Rachel Carter

List of Publications by Year
in descending order

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32 papers	2,734 citations	279798 23 h-index	454955 30 g-index
32 all docs	32 docs citations	32 times ranked	4840 citing authors

#	Article	IF	Citations
1	Role of Nitrogen-Doped Graphene for Improved High-Capacity Potassium Ion Battery Anodes. ACS Nano, 2016, 10, 9738-9744.	14.6	640
2	Anode-Free Sodium Battery through in Situ Plating of Sodium Metal. Nano Letters, 2017, 17, 1296-1301.	9.1	248
3	Sulfur Vapor-Infiltrated 3D Carbon Nanotube Foam for Binder-Free High Areal Capacity Lithiumâ€“Sulfur Battery Composite Cathodes. ACS Nano, 2017, 11, 4877-4884.	14.6	235
4	A Sugar-Derived Room-Temperature Sodium Sulfur Battery with Long Term Cycling Stability. Nano Letters, 2017, 17, 1863-1869.	9.1	220
5	Ultrafast Solvent-Assisted Sodium Ion Intercalation into Highly Crystalline Few-Layered Graphene. Nano Letters, 2016, 16, 543-548.	9.1	185
6	Durable potassium ion battery electrodes from high-rate cointercalation into graphitic carbons. Journal of Materials Chemistry A, 2016, 4, 14954-14959.	10.3	158
7	Interface strain in vertically stacked two-dimensional heterostructured carbon-MoS2 nanosheets controls electrochemical reactivity. Nature Communications, 2016, 7, 11796.	12.8	157
8	Carbon Nanotubes Produced from Ambient Carbon Dioxide for Environmentally Sustainable Lithium-Ion and Sodium-Ion Battery Anodes. ACS Central Science, 2016, 2, 162-168.	11.3	147
9	Polysulfide Anchoring Mechanism Revealed by Atomic Layer Deposition of V₂O₅ and Sulfur-Filled Carbon Nanotubes for Lithiumâ€“Sulfur Batteries. ACS Applied Materials & Interfaces, 2017, 9, 7185-7192.	8.0	100
10	Electrolyte Confinement Alters Lithium Electrodeposition. ACS Energy Letters, 2019, 4, 156-162.	17.4	65
11	In Operando Detection of the Onset and Mapping of Lithium Plating Regimes during Fast Charging of Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2020, 12, 30438-30448.	8.0	60
12	Direct integration of a supercapacitor into the backside of a silicon photovoltaic device. Applied Physics Letters, 2014, 104, .	3.3	54
13	Modulation of Lithium Plating in Li-Ion Batteries with External Thermal Gradient. ACS Applied Materials & Interfaces, 2018, 10, 26328-26334.	8.0	45
14	Strain Engineering to Modify the Electrochemistry of Energy Storage Electrodes. Scientific Reports, 2016, 6, 27542.	3.3	42
15	Mechanistic underpinnings of thermal gradient induced inhomogeneity in lithium plating. Energy Storage Materials, 2021, 35, 500-511.	18.0	41
16	Solution Assembled Single-Walled Carbon Nanotube Foams: Superior Performance in Supercapacitors, Lithium-Ion, and Lithiumâ€“Air Batteries. Journal of Physical Chemistry C, 2014, 118, 20137-20151.	3.1	40
17	Nanoscale defect engineering of lithiumâ€“sulfur battery composite cathodes for improved performance. Nanoscale, 2016, 8, 19368-19375.	5.6	40
18	A high areal capacity lithiumâ€“sulfur battery cathode prepared by site-selective vapor infiltration of hierarchical carbon nanotube arrays. Nanoscale, 2017, 9, 15018-15026.	5.6	35

#	Article	IF	Citations
19	Ultrafast triggered transient energy storage by atomic layer deposition into porous silicon for integrated transient electronics. Nanoscale, 2016, 8, 7384-7390.	5.6	32
20	Role of carbon defects in the reversible alloying states of red phosphorus composite anodes for efficient sodium ion batteries. Journal of Materials Chemistry A, 2017, 5, 5266-5272.	10.3	30
21	Directionality of thermal gradients in lithium-ion batteries dictates diverging degradation modes. Cell Reports Physical Science, 2021, 2, 100351.	5.6	29
22	Isothermal Sulfur Condensation into Carbon Scaffolds: Improved Loading, Performance, and Scalability for Lithiumâ€“Sulfur Battery Cathodes. Journal of Physical Chemistry C, 2017, 121, 7718-7727.	3.1	28
23	Mechanical collapse as primary degradation mode in mandrel-free 18650 Li-ion cells operated at 0â€¯Â°C. Journal of Power Sources, 2019, 437, 226820.	7.8	27
24	Detection of Lithium Plating During Thermally Transient Charging of Li-Ion Batteries. Frontiers in Energy Research, 2019, 7, .	2.3	17
25	Particulate-free porous silicon networks for efficient capacitive deionization water desalination. Scientific Reports, 2016, 6, 24680.	3.3	16
26	Operational strategy to stabilize lithium metal anodes by applied thermal gradient. Energy Storage Materials, 2019, 22, 18-28.	18.0	13
27	Corrosion resistant three-dimensional nanotextured silicon for water photo-oxidation. Nanoscale, 2015, 7, 16755-16762.	5.6	12
28	Initiated Chemical Vapor Deposition of Ultrathin Polymer Coatings at Graphite Electrodes for Enhanced Performance in Li-Ion Batteries. Journal of the Electrochemical Society, 2020, 167, 060510.	2.9	10
29	Optical Microscopy Reveals the Ambient Sodiumâ€“Sulfur Discharge Mechanism. ACS Sustainable Chemistry and Engineering, 2021, 9, 92-100.	6.7	6
30	Sodiation-Induced Electrochromism in Carbon Nanofoamâ€“Paper Electrodes. Journal of the Electrochemical Society, 2022, 169, 060514.	2.9	2
31	Accelerating Rate Calorimetry and Complementary Techniques to Characterize Battery Safety Hazards. Journal of Visualized Experiments, 2021, , .	0.3	0
32	Structural and Morphological Analysis of the First Alloy/Dealloy of a Bulk Siâ€“Li System at Elevated Temperature. ACS Omega, 0, , .	3.5	0