

Electronic Supplementary Information (ESI) for
Photothermally Boosted Water Splitting Electrocatalysis by
Broadband Solar Harvesting Nickel Phosphide within
Quasi-MOF

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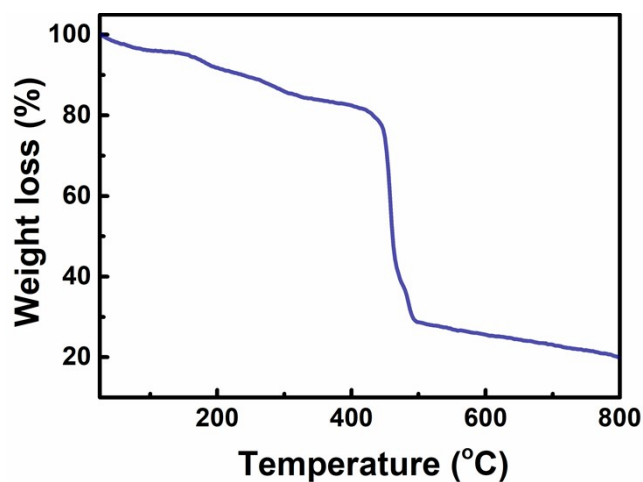


Fig. S1 TGA curve of the Ni-BDC under N₂ atmosphere.

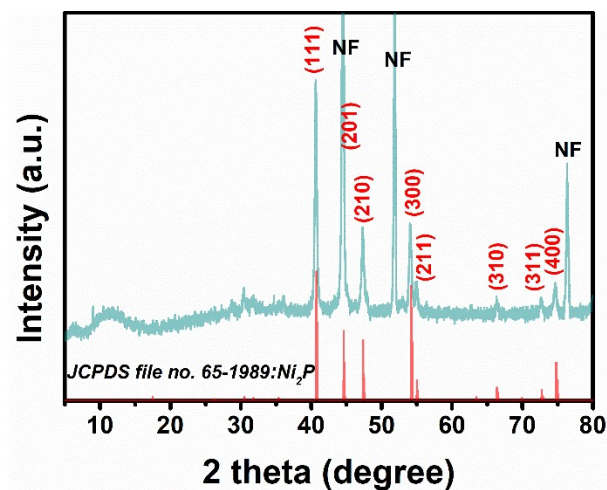


Fig. S2 XRD pattern of Ni₂P@quasi-Ni-BDC/NF

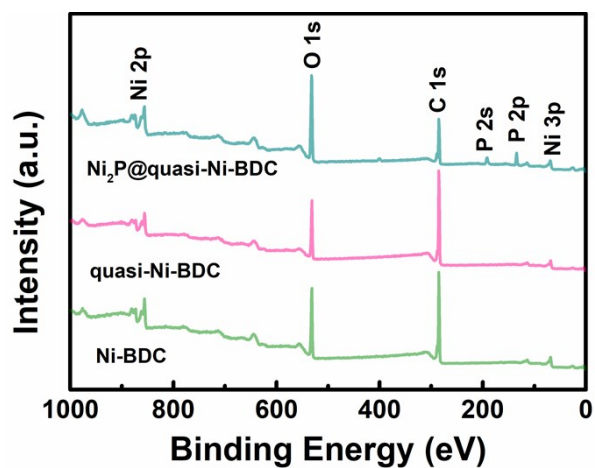


Fig. S3 Survey XPS spectra of Ni-BDC, quasi-Ni-BDC and Ni₂P@quasi-Ni-BDC

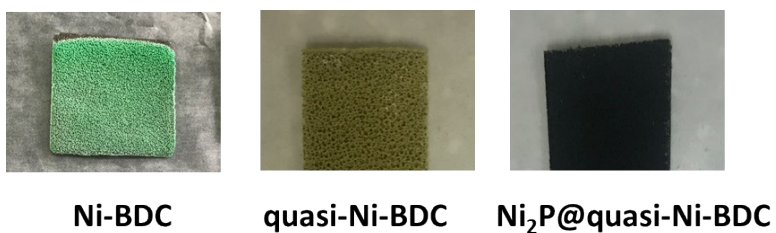


Fig. S4 Digital photographs of Ni-BDC/NF, quasi-Ni-BDC/NF and Ni₂P@quasi-Ni-BDC/NF

