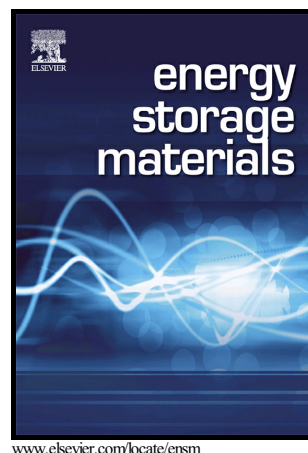


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Copper Silicate Nanotubes Anchored on Reduced Graphene Oxide for Long-Life Lithium-Ion Battery

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Abstract

Copper silicate (CSO) is a promising anode material for lithium-ion batteries (LIBs). It delivers high specific capacity; however, the capacity fades quickly because of its intrinsic poor electric conductivity and large volume variation during lithium ion insertion/extraction. Herein, a sandwich-like structure with CSO nanotubes grown on both sides of reduced graphene oxide (RGO) is designed to solve the capacity fading issue. The RGO not only serves as a soft and robust matrix to mitigate the large volume change during cycling but also acts as the electron highway. When applied as the anode material for LIBs, the as-obtained CSO/RGO sandwich-like structure

¹ These authors contributed equally to this work.

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