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Towards Benchmarking Electrode Preparation For Supercapacitor Application.

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Abstract:

This work aims towards the optimisation of electrode preparation for supercapacitor applications. Currently, different research groups are using different protocols for electrode preparation. However, we envisioned that the electrode preparation can immensely affect the supercapacitor performance. In this work, oxygen-functionalized few-layer graphene (OFG) has been used as an active material while binders (PVDF, Nafion and PTFE), drying temperature and solvents (ethylene glycol and NMP) have been varied. Electrochemical investigations have been carried out using cyclic voltammetry, galvanostatic charge/discharge and electrochemical impedance spectroscopy. Preliminary studies demonstrated that PVDF binder, drying temperature near to boiling point provides better electrochemical performance.

Scheme:



References:

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