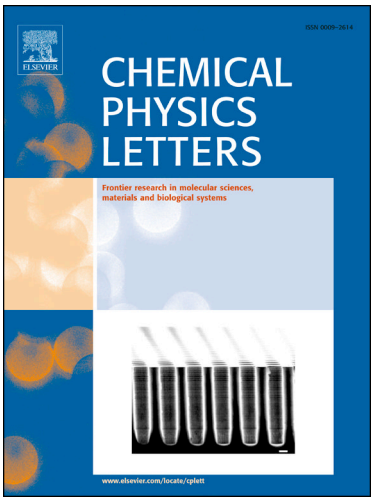

Research paper

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Thermally reduced graphite oxide-titanium dioxide composites for supercapacitors

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ABSTRACT

Thermally reduced graphite oxide and titanium dioxide (TRGO-TiO_2) composite is synthesized by using a simple chemical method for supercapacitor applications. The TRGO-TiO_2 composites have higher capacitance than that of each precursor, such as GO, TRGO, and TiO_2. Electrochemical performance of the composites with different weight ratio of TRGO to TiO_2 is also investigated, and optimal ratio for the best performance is 7 to 3, resulting in the specific capacitance of 380 Fg^{-1}. The best performance of the TRGO-TiO_2 composite is attributed to synergic effect of the high electrical conductivity supported by TRGO and electroactive property of TiO_2.

Keywords: Titanium dioxide, graphite oxide, reduced graphite oxide, supercapacitor

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