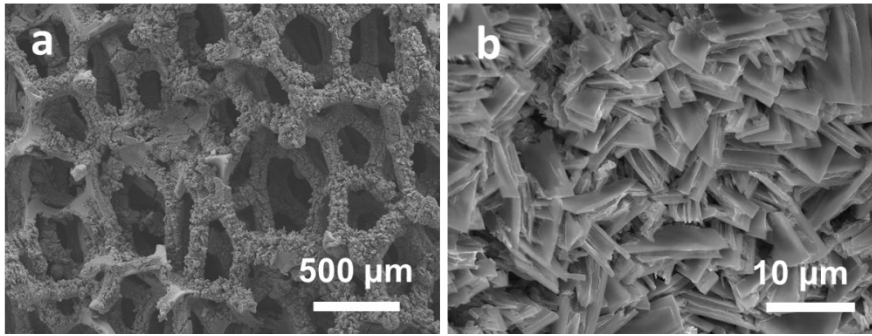


Fig. S5 SEM images of Ni-BDC/NF

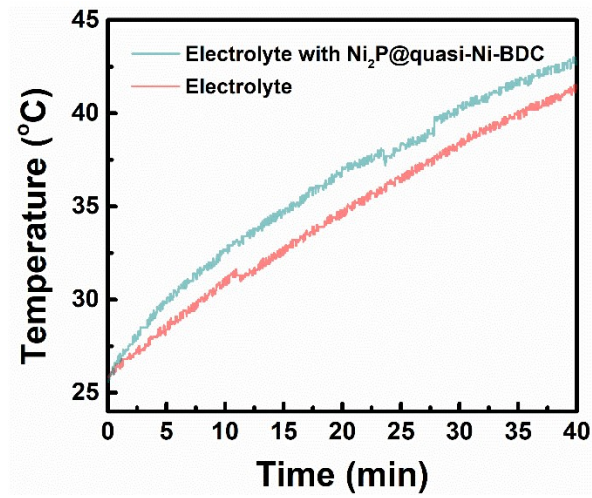


Fig. S6 Temperature change curves of electrolyte with or without Ni₂P@quasi-Ni-BDC/NF under light illumination

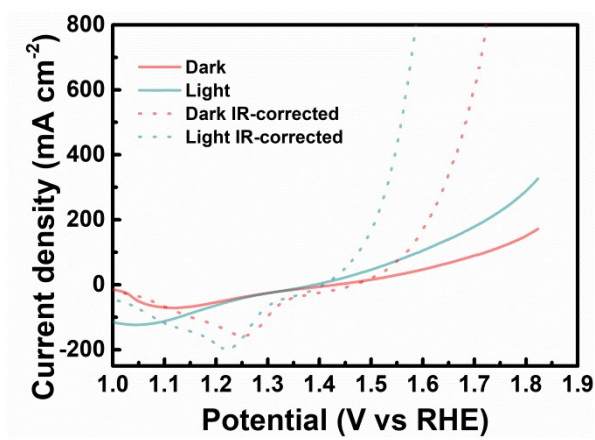


Fig. S7 LSV curves of Ni₂P@quasi-Ni-BDC/NF under dark and light illumination with and without iR compensation

