

One-pot synthesis of multidimensional structured 3D nanohybrid material for high performance energy storage

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Among the electrochemical energy storage devices, hybrid capacitor has attracted tremendous attention of scientific society due to its amazing feature of high power, good cycle life, tunable energy density, and environmental friendliness. Engineering of active, accessible and safe material with the simple approach is another area of interest in electrochemical energy storage technology. Last two decades, organic materials, especially carbon allotropes like reduced graphene oxide (rGO) and carbon nanotubes (CNTs) have played a great role to enhance performance of energy storage devices due to their special physical and chemical features. Herein, we have attempted one-pot facile synthesis approach to prepare 3D structured nanohybrid material, which have integrated above mentioned key features of electro-active material and thus offered best performance. Our material with new synthesis approach is able to offer optimistic and unmatched ultra-high electrochemical performance.