

Role of Mesoporosity in Cellulose Fiber for Paper-Based Fast Electrochemical Energy Storage

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Supporting materials

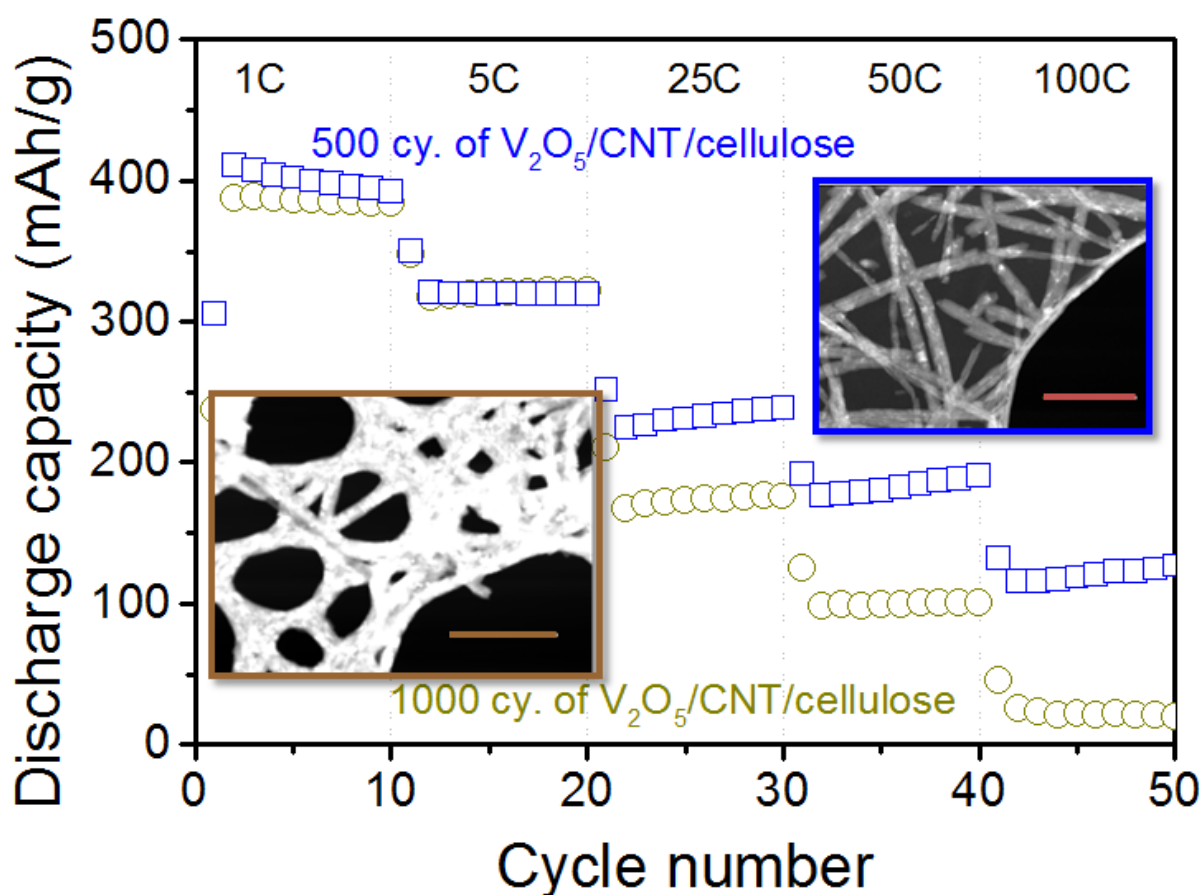


Figure 1s: Relationship of V₂O₅ mass and electrode rate performance. The mass ratio of 500 and 1000 cycle ALD V₂O₅ is about 5% and 10% of total electrode, respectively. Inset shows the dark field TEM images of 500 and 1000 cycle ALD V₂O₅ on CNT. In dark field TEM, the brightness indicates heavy elements or thicker materials. Scale bar in the TEM is 500 nm.

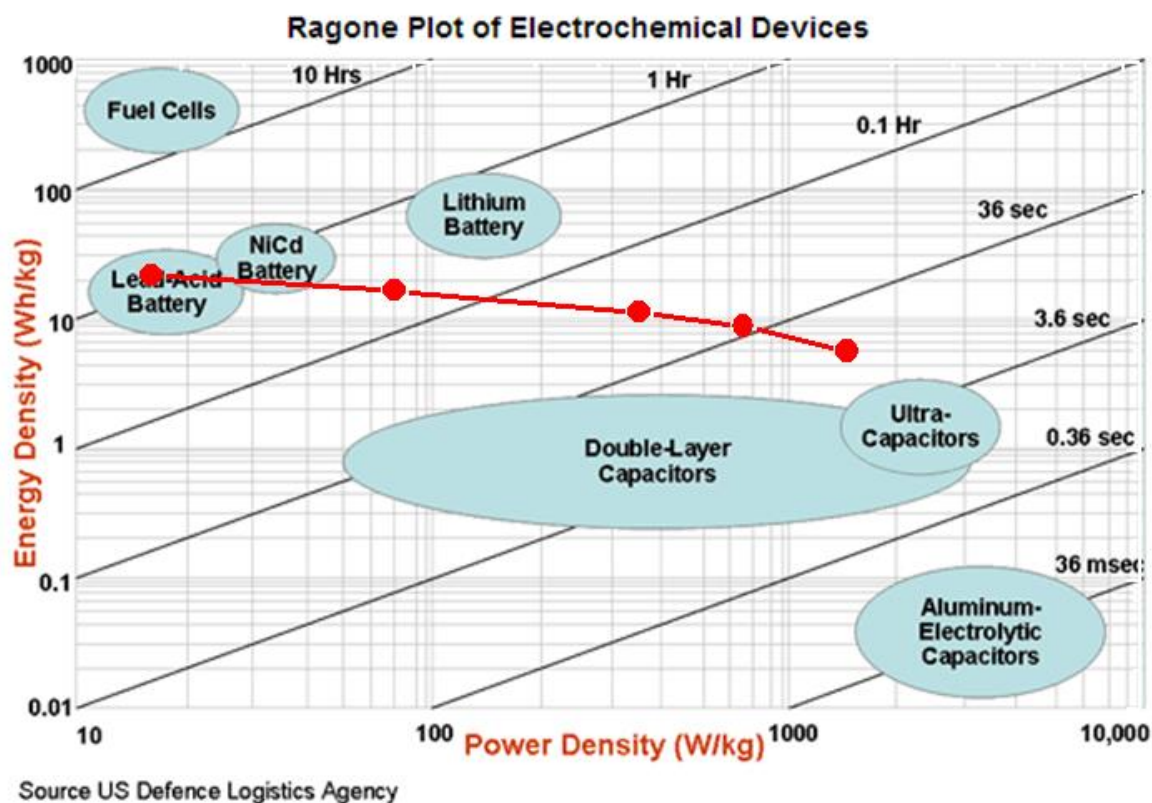


Figure 2s: Estimated device level performance of V₂O₅/CNT paper-electrodes (red dots) in the Ragone plot from US Defence Logistics Agency. Taking 5% mass ratio of V₂O₅ over total cathode and assuming the cathode mass is 40% of total device, we estimate the device performance as 40% × 5% × active material V₂O₅ performance.