Supporting Information

FeP/Ni₂P Nanosheet Arrays as High-Efficiency Hydrogen Evolution Electrocatalysts

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Fig. S1 EDS elemental mapping images of FeP/Ni$_2$P/CP. (a) overlay, (b) Fe element, (c) Ni element, (d) P element.

Fig. S2 SEM images of (a) FeP/CP-NA, (b) FeP/CP, (c) Ni$_2$P/CP, (d) FeP/Ni$_2$P/CP.
Fig. S3 XPS spectra of Ni(OH)$_2$/CP and FeOOH/Ni(OH)$_2$/CP precursor.

Fig. S4 (a) LSV curves of FeP/Ni$_2$P/CP, FeP/CP, Ni$_2$P/CP, FeP/CP-NA and FeP/Ni$_2$P/CP-NA. (b) Corresponding $\eta_{10}$ and $\eta_{100}$. (c) Plots of specific current densities ($I_s$) of FeP/Ni$_2$P/CP, FeP/CP and Ni$_2$P/CP. The electrolyte is 0.5 M H$_2$SO$_4$.

Fig. S5 (a) LSV curves of FeP/Ni$_2$P/CP, FeP/CP, Ni$_2$P/CP, FeP/CP-NA and FeP/Ni$_2$P/CP-NA. (b) Corresponding $\eta_{10}$ and $\eta_{100}$. (c) Plots of specific current densities ($I_s$) of FeP/Ni$_2$P/CP, FeP/CP and Ni$_2$P/CP. The electrolyte is 1.0 M KOH.
Fig. S6 simulated DOS of the Fe-3\(d\) orbital, Ni-3\(d\) orbital and P-3\(p\) orbital in FeP/Ni\(_2\)P.

Fig. S7 Optimized structure of H\(_{ad}\) on (a) FeP(211) and (b) Ni\(_2\)P(111).