

Supporting Information for

Few-layer black phosphorus and boron-doped graphene based heteroelectrocatalyst for enhanced hydrogen evolution

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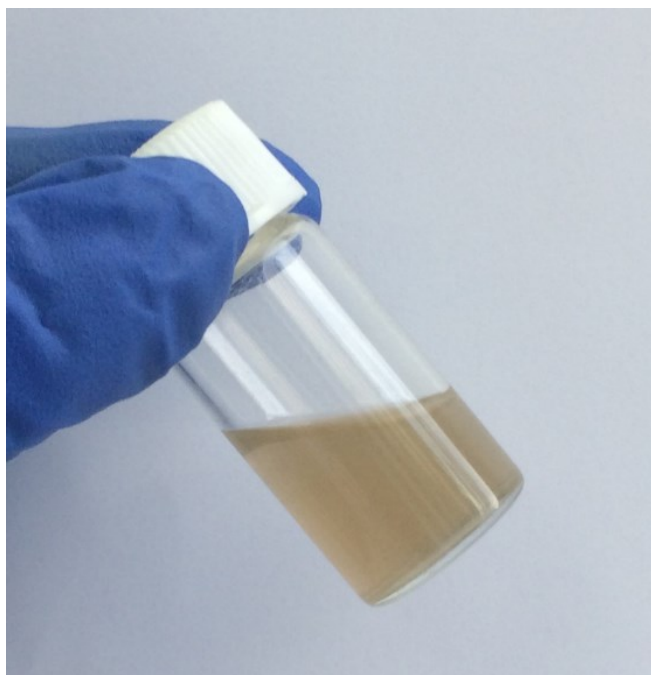


Fig. S1 Photograph of FL-BP solution in a mixed ethanol/water solvent (4:1 v/v) prepared using a liquid-phase exfoliation of bulk BP.

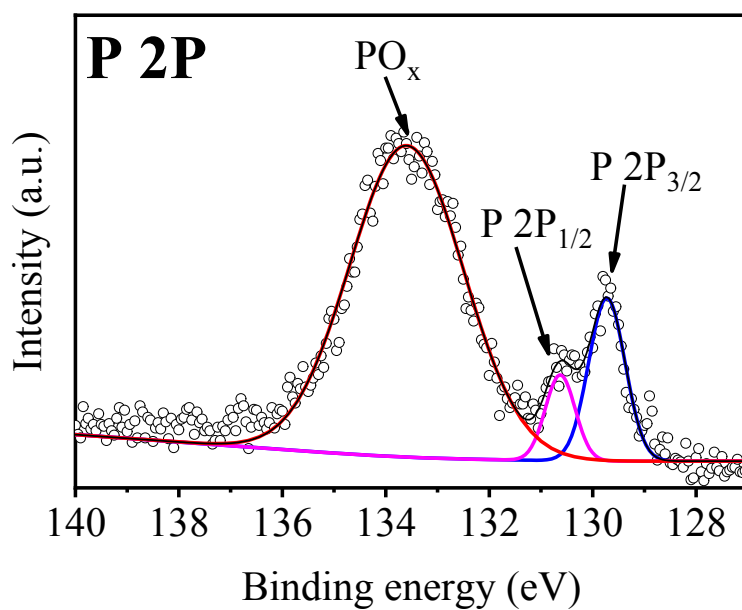


Fig. S2 High-resolution X-ray photoelectron spectroscopy P 2p spectrum of oxidized few-layer black phosphorus (FL-BP).

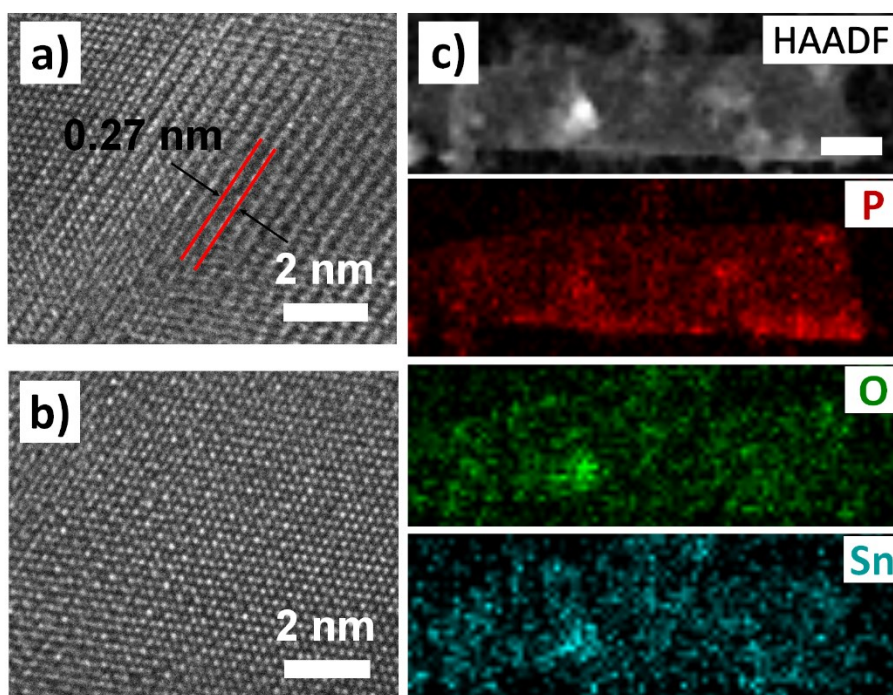


Fig. S3 (a and b) High-resolution transmission electron microscopy (HRTEM) images of FL-BP nanosheet. (c) High-angle annular dark-field-scanning transmission electron microscope (HAADF-STEM) image (scale bar: 100 nm) of FL-BP, and the corresponding elemental mapping images for P, O, and Sn elements.

