

Supporting Information

Binary nickel iron phosphide composites with oxidized surface groups as efficient electrocatalysts for oxygen evolution reaction

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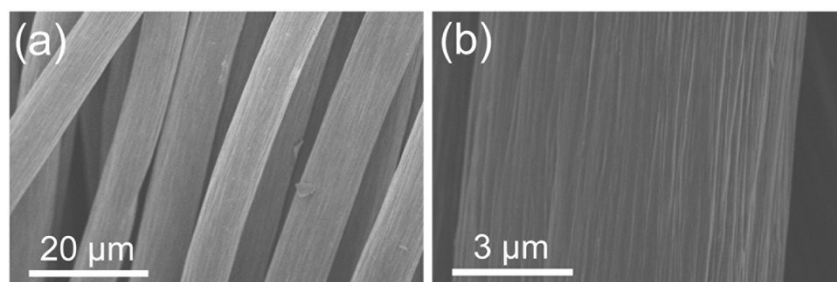


Figure S1. SEM images of carbon cloth.

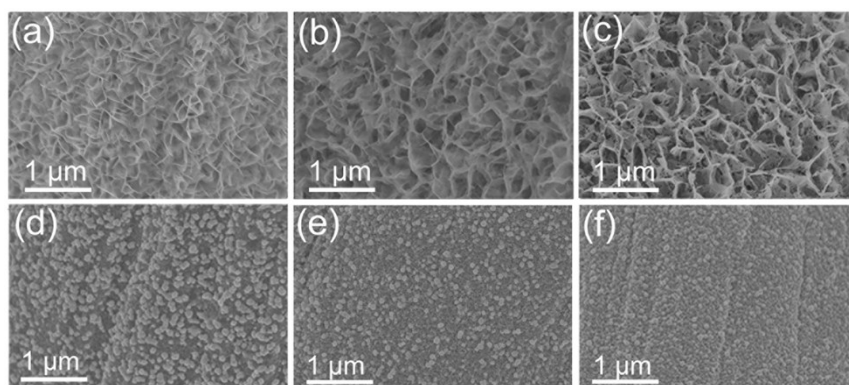


Figure S2. SEM images of (a) NiOH/CC, (b) NiO/CC and (c) NiP/CC. SEM images of the (d) FeOH/CC, (e) FeO/CC and (f) FeP/CC.

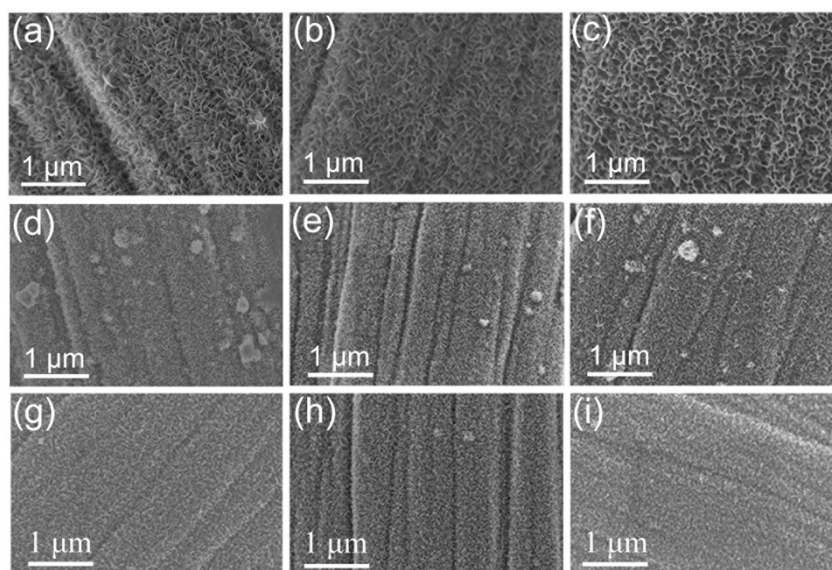


Figure S3. SEM images of (a) NiFeOH-41/CC, (b) NiFeO-41/CC, (c) NiFeP-41/CC, (d) NiFeOH-11/CC, (e) NiFeO-11/CC, (f) NiFeP-11/CC, (g) NiFeOH-14/CC, (h) NiFeO-14/CC and (i) NiFeP-14/CC

