

Supercapacitor

We provide indigenous, economically viable solutions for high-power energy storage, spanning from the synthesis of value-added active carbon to the fabrication of fully assembled cylindrical cells.

Electrode Material: Value-Added High Surface Area Carbon

Supercapacitor-grade carbon prepared indigenously at large scale. Tunable performance, engineered to match specific requirements.

- **Surface area:** 1,548 m²/g
- **Bulk density:** 0.45 g/mL
- **Ash Content:** 0.38 wt%

Device Fabrication: 2.7 V, 150 F Cylindrical Cell

Economically viable process for fabricating cylindrical supercapacitors using our indigenous electrode materials.

- **Dimensions:** Length 47mm, Diameter 30mm
- **Energy density:** 5.2 Wh/kg
- **Power density:** 1.01 kW/kg
- **Capacity retention:** 162 F after 5,000 cycles

Application

- Regenerative braking
- Power backup
- High power application – Start and stop of engines, Forklifts

Supercapacitors Fabricated at CSIR-CECRI



Bio-derived Carbon Suitable for Supercapacitor

