

FLEXIBLE SUPERCAPACITOR

TECHNOLOGY DESCRIPTION

Flexible supercapacitor is a device for storing electrical energy with rapid charge time, delivering high current on demand and long lifecycle.

TECHNOLOGY FEATURES

This technology exhibit excellent stability at various curvatures, versatile, portable and light-weight makes it easier for transportation. It can be applied to various surface curvatures and fast charging or discharging with excellent cyclic performance. The method used for the production of the supercapacitor is relatively simple and without any chemicals. It minimizes compartment size thus it is applicable for minimal physical space allocation. The flexible supercapacitor result in versatile and portable electronic devices and light weight electronic vehicles.

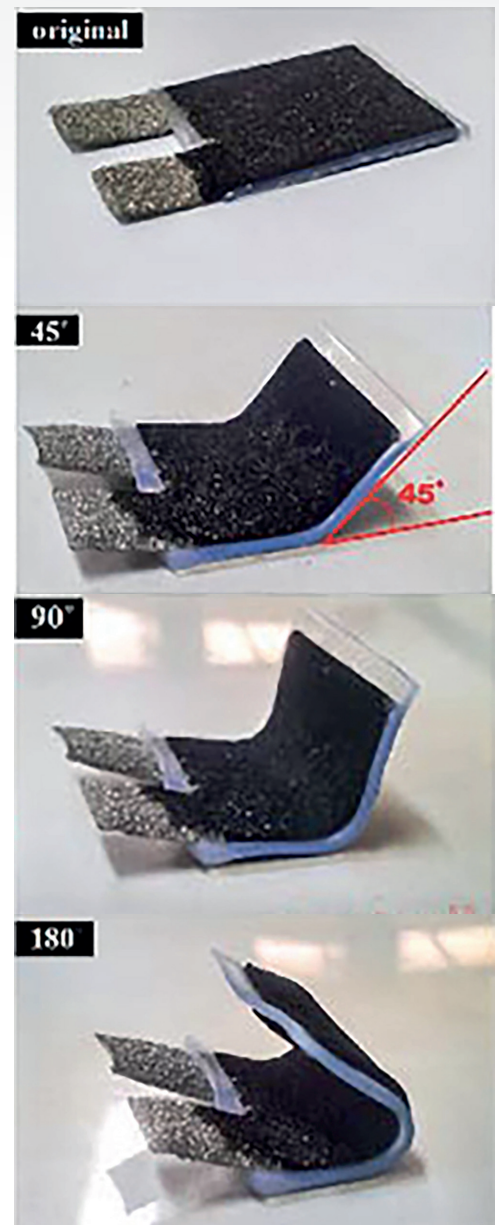
ADVANTAGES

- Facile, single-step and straightforward approach
- No hazardous chemicals
- Applicable for minimal physical space allocation
- Can be applied to various surface curvatures

INDUSTRY OVERVIEW

Prospects: Electric and Electronic device manufacturers

The global supercapacitor market size was recorded at roughly USD3.8 billion in 2014, with an expected CAGR of 21.3% or so for the next few years (2014-2019). The market for supercapacitors will more than double to \$836 million in 2018, up from \$466 million in 2013, Ultracapacitors will drive \$3.5 billion in energy storage revenues in 2020, accounting for 5% of the battery energy storage market in 2020. One of the key factors contributing to this market growth is the need for an environmentally friendly fuel source. In Malaysia, the development of supercapacitor is still in the early stage. In addition to benefiting from the physical properties of Graphene, Malaysian downstream application providers may also capture the benefits of a modest input cost advantage for the domestic production of Graphene.



Dr. Janet Lim Hong Ngee
Faculty of Science
hongngee@upm.edu.my