

Electrophoretic deposition of reduced graphene oxide and carbon black composite for energy devices

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Reduced graphene oxide, a single layer of graphite oxide reduced by hydrazine, has been researched a lot as one of the most potential electrode materials for its high specific surface area. Carbon black has the advantage of high conductivity so it has been largely used as the electrode conductor as well as the spacer. Electrophoretic deposition has been reported to be applied in supercapacitor electrode fabrication. It has the advantage of high deposition rate, good thickness controllability and uniformity and easily scale up. Our group has successfully fabricated the reduced graphene oxide/carbon black interlayered composite by electrophoretic deposition. This kind of structure can offer large surface area and good conductivity, indicating a high capacitance electrode material.