TECHNOLOGY

Polymeric Nanoscale Solid-State Battery

OVERVIEW

Laptop computers and mobile telephones have become smaller and faster. Unfortunately, the demand for battery power has not fallen; demand for power has increased and as the products decrease in size they approach a size limit dictated by the size of the battery.

Researchers at the University of Maryland are developing a nanoscale solid state battery whose electrochemical cell size can be as small as a 10 nanometers. The battery is polymer-based and contains a solid electrolyte. The advantage of such a polymer-based nanobattery is that it can be easily processed into a flexible sheet or coating. It is estimated that a 3.6 Volt potential applied to such a nanobattery device with an area of 9 square centimeters and a thickness of 100 micrometers can produce a charge capacity of 5 milli Ampere-hours per gram of material.

See US patent No. 7,063,918

For additional information contact the University of Maryland, Office of Technology Commercialization at 301-405-2555 or by e-mail at otc@umd.edu.

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Additional Information

INSTITUTION

University of Maryland, College Park

PATENT STATUS

Patent(s) pending

LICENSE STATUS

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CATEGORIES

- Microelectronics
- Nanotechnology + Nanoparticles + Nanomaterials

EXTERNAL RESOURCES

- US Patent 7,063,918

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