Daniel Buchholz

List of Publications by Year in Descending Order

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	Monitoring the Sodiation Mechanism of Anatase TiO2 Nanoparticle-Based Electrodes for Sodium-Ion Batteries by Operando XANES Measurements. *ACS Applied Energy Materials*, **2021**, 4, 164-175	6.1	4
46	Structural Investigation of Quaternary Layered Oxides upon Na-Ion Deinsertion. *Inorganic Chemistry*, **2020**, 59, 7408-7414	5.1	3
45	In Situ Investigation of Layered Oxides with Mixed Structures for Sodium-Ion Batteries. *Small Methods*, **2019**, 3, 1900239	12.8	10
44	Study of the Na Storage Mechanism in Silicon Oxycarbide Evidence for Reversible Silicon Redox Activity. *Small Methods*, **2019**, 3, 1800177	12.8	14
43	Influence of Salt Concentration on the Properties of Sodium-Based Electrolytes. *Small Methods*, **2019**, 3, 1800208	12.8	27
42	Hard carbons for sodium-ion batteries: Structure, analysis, sustainability, and electrochemistry. *Materials Today*, **2019**, 23, 87-104	21.8	276
41	Towards High-Performance Aqueous Sodium-Ion Batteries: Stabilizing the Solid/Liquid Interface for NASICON-Type Na VTi(PO) using Concentrated Electrolytes. *ChemSusChem*, **2018**, 11, 1382-1389	8.3	58
40	Addressing the energy sustainability of biowaste-derived hard carbon materials for battery electrodes. *Green Chemistry*, **2018**, 20, 1527-1537	10	22
39	Research Update: Hard carbon with closed pores from pectin-free apple pomace waste for Na-ion batteries. *APL Materials*, **2018**, 6, 047501	5.7	18
38	Non-aqueous potassium-ion batteries: a review. *Current Opinion in Electrochemistry*, **2018**, 9, 41-48	7.2	88
37	A cost and resource analysis of sodium-ion batteries. *Nature Reviews Materials*, **2018**, 3,	73.3	886
36	Alternative binders for sustainable electrochemical energy storage the transition to aqueous electrode processing and bio-derived polymers. *Energy and Environmental Science*, **2018**, 11, 3096-3127	35.4	234
35	High-Efficiency Sodium-Ion Battery Based on NASICON Electrodes with High Power and Long Lifespan. *ACS Applied Energy Materials*, **2018**, 1, 6425-6432	6.1	13
34	High-Performance Na0.44MnO2 Slabs for Sodium-Ion Batteries Obtained through Urea-Based Solution Combustion Synthesis. *Batteries*, **2018**, 4, 8	5.7	12
33	Impact of the Acid Treatment on Lignocellulosic Biomass Hard Carbon for Sodium-Ion Battery Anodes. *ChemSusChem*, **2018**, 11, 3276-3285	8.3	31
32	Excellent Cycling Stability and Superior Rate Capability of Na3V2(PO4)3 Cathodes Enabled by Nitrogen-Doped Carbon Interpenetration for Sodium-Ion Batteries. *ChemElectroChem*, **2017**, 4, 1256-1263	4.3	27
31	Pectin, Hemicellulose, or Lignin? Impact of the Biowaste Source on the Performance of Hard Carbons for Sodium-Ion Batteries. *ChemSusChem*, **2017**, 10, 2668-2676	8.3	97

