

# CAN RGO STORE SODIUM



In order to improve the specific capacity of intercalation electrodes for sodium-ion batteries, it is necessary to identify materials capable of storing Na<sup>+</sup> ions by activating multi-electron redox reactions.



The higher sodium insertion contents can be attributed to the storage on both sides of RGO layers. However, both the charge and discharge capacities reduce with cycling and the capacity stabilizes around the 30th cycle, where the capacity is approximately 30% of the initial value.



Sodium ion (Na<sup>+</sup>) storage and kinetics are of great importance for the development of high-performance sodium ion batteries. Herein, we report a composite of ultrafine V<sub>2</sub>O<sub>3</sub> nanoparticles evenly anchored into three layers of reduced graphene oxide (rGO).



Abstract. In order to improve the specific capacity of intercalation electrodes for sodium-ion batteries, it is necessary to identify materials capable of storing Na<sup>+</sup> ions by activating multi-electron redox reactions. Herein, we report a composite of ultrafine V<sub>2</sub>O<sub>3</sub> nanoparticles evenly anchored into three layers of reduced graphene oxide (rGO).



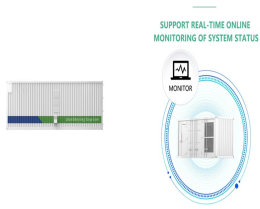
The Raman spectra of CoSe<sub>2</sub>/rGO and MoSe<sub>2</sub>/rGO are displayed in Figure S2b. The peaks around 1342.7 and 1583.2 cm<sup>-1</sup> are attributed to disorder-induced D band and the graphitic G band, respectively.



Exploitation of superior anode materials is a key step to realize the pursuit of high-performance sodium-ion batteries. In this work, a reduced graphene oxide-wrapped FeSe<sub>2</sub> (FeSe<sub>2</sub>@rGO) composite derived from FeSe<sub>2</sub> and rGO is synthesized.

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, rGO FeS<sub>2</sub>/MoS<sub>2</sub> i 1/4 ?FeS<sub>2</sub>/MoS<sub>2</sub>-rGO i 1/4 ?a?? FeS<sub>2</sub>/MoS<sub>2</sub> a?|