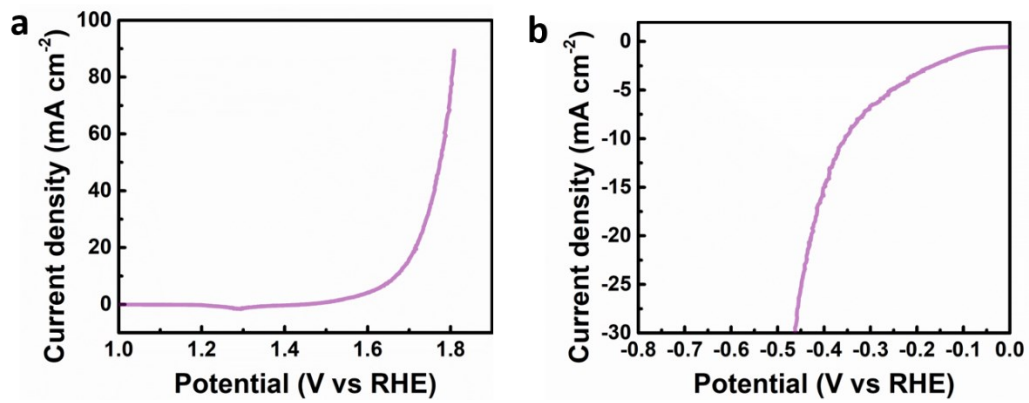


Fig. S8 LSV curves of quasi-Ni-BDC/NF under dark: (a) OER and (b) HER

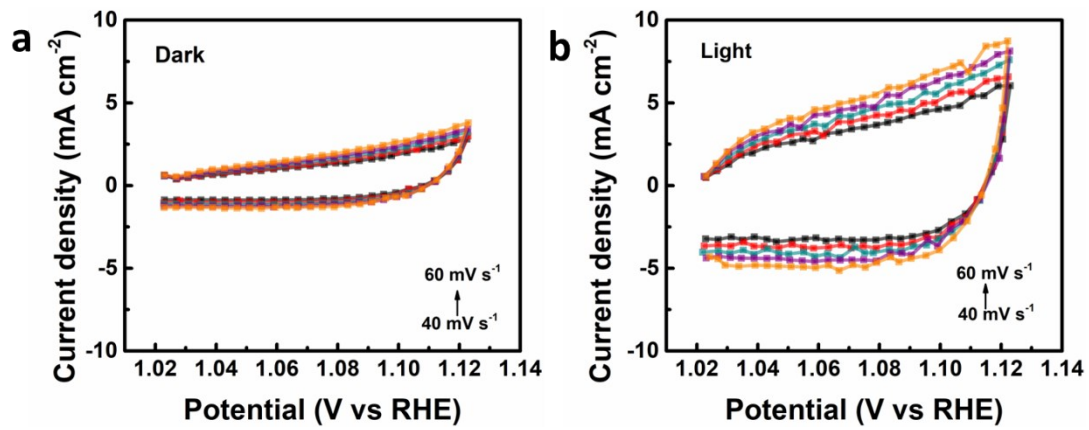


Fig. S9 CVs of Ni₂P@quasi-Ni-BDC/NF under dark (a) and light illumination (b) at scan rates of 40 to 60 mV s⁻¹ at 1.023 to 1.123 V vs RHE

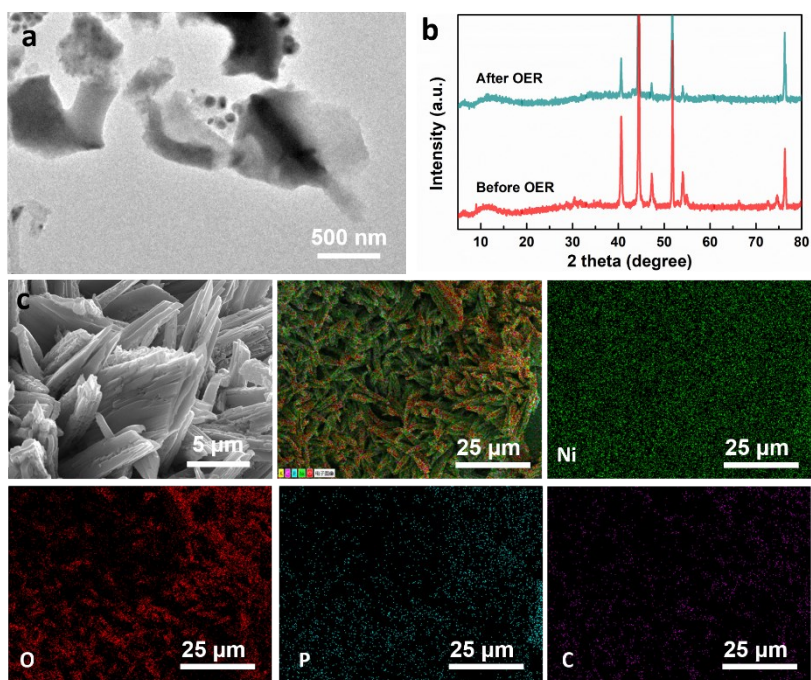


Fig. S10 TEM image (a), XRD pattern (b) and SEM-EDS mapping images (c) of $\text{Ni}_2\text{P}@$ quasi-Ni-BDC/NF after OER

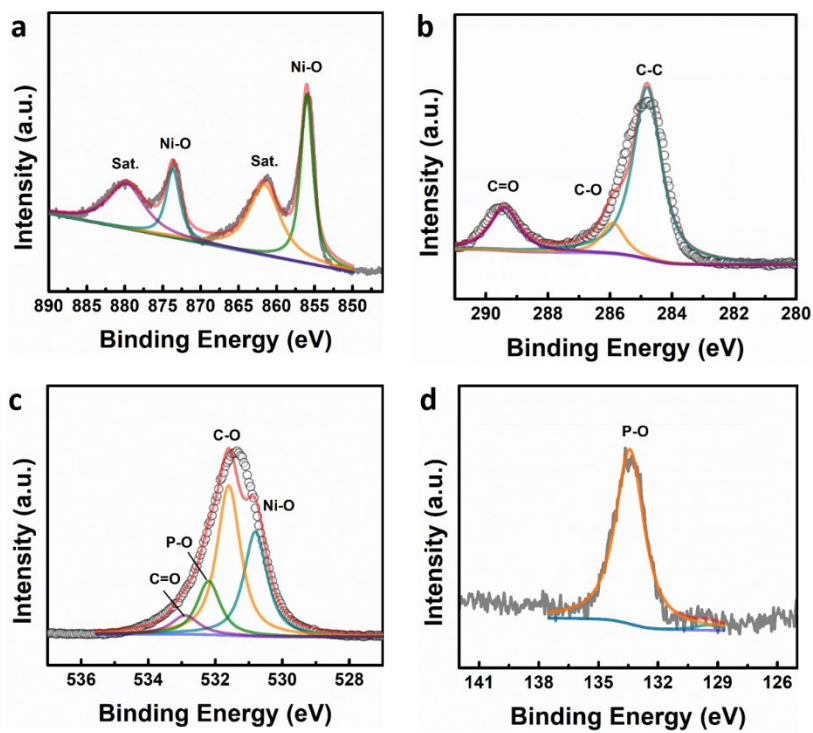


Fig. S11 XPS spectra of $\text{Ni}_2\text{P}@$ quasi-Ni-BDC after OER: (a) Ni 2p, (b) C 1s, (c) O 1s and P 2p

