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Few-Atomic-Layered Hollow Nanospheres Constructed from Alternate Intercalation of Carbon and MoS₂ Monolayers for Sodium and Lithium Storage

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Abstract

Despite high theoretical specific capacity and uniform interlayer channel for accommodation of ions, poor cycling stability and rate capacity have been identified as critical roadblocks to further development of MoS₂-based lithium ion batteries (LIBs) or sodium ion batteries (SIBs). In this study, few-atomic-layered MoS₂ hollow nanospheres with expanded interlayer spacing, due to alternate intercalation of N-doped monolayer carbon (m-C) between the adjacent MoS₂ monolayers, have been designed and synthesized via an annealing-followed

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