Supporting Information

Simultaneous Manipulation of Ion Doping and Cocatalyst Loading in Mn$_{0.3}$Cd$_{0.7}$S Nanorods toward Significantly Improved H$_2$ Evolution

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Fig. S1. XRD pattern of sample.

Fig. S2. XPS spectra of (a) Mn 2p, (b) Cd 3d, (c) S 2p, (d) Ni 2p, (e) P 2p of Ni$_3$P/Ni$_{2+}$-Mn$_{0.3}$Cd$_{0.7}$S-10 at different etching depth.
**Fig. S3.** TEM images of (a, b) Ni$_2$P/Ni$^{2+}$-Mn$_{0.3}$Cd$_{0.7}$S-10.

**Fig. S4.** H$_2$ evolution rate of composites.

**Fig. S5.** The H$_2$ evolution rate of Ni$_2$P/Ni$^{2+}$-Mn$_{0.3}$Cd$_{0.7}$S-10 in different sacrifice reagent.
Fig. 56. Mott-Schottky plots of (a) Mn$_{0.3}$Cd$_{0.7}$S, (b) Ni$_2$P and (c) Ni$_2$P/Ni$^{2+}$-Mn$_{0.3}$Cd$_{0.7}$S-10.