30	Exploring the Ni redox activity in polyanionic compounds as conceivable high potential cathodes for Na rechargeable batteries. *NPG Asia Materials*, **2017**, 9, e370-e370	10.3	38
29	Effects of nitrogen doping on the structure and performance of carbon coated Na3V2(PO4)3 cathodes for sodium-ion batteries. *Carbon*, **2017**, 124, 334-341	10.4	35
28	Aqueous Processing of NaMnO Cathode Material for the Development of Greener Na-Ion Batteries. *ACS Applied Materials & Interfaces*, **2017**, 9, 34891-34899	9.5	51
27	Beneficial effect of boron in layered sodium-ion cathode materials□The example of Na 2/3 B 0.11 Mn 0.89 O 2. *Journal of Power Sources*, **2017**, 364, 33-40	8.9	20
26	Synthesis, Structure, and Sodium Mobility of Sodium Vanadium Nitridophosphate: A Zero-Strain and Safe High Voltage Cathode Material for Sodium-Ion Batteries. *Energies*, **2017**, 10, 889	3.1	21
25	Development and Characterization of High-Performance Sodium-Ion Cells based on Layered Oxide and Hard Carbon. *ChemElectroChem*, **2016**, 3, 1030-1030	4.3	3
24	Local structure modification in lithium rich layered Li-Mn-O cathode material. *Journal of Physics: Conference Series*, **2016**, 712, 012130	0.3	1
23	Apple-Biowaste-Derived Hard Carbon as a Powerful Anode Material for Na-Ion Batteries. *ChemElectroChem*, **2016**, 3, 292-298	4.3	162
22	Non-Aqueous K-Ion Battery Based on Layered K0.3MnO2and Hard Carbon/Carbon Black. *Journal of the Electrochemical Society*, **2016**, 163, A1295-A1299	3.9	291
21	Life cycle assessment of sodium-ion batteries. *Energy and Environmental Science*, **2016**, 9, 1744-1751	35.4	151
20	A sodium-ion battery exploiting layered oxide cathode, graphite anode and glyme-based electrolyte. *Journal of Power Sources*, **2016**, 310, 26-31	8.9	118
19	Development and Characterization of High-Performance Sodium-Ion Cells based on Layered Oxide and Hard Carbon. *ChemElectroChem*, **2016**, 3, 1124-1132	4.3	21
18	Layered Na-Ion Cathodes with Outstanding Performance Resulting from the Synergetic Effect of Mixed P- and O-Type Phases. *Advanced Energy Materials*, **2016**, 6, 1501555	21.8	117
17	Extraordinary Performance of Carbon-Coated Anatase TiO as Sodium-Ion Anode. *Advanced Energy Materials*, **2016**, 6, 1501489	21.8	174
16	Combining ionic liquid-based electrolytes and nanostructured anatase TiO2 anodes for intrinsically safer sodium-ion batteries. *Electrochimica Acta*, **2016**, 203, 109-116	6.7	25
15	Non-aqueous semi-solid flow battery based on Na-ion chemistry. P2-type Na(x)Ni(0.22)Co(0.11)Mn(0.66)O(2)-NaTi2(PO4)3. *Chemical Communications*, **2015**, 51, 7298-301	5.8	44
14	Mg-doping for improved long-term cyclability of layered Na-ion cathode materials□The example of P2-type NaxMg0.11Mn0.89O2. *Journal of Power Sources*, **2015**, 282, 581-585	8.9	95
13	A comparative study of layered transition metal oxide cathodes for application in sodium-ion battery. *ACS Applied Materials & Interfaces*, **2015**, 7, 5206-12	9.5	133

12	Exploring the Low Voltage Behavior of V2O5Aerogel as Intercalation Host for Sodium Ion Battery. *Journal of the Electrochemical Society*, **2015**, 162, A2723-A2728	3.9	43
11	X-ray Absorption Spectroscopy Investigation of Lithium-Rich, Cobalt-Poor Layered-Oxide Cathode Material with High Capacity. *ChemElectroChem*, **2015**, 2, 85-97	4.3	51
10	Unfolding the Mechanism of Sodium Insertion in Anatase TiO2 Nanoparticles. *Advanced Energy Materials*, **2015**, 5, 1401142	21.8	255
9	Nanocrystalline TiO2(B) as Anode Material for Sodium-Ion Batteries. *Journal of the Electrochemical Society*, **2015**, 162, A3052-A3058	3.9	93
8	Anatase TiO2 nanoparticles for high power sodium-ion anodes. *Journal of Power Sources*, **2014**, 251, 379-385	8.9	257
7	Water sensitivity of layered P2/P3-NaxNi0.22Co0.11Mn0.66O2 cathode material. *Journal of Materials Chemistry A*, **2014**, 2, 13415-13421	13	133
6	High Performance Na0.5[Ni0.23Fe0.13Mn0.63]O2 Cathode for Sodium-Ion Batteries. *Advanced Energy Materials*, **2014**, 4, 1400083	21.8	182
5	Embedding tin nanoparticles in micron-sized disordered carbon for lithium- and sodium-ion anodes. *Electrochimica Acta*, **2014**, 128, 163-171	6.7	74
4	Unexpected performance of layered sodium-ion cathode material in ionic liquid-based electrolyte. *Journal of Power Sources*, **2014**, 247, 377-383	8.9	113
3	P2-type layered Na0.45Ni0.22Co0.11Mn0.66O2 as intercalation host material for lithium and sodium batteries. *Electrochimica Acta*, **2013**, 110, 208-213	6.7	83
2	Toward Na-ion Batteries Synthesis and Characterization of a Novel High Capacity Na Ion Intercalation Material. *Chemistry of Materials*, **2013**, 25, 142-148	9.6	172
1	Carbon coated lithium sulfide particles for lithium battery cathodes. *Journal of Power Sources*, **2013**, 235, 220-225	8.9	78