One-Step Electrochemical Synthesis and Assembly of MnO₂/Graphene and its Application for Supercapacitors

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doi: 10.20964/2020.02.09

Received: 19 June 2019 / *Accepted:* 7 August 2019 / *Published:* 31 December 2019

We developed a facile, rapid, scalable, and environmentally friendly route to synchronously achieve ultrathin, high-quality graphene and MnO₂ nanosheets, which spontaneously migrated and coassembled on a cathodic 3D Ni foam. The resultant 3D MnO₂/graphene electrodes exhibited excellent performance for a supercapacitor in terms of capacitance, rate capability and cycle life.

Keywords: Two-dimensional Nanosheet; Self-assembly; Graphene; MnO₂; Superconductors

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