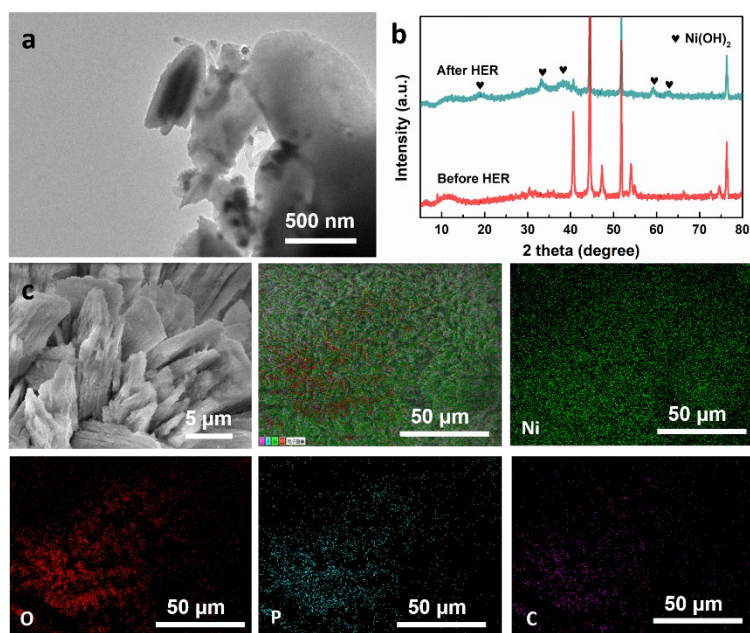


Fig. S12 TEM image (a), XRD pattern (b) and SEM-EDS mapping images (c) of Ni₂P@quasi-Ni-BDC/NF after HER

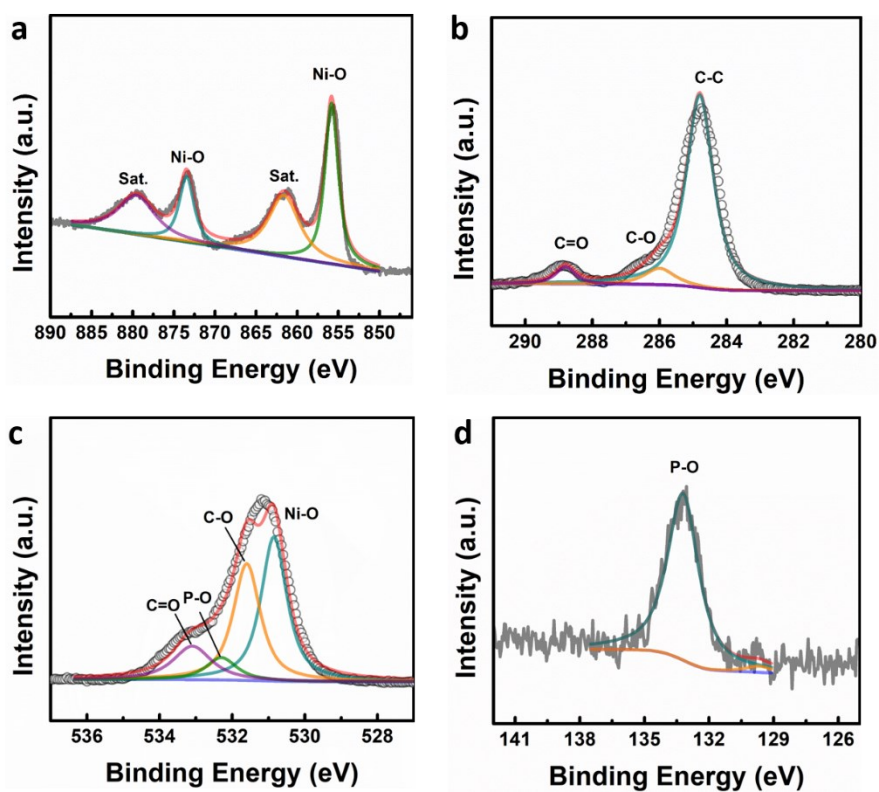


Fig. S13 XPS spectra of Ni₂P@quasi-Ni-BDC after HER: (a) Ni 2p, (b) C 1s, (c) O 1s and P 2p