Preparation of Graphene Oxide Paper as an Electrode for Lithium-Ion Batteries Based on a Vacuum Filtration Method

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A conducting additive- and binder-free high-performance anode was prepared using freestanding graphene-graphene oxide paper (graphene/GO paper) for use in lithium-ion batteries (LIBs). The LIB anode comprised of graphene/GO paper exhibited a high rate performance and a high specific capacity of 702 mA h/g. This graphene/GO paper electrode fabricated by the facile assembly of graphene derivatives could be used to prepare flexible energy storage apparatuses.

Keywords: Lithium ion battery; Filtration method; Graphene paper; Graphene oxide; Energy storage