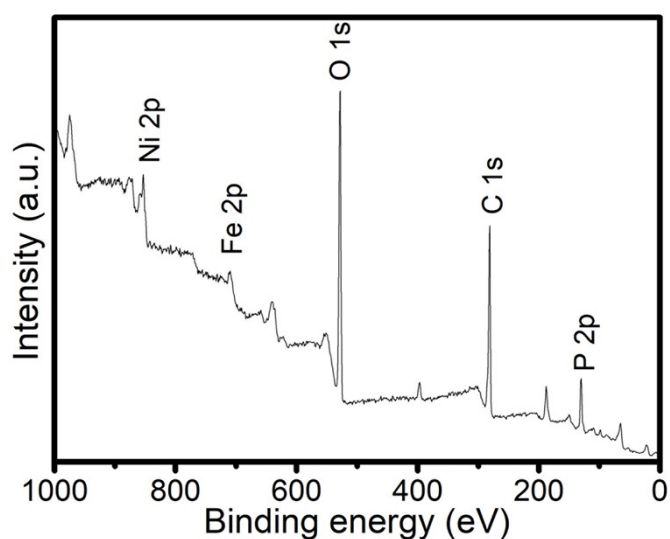


Figure S4. XPS survey of NiFeP-64/CC.

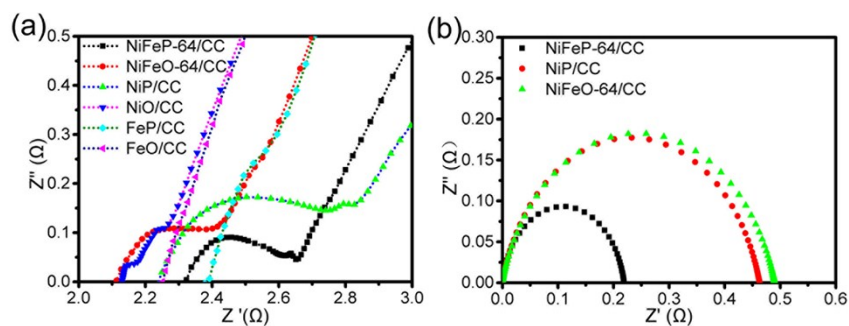


Figure S5. (a) The electrochemical impedance spectroscopy and (b) the fitted EIS spectra.

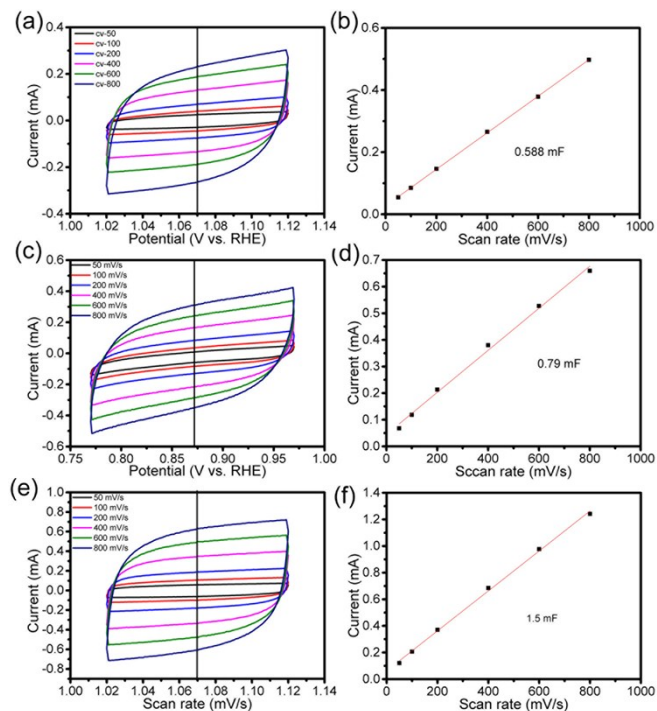


Figure S6. (a) CV curves, (b) current vs. scan rate plots of NiFeP-64/CC. (c) CV curves, (d) current vs. scan rate plots of NiFeO-64/CC. (e) CV curves, (f) current vs. scan rate plots of NiFeP-64/CC after OER for 50 h.

