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Supporting Information

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Nickel Nitride Particles Supported on 2D Activated Graphene–Black Phosphorus Heterostructure: An Efficient Electrocatalyst for the Oxygen Evolution Reaction

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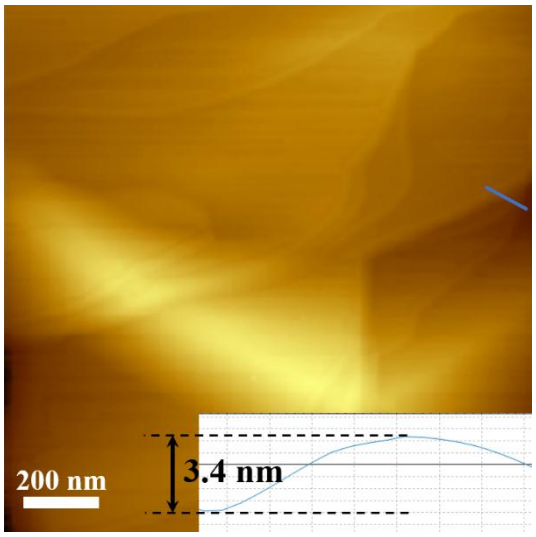

Figure S1. AFM image of the BP nanoflakes.

