

# Rachel Carter

## List of Publications by Year in descending order

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Version: 2024-02-01

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  | Sodiation-Induced Electrochromism in Carbon Nanofoam Paper Electrodes. <i>Journal of the Electrochemical Society</i> , 2022, 169, 060514.  | 2.9  | 2         |
| 2  | Mechanistic underpinnings of thermal gradient induced inhomogeneity in lithium plating. <i>Energy Storage Materials</i> , 2021, 35, 500-511.   | 18.0 | 41        |
| 3  | Directionality of thermal gradients in lithium-ion batteries dictates diverging degradation modes. <i>Cell Reports Physical Science</i> , 2021, 2, 100351.   | 5.6  | 29        |
| 4  | Accelerating Rate Calorimetry and Complementary Techniques to Characterize Battery Safety Hazards. <i>Journal of Visualized Experiments</i> , 2021, , .  | 0.3  | 0         |
| 5  | Optical Microscopy Reveals the Ambient Sodium Sulfur Discharge Mechanism. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 92-100.  | 6.7  | 6         |
| 6  | Initiated Chemical Vapor Deposition of Ultrathin Polymer Coatings at Graphite Electrodes for Enhanced Performance in Li-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2020, 167, 060510.            | 2.9  | 10        |
| 7  | In Operando Detection of the Onset and Mapping of Lithium Plating Regimes during Fast Charging of Lithium-Ion Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 30438-30448.                      | 8.0  | 60        |
| 8  | Operational strategy to stabilize lithium metal anodes by applied thermal gradient. <i>Energy Storage Materials</i> , 2019, 22, 18-28.   | 18.0 | 13        |
| 9  | Mechanical collapse as primary degradation mode in mandrel-free 18650 Li-ion cells operated at 0 °C. <i>Journal of Power Sources</i> , 2019, 437, 226820.  | 7.8  | 27        |
| 10 | Detection of Lithium Plating During Thermally Transient Charging of Li-Ion Batteries. <i>Frontiers in Energy Research</i> , 2019, 7, .   | 2.3  | 17        |
| 11 | Electrolyte Confinement Alters Lithium Electrodeposition. <i>ACS Energy Letters</i> , 2019, 4, 156-162.  | 17.4 | 65        |
| 12 | Modulation of Lithium Plating in Li-Ion Batteries with External Thermal Gradient. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 26328-26334.   | 8.0  | 45        |
| 13 | Anode-Free Sodium Battery through in Situ Plating of Sodium Metal. <i>Nano Letters</i> , 2017, 17, 1296-1301.  | 9.1  | 248       |
| 14 | A Sugar-Derived Room-Temperature Sodium Sulfur Battery with Long Term Cycling Stability. <i>Nano Letters</i> , 2017, 17, 1863-1869.  | 9.1  | 220       |
| 15 | Role of carbon defects in the reversible alloying states of red phosphorus composite anodes for efficient sodium ion batteries. <i>Journal of Materials Chemistry A</i> , 2017, 5, 5266-5272.                        | 10.3 | 30        |
| 16 | Polysulfide Anchoring Mechanism Revealed by Atomic Layer Deposition of $V_2O_5$ and Sulfur-Filled Carbon Nanotubes for Lithium Sulfur Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 7185-7192. | 8.0  | 100       |
| 17 | Sulfur Vapor-Infiltrated 3D Carbon Nanotube Foam for Binder-Free High Areal Capacity Lithium Sulfur Battery Composite Cathodes. <i>ACS Nano</i> , 2017, 11, 4877-4884.   | 14.6 | 235       |
| 18 | Isothermal Sulfur Condensation into Carbon Scaffolds: Improved Loading, Performance, and Scalability for Lithium Sulfur Battery Cathodes. <i>Journal of Physical Chemistry C</i> , 2017, 121, 7718-7727.             | 3.1  | 28        |

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|----|---|------|-----------|
| 19 | A high areal capacity lithium-sulfur battery cathode prepared by site-selective vapor infiltration of hierarchical carbon nanotube arrays. <i>Nanoscale</i> , 2017, 9, 15018-15026.                       | 5.6  | 35        |
| 20 | Strain Engineering to Modify the Electrochemistry of Energy Storage Electrodes. <i>Scientific Reports</i> , 2016, 6, 27542.   | 3.3  | 42        |
| 21 | Carbon Nanotubes Produced from Ambient Carbon Dioxide for Environmentally Sustainable Lithium-Ion and Sodium-Ion Battery Anodes. <i>ACS Central Science</i> , 2016, 2, 162-168.                           | 11.3 | 147       |
| 22 | Durable potassium ion battery electrodes from high-rate cointercalation into graphitic carbons. <i>Journal of Materials Chemistry A</i> , 2016, 4, 14954-14959.   | 10.3 | 158       |
| 23 | Role of Nitrogen-Doped Graphene for Improved High-Capacity Potassium Ion Battery Anodes. <i>ACS Nano</i> , 2016, 10, 9738-9744.   | 14.6 | 640       |
| 24 | Interface strain in vertically stacked two-dimensional heterostructured carbon-MoS <sub>2</sub> nanosheets controls electrochemical reactivity. <i>Nature Communications</i> , 2016, 7, 11796.            | 12.8 | 157       |
| 25 | Particulate-free porous silicon networks for efficient capacitive deionization water desalination. <i>Scientific Reports</i> , 2016, 6, 24680.  | 3.3  | 16        |
| 26 | Nanoscale defect engineering of lithium-sulfur battery composite cathodes for improved performance. <i>Nanoscale</i> , 2016, 8, 19368-19375.  | 5.6  | 40        |
| 27 | Ultrafast Solvent-Assisted Sodium Ion Intercalation into Highly Crystalline Few-Layered Graphene. <i>Nano Letters</i> , 2016, 16, 543-548.  | 9.1  | 185       |
| 28 | Ultrafast triggered transient energy storage by atomic layer deposition into porous silicon for integrated transient electronics. <i>Nanoscale</i> , 2016, 8, 7384-7390.                                  | 5.6  | 32        |
| 29 | Corrosion resistant three-dimensional nanotextured silicon for water photo-oxidation. <i>Nanoscale</i> , 2015, 7, 16755-16762.  | 5.6  | 12        |
| 30 | Direct integration of a supercapacitor into the backside of a silicon photovoltaic device. <i>Applied Physics Letters</i> , 2014, 104, .  | 3.3  | 54        |
| 31 | Solution Assembled Single-Walled Carbon Nanotube Foams: Superior Performance in Supercapacitors, Lithium-Ion, and Lithium-Air Batteries. <i>Journal of Physical Chemistry C</i> , 2014, 118, 20137-20151. | 3.1  | 40        |
| 32 | Structural and Morphological Analysis of the First Alloy/Dealloy of a Bulk Si-Li System at Elevated Temperature. <i>ACS Omega</i> , 0, .  | 3.5  | 0         |