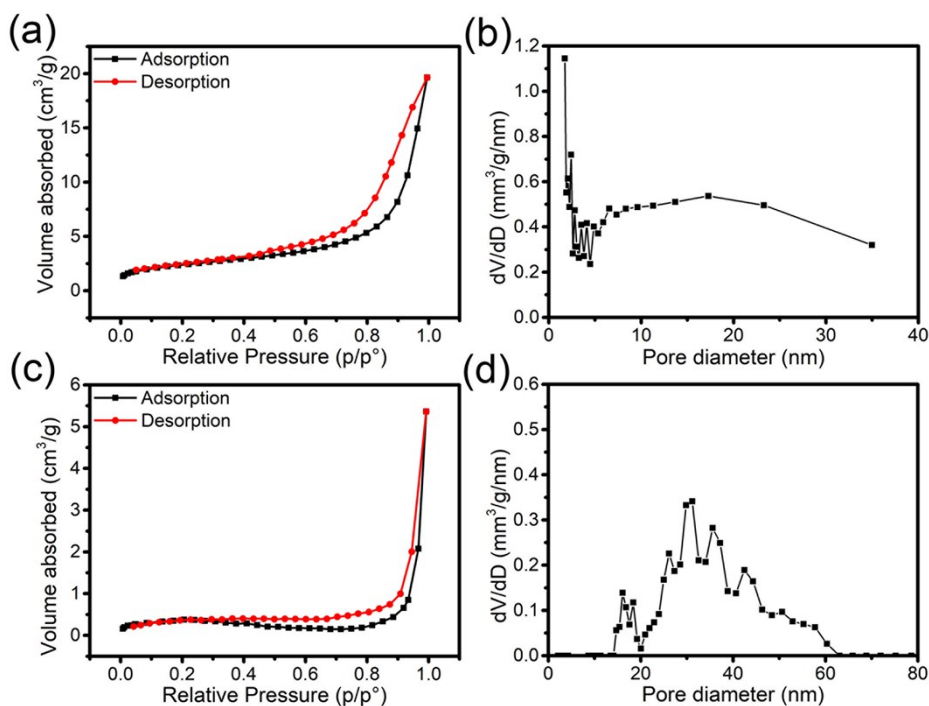


Figure S7. N₂ adsorption–desorption isotherms for samples of (a) NiFeP-32/CC, (c) NiFeO-32/CC. The corresponding pore size distribution for samples of (b) NiFeP-32/CC, (d) NiFeO-32/CC.

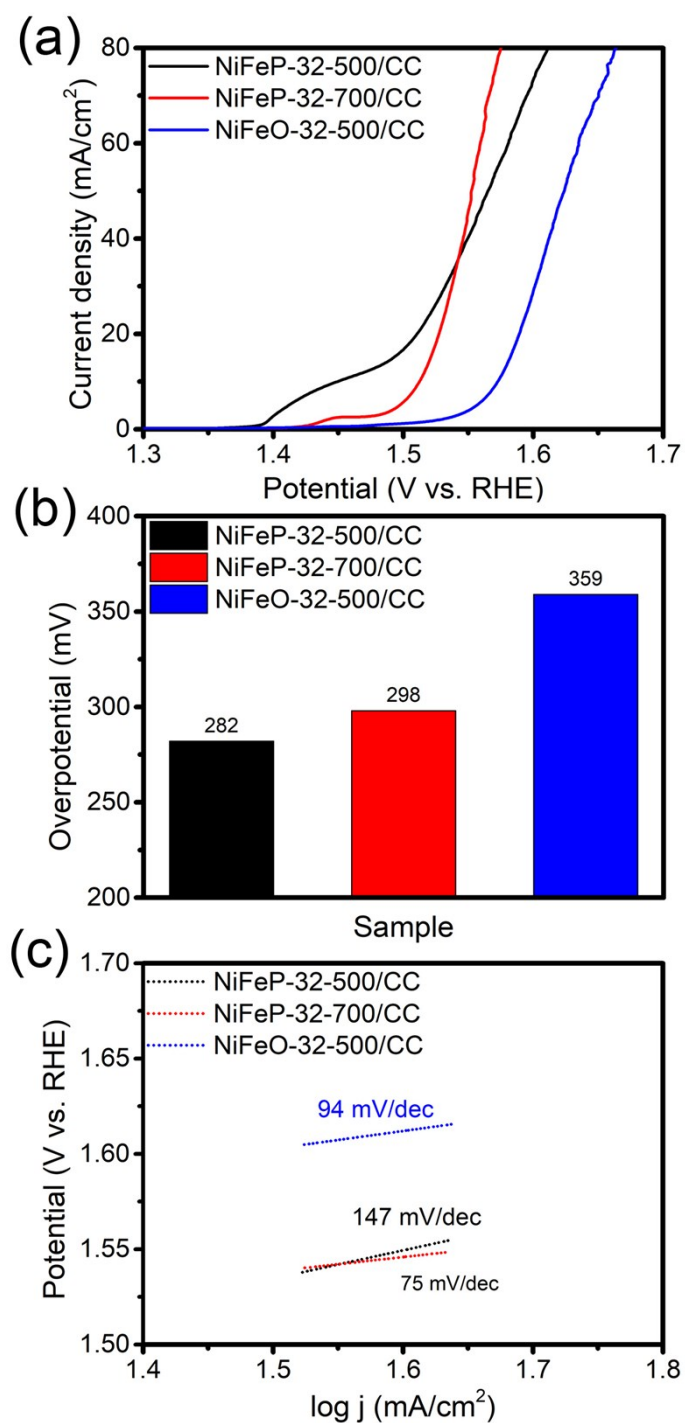


Figure S8. (a) Polarization curves obtained for the NiFeP-32-500/CC, NiFeP-32-700/CC and NiFeO-32-500/CC. (b) The corresponding overpotential of the as-prepared catalysts obtained at current density of 20 mA/cm^2 . (c) The corresponding Tafel plots of as-prepared catalysts.