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Title: Hollow CeO₂@Co₂N Nanosheets Derived from Co-ZIF-L for Boosting the Oxygen Evolution Reaction

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Abstract: Rational design of highly active electrocatalysts for the oxygen evolution reaction (OER) is critical to improving overall electrochemical water splitting efficiency. This study suggests hollow CeO₂@Co₂N nanosheets synthesized using Co-ZIF-L as a precursor, followed by a hydrothermal reaction and a nitridation process as very attractive OER catalysts. The increased activity is supposed to be due to nitridation and strong electronic interaction between CeO₂ and Co₂N that contribute to the formation of active CoOOH phase. The synthesized CeO₂@Co₂N exhibits low overpotentials of 219 and 345 mV at OER current densities of 10 and 100 mA cm⁻², respectively, as well as a long-term durability of 30 h at a comparatively high current density of 100 mA cm⁻².

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