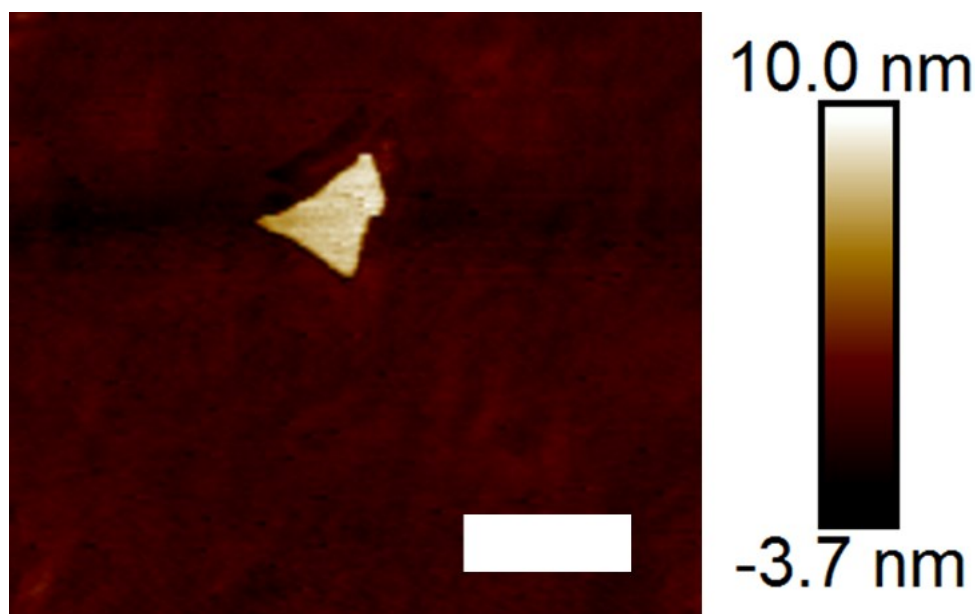


Fig. S4 Atomic force microscopy (AFM) image of FL-BP nanosheets. Scale bar: 500 nm. Thickness: 7.5 nm.

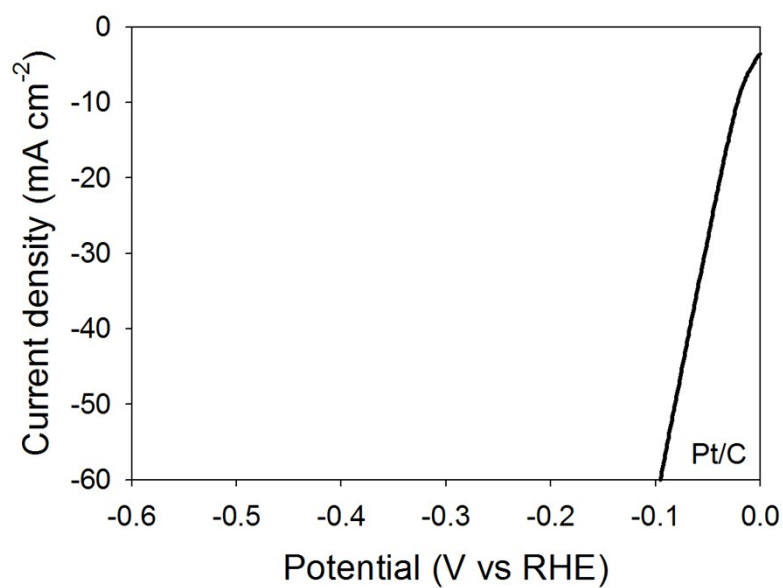


Fig. S5 Linear sweep voltammetry (LSV) curve of Pt/C electrocatalyst in 0.5 H₂SO₄.

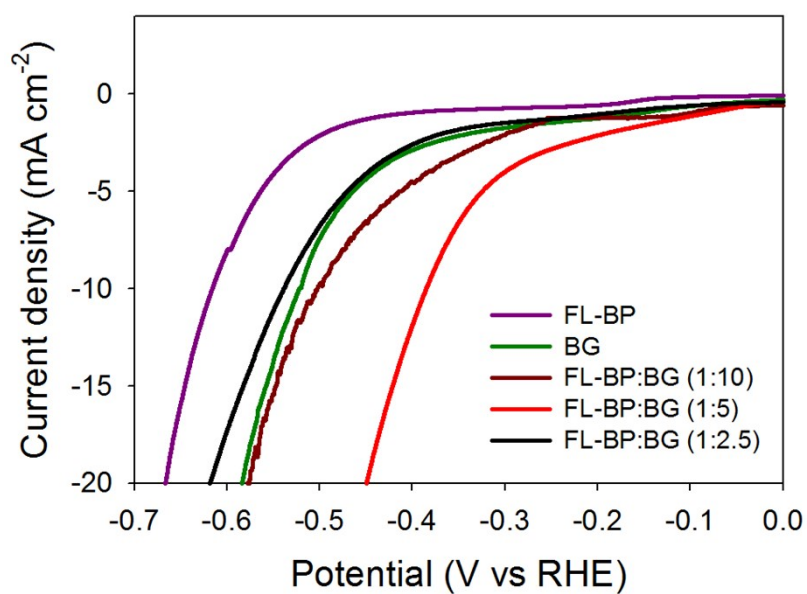


Fig. S6 LSV curves of FL-BP, BG and their hybrid electrocatalysts with different contents.