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Spinel CuCo2O4 Nanoparticles Supported on N-Doped Reduced Graphene Oxide: A Highly Active and Stable Hybrid Electrocatalyst for the Oxygen Reduction Reaction

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Abstract

In this Letter, for the first time, we demonstrated the preparation of a highly efficient electrocatalyst, spinel CuCo₂O₄ nanoparticles supported on N-doped reduced graphene oxide (CuCo₂O₄/N-rGO), for an oxygen reduction reaction (ORR) under alkaline media. The hybrid exhibits higher ORR catalytic activity than CuCo₂O₄ or N-rGO alone, the physical mixture of CuCo₂O₄ nanoparticles and N-rGO, and Co₃O₄/N-rGO. Moreover, such a hybrid affords superior durability to the commercial Pt/C catalyst.

Keywords

KeyWords Plus: NITROGEN; ELECTRODES; BATTERIES; COBALT; CO3O4

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