



ProLynx™ electrolyte enables low-cost/high-performance supercaps

Ideal short-term storage of renewable energy

Supercapacitors power high-performance electronics while enduring an exceptionally high number of charge-discharge cycles. As renewables increasingly dominate electricity generation, effective energy storage is essential to smooth supply fluctuations. Lithium-ion batteries now serve as the primary daily buffers due to the higher cost of supercaps. However, if supercaps could achieve \$/kWh cost parity, they would enable day-night buffering systems with century-long lifespans, delivering the lowest levelized cost and eliminating recycling issues. BroadBit Batteries' ProLynx™ electrolyte unlocks this potential.



Achieving cost-effective supercap production depends on optimizing its two primary components: carbon-based electrodes and electrolytes. In principle, carbon-based electrodes can be manufactured cheaply, with numerous companies actively addressing this challenge. However, low-cost electrolyte production has remained elusive, as manufacturers have relied on expensive formulations of exotic chemicals to meet stringent performance requirements.

BroadBit Batteries' novel ProLynx™ electrolyte invention is a major step forward, enabling the low-cost production of high-performing supercap electrolytes. This has been the missing component for the scalable low-cost production of supercaps.

BroadBit Batteries – Never run out



ProLynx™ “Oxidized table-salt” electrolyte is optimized for supercaps

Supercap electrolytes must meet strict requirements:

- ✦ High solubility of electrolyte salt, to facilitate high-capacity charging of the electrodes
- ✦ High ionic conductivity over wide ranges of temperature and electrolyte salt concentration.
- ✦ Degradation-free in the entire 2.7 V supercap electrode operating window.

BroadBit Batteries’ globally patented supercap formulation is high-performance and ultra low-cost and can be mass-produced on a large scale. Here’s how:

- ✓ Cheap, widely available raw materials ensure low-cost, secure and scalable supply.
- ✓ High (> 30 mS/cm) conductivity across the entire state of charge ensures high power capability at every stage between fully charged and fully discharged.
- ✓ Electrochemical electrolyte stability ensures optimal performance across the entire electrode operating range.
- ✓ In-situ current collector passivization ensures long cycle and calendar life.

Contact us to purchase electrolyte, license our patented technology, partner on joint production, customize formulations, or explore other collaboration.

BroadBit Batteries Oy

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