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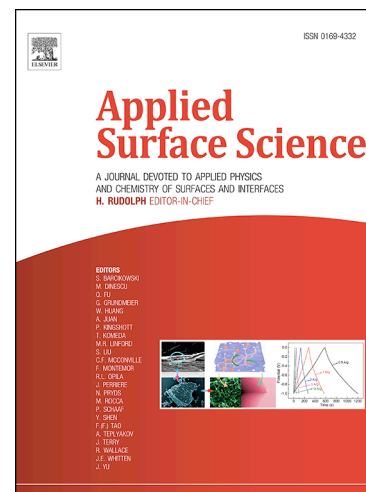
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Bimetallic CoFeP hollow microspheres as highly efficient bifunctional electrocatalysts for overall water splitting in alkaline media

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Abstract

The ingenious design and synthesis of bifunctional electrocatalysts with high activity and robust stability for hydrogen evolution reaction and oxygen evolution reaction (HER and OER) is desirable and challenging. Herein, bimetallic phosphides CoFeP with hollow microspheres structure has been synthesized through a facile gas phosphorization as bifunctional electrocatalyst for overall water splitting. SEM and TEM demonstrate the formation of uniform hollow microspheres of CoFeP. The hollow structure of CoFeP is helpful to increase the exposed actives and the larger contact surface with electrolyte. The bimetallic composites can provide the better intrinsic activity. Compared with single metallic phosphides CoP and FeP, the obvious enhancement of electrocatalytic performances of CoFeP can be observed. The electrochemical results show that the bimetallic CoFeP hollow microspheres only

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