avg, IF

6.19
L-index

#	Paper	IF	Citations
47	A cost and resource analysis of sodium-ion batteries. <i>Nature Reviews Materials</i> , 2018 , 3,	73.3	886
46	Non-Aqueous K-Ion Battery Based on Layered $K_{0.3}MnO_2$ and Hard Carbon/Carbon Black. <i>Journal of the Electrochemical Society</i> , 2016 , 163, A1295-A1299	3.9	291
45	Hard carbons for sodium-ion batteries: Structure, analysis, sustainability, and electrochemistry. <i>Materials Today</i> , 2019 , 23, 87-104	21.8	276
44	Anatase TiO_2 nanoparticles for high power sodium-ion anodes. <i>Journal of Power Sources</i> , 2014 , 251, 3798-3805	33.5	257
43	Unfolding the Mechanism of Sodium Insertion in Anatase TiO_2 Nanoparticles. <i>Advanced Energy Materials</i> , 2015 , 5, 1401142	21.8	255
42	Alternative binders for sustainable electrochemical energy storage II: the transition to aqueous electrode processing and bio-derived polymers. <i>Energy and Environmental Science</i> , 2018 , 11, 3096-3127	35.4	234
41	High Performance $Na_{0.5}[Ni_{0.23}Fe_{0.13}Mn_{0.63}]O_2$ Cathode for Sodium-Ion Batteries. <i>Advanced Energy Materials</i> , 2014 , 4, 1400083	21.8	182
40	Extraordinary Performance of Carbon-Coated Anatase TiO as Sodium-Ion Anode. <i>Advanced Energy Materials</i> , 2016 , 6, 1501489	21.8	174
39	Toward Na-ion Batteries: Synthesis and Characterization of a Novel High Capacity Na Ion Intercalation Material. <i>Chemistry of Materials</i> , 2013 , 25, 142-148	9.6	172
38	Apple-Biowaste-Derived Hard Carbon as a Powerful Anode Material for Na-Ion Batteries. <i>ChemElectroChem</i> , 2016 , 3, 292-298	4.3	162
37	Life cycle assessment of sodium-ion batteries. <i>Energy and Environmental Science</i> , 2016 , 9, 1744-1751	35.4	151
36	A comparative study of layered transition metal oxide cathodes for application in sodium-ion battery. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 5206-12	9.5	133
35	Water sensitivity of layered $P_2/P_3-Na_xNi_{0.22}Co_{0.11}Mn_{0.66}O_2$ cathode material. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 13415-13421	13	133
34	A sodium-ion battery exploiting layered oxide cathode, graphite anode and glyme-based electrolyte. <i>Journal of Power Sources</i> , 2016 , 310, 26-31	8.9	118
33	Layered Na-Ion Cathodes with Outstanding Performance Resulting from the Synergetic Effect of Mixed P- and O-Type Phases. <i>Advanced Energy Materials</i> , 2016 , 6, 1501555	21.8	117
32	Unexpected performance of layered sodium-ion cathode material in ionic liquid-based electrolyte. <i>Journal of Power Sources</i> , 2014 , 247, 377-383	8.9	113
31	Pectin, Hemicellulose, or Lignin? Impact of the Biowaste Source on the Performance of Hard Carbons for Sodium-Ion Batteries. <i>ChemSusChem</i> , 2017 , 10, 2668-2676	8.3	97

30	Mg-doping for improved long-term cyclability of layered Na-ion cathode materials – The example of P2-type $\text{Na}_x\text{Mg}_{0.11}\text{Mn}_{0.89}\text{O}_2$. <i>Journal of Power Sources</i> , 2015 , 282, 581-585	8.9	95
29	Nanocrystalline $\text{TiO}_2(\text{B})$ as Anode Material for Sodium-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2015 , 162, A3052-A3058	3.9	93
28	Non-aqueous potassium-ion batteries: a review. <i>Current Opinion in Electrochemistry</i> , 2018 , 9, 41-48	7.2	88
27	P2-type layered $\text{Na}_{0.45}\text{Ni}_{0.22}\text{Co}_{0.11}\text{Mn}_{0.66}\text{O}_2$ as intercalation host material for lithium and sodium batteries. <i>Electrochimica Acta</i> , 2013 , 110, 208-213	6.7	83
26	Carbon coated lithium sulfide particles for lithium battery cathodes. <i>Journal of Power Sources</i> , 2013 , 235, 220-225	8.9	78
25	Embedding tin nanoparticles in micron-sized disordered carbon for lithium- and sodium-ion anodes. <i>Electrochimica Acta</i> , 2014 , 128, 163-171	6.7	74
24	Towards High-Performance Aqueous Sodium-Ion Batteries: Stabilizing the Solid/Liquid Interface for NASICON-Type $\text{NaVTi}(\text{PO})_4$ using Concentrated Electrolytes. <i>ChemSusChem</i> , 2018 , 11, 1382-1389	8.3	58
23	X-ray Absorption Spectroscopy Investigation of Lithium-Rich, Cobalt-Poor Layered-Oxide Cathode Material with High Capacity. <i>ChemElectroChem</i> , 2015 , 2, 85-97	4.3	51
22	Aqueous Processing of NaMnO Cathode Material for the Development of Greener Na-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 34891-34899	9.5	51
21	Non-aqueous semi-solid flow battery based on Na-ion chemistry. P2-type $\text{Na}_x\text{Ni}_{(0.22)}\text{Co}_{(0.11)}\text{Mn}_{(0.66)}\text{O}_{(2)}\text{-NaTi}_2(\text{PO}_4)_3$. <i>Chemical Communications</i> , 2015 , 51, 7298-301	5.8	44
20	Exploring the Low Voltage Behavior of V_2O_5 Aerogel as Intercalation Host for Sodium Ion Battery. <i>Journal of the Electrochemical Society</i> , 2015 , 162, A2723-A2728	3.9	43
19	Exploring the Ni redox activity in polyanionic compounds as conceivable high potential cathodes for Na rechargeable batteries. <i>NPG Asia Materials</i> , 2017 , 9, e370-e370	10.3	38
18	Effects of nitrogen doping on the structure and performance of carbon coated $\text{Na}_3\text{V}_2(\text{PO}_4)_3$ cathodes for sodium-ion batteries. <i>Carbon</i> , 2017 , 124, 334-341	10.4	35
17	Impact of the Acid Treatment on Lignocellulosic Biomass Hard Carbon for Sodium-Ion Battery Anodes. <i>ChemSusChem</i> , 2018 , 11, 3276-3285	8.3	31
16	Excellent Cycling Stability and Superior Rate Capability of $\text{Na}_3\text{V}_2(\text{PO}_4)_3$ Cathodes Enabled by Nitrogen-Doped Carbon Interpenetration for Sodium-Ion Batteries. <i>ChemElectroChem</i> , 2017 , 4, 1256-1263	4.3	27
15	Influence of Salt Concentration on the Properties of Sodium-Based Electrolytes. <i>Small Methods</i> , 2019 , 3, 1800208	12.8	27
14	Combining ionic liquid-based electrolytes and nanostructured anatase TiO_2 anodes for intrinsically safer sodium-ion batteries. <i>Electrochimica Acta</i> , 2016 , 203, 109-116	6.7	25
13	Addressing the energy sustainability of biowaste-derived hard carbon materials for battery electrodes. <i>Green Chemistry</i> , 2018 , 20, 1527-1537	10	22

12	Synthesis, Structure, and Sodium Mobility of Sodium Vanadium Nitridophosphate: A Zero-Strain and Safe High Voltage Cathode Material for Sodium-Ion Batteries. <i>Energies</i> , 2017 , 10, 889	3.1	21
11	Development and Characterization of High-Performance Sodium-Ion Cells based on Layered Oxide and Hard Carbon. <i>ChemElectroChem</i> , 2016 , 3, 1124-1132	4.3	21
10	Beneficial effect of boron in layered sodium-ion cathode materials—The example of Na _{2/3} B _{0.11} Mn _{0.89} O ₂ . <i>Journal of Power Sources</i> , 2017 , 364, 33-40	8.9	20
9	Research Update: Hard carbon with closed pores from pectin-free apple pomace waste for Na-ion batteries. <i>APL Materials</i> , 2018 , 6, 047501	5.7	18
8	Study of the Na Storage Mechanism in Silicon Oxycarbide—Evidence for Reversible Silicon Redox Activity. <i>Small Methods</i> , 2019 , 3, 1800177	12.8	14
7	High-Efficiency Sodium-Ion Battery Based on NASICON Electrodes with High Power and Long Lifespan. <i>ACS Applied Energy Materials</i> , 2018 , 1, 6425-6432	6.1	13
6	High-Performance Na _{0.44} MnO ₂ Slabs for Sodium-Ion Batteries Obtained through Urea-Based Solution Combustion Synthesis. <i>Batteries</i> , 2018 , 4, 8	5.7	12
5	In Situ Investigation of Layered Oxides with Mixed Structures for Sodium-Ion Batteries. <i>Small Methods</i> , 2019 , 3, 1900239	12.8	10
4	Monitoring the Sodiation Mechanism of Anatase TiO ₂ Nanoparticle-Based Electrodes for Sodium-Ion Batteries by Operando XANES Measurements. <i>ACS Applied Energy Materials</i> , 2021 , 4, 164-175	6.1	4
3	Structural Investigation of Quaternary Layered Oxides upon Na-Ion Deinsertion. <i>Inorganic Chemistry</i> , 2020 , 59, 7408-7414	5.1	3
2	Development and Characterization of High-Performance Sodium-Ion Cells based on Layered Oxide and Hard Carbon. <i>ChemElectroChem</i> , 2016 , 3, 1030-1030	4.3	3
1	Local structure modification in lithium rich layered Li-Mn-O cathode material. <i>Journal of Physics: Conference Series</i> , 2016 , 712, 012130	0.3	1