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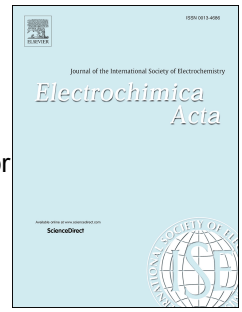

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Densely Packed Porous Graphene Film for High Volumetric Performance Supercapacitor

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Abstract

Improving volumetric capacitance of supercapacitor is important and challenging for practical application. Here, porous graphene oxide (PGO) is prepared through an efficient method at room temperature after etched by $Zn(CH_3COO)_2$ in several minutes. The obtained densely packed porous graphene film (PGF) was constructed by a template-assisted method. And the perforated PGF electrode material exhibits a high volumetric capacitance (C_V) of 318.8 F • cm^{-3} in 6.0 M KOH electrolyte at the current density of 1 A • g^{-1}. In addition, it exhibited excellent cycling