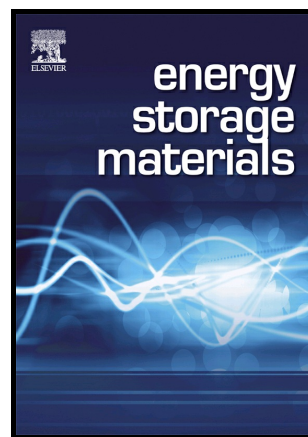


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Layered Conductive Polymer-Inorganic Anion Network for High-Performance Ultra-Loading Capacitive Electrodes

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Abstract

Conducting layered capacitive materials that utilize interlayer space to store charges usually exhibit higher areal and volumetric capacitive performance than porous carbons as a result of the bulk storage mechanism. Here, an organic-inorganic hybrid conducting layered material is designed through a 'bottom-up' strategy, and is synthesized facilely using a 'one-pot' approach. This material consists of periodically stacked nanosheets with a larger lamellar period of 11.81 Å. It is postulated that each nanosheet is composed of parallel oriented fully oxidized polyaniline (pernigraniline) molecular chains that are crosslinked by monomeric/oligomeric protonated tungstate molecules, both of which are self-organized through multiple side-chain hydrogen

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