**ABSTRACT**

Sodium ion capacitors are under extensive investigation as companionable pre-existing lithium ion batteries and sodium ion batteries. Finding a suitable host for sodium ion storage is still a major challenge. In this context, here we report a MoS2 nanoflowers@rGO composite produced *via* a hydrothermal method followed by an ultra sonication process as a sodium ion symmetric hybrid supercapacitor. The structural and electrochemical performances of the electrode material were investigated to establish its applicability in sodium ion capacitors. The electrochemical performance was evaluated using metallic sodium in a half cell configuration which delivered a maximum specific capacitance of 226 F g−1 at 0.03 A g−1. When examined as a symmetric hybrid electrode (full cell) it delivered a maximum capacitance of 55 F g−1 at 0.03 A g−1. This combination may be a new gateway for upcoming research work which deals with sodium ion storage applications. The results confirmed that the as-synthesized MoS2 nanoflowers@rGOheterostructure electrode exhibited notable electrochemical behaviour.