

Intrinsic structure ZnCo layered double hydroxide electrocatalysts through effective synthetic method for oxygen evolution reaction

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Recently layered double hydroxide (LDH) materials composed of transition metal such as Ni, Fe and Co are widely used as electrocatalysts for oxygen evolution reaction (OER). Nevertheless enormous efforts have been committed, there are still fatal bottlenecks that limit understand comprehensive characterizations of LDH. This report suggests LDH based on Zn synthesized by method that minimized impurities and mass production. Furthermore, try to figure out exact characterization of synthesized LDH and visualize the structure through various analysis equipment. Using this embracive analysis, it is obvious that our ZnCo LDH have different structure compared to conventional LDH and consist of only divalent metal cations. For these reasons, it has similar or better efficiency than IrO₂, RuO₂ and reported LDH.

Keywords: ZnCo LDH, comprehensive analysis, oxygen evolution reaction (OER)