

FABRICATION OF ENHANCED SUPERCAPACITORS USING ATOMIC LAYER DEPOSITION OF METAL OXIDE ON NANOSTRUCTURES

Tech ID: 23884 / UC Case 2014-095-0

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	9,805,880	10/31/2017	2014-095

BRIEF DESCRIPTION

Supercapacitors are electrochemical energy-storage devices that store charge by reversible adsorption of ions onto high-surface area, porous materials (known as “electric double layer capacitors”) or reversible surface reduction-oxidation (redox) reactions (known as “pseudo-capacitors”). With their high power density and long cycle stability, supercapacitors are well-suited to complement or replace batteries in a wide range of applications, including transportation, renewable energy, and portable electronics. High-performance supercapacitors are characterized by high specific capacitance, good stability over repeated cycling, and low series resistance.

UC Berkeley researchers and others developed a method to fabricate high surface area, high performance supercapacitor.

SUGGESTED USES

- » Supercapacitors
- » Energy-storage devices
- » Biosensors

ADVANTAGES

- » Ultra-high specific capacitance (100mF/cm² from prototype electrodes with a scan rate of 100mV/s)

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- PLASMONIC COFFEE-RING PATTERN DIAGNOSTIC DEVICES AND METHODS OF MAKING AND USING THEM
- Three-Dimensional Imaging Via Piezoelectric Micromachined Ultrasound Transducer
- Subcutaneous and Continuous Blood Pressure Monitoring by PMUTS
- Reconfigurable Soft Li-Ion Battery
- Wafer Level Chip Scale Packaging Technology For Integrated Mems Devices

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INVENTORS

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OTHER INFORMATION

CATEGORIZED AS

- » Energy
- » Storage/Battery

RELATED CASES

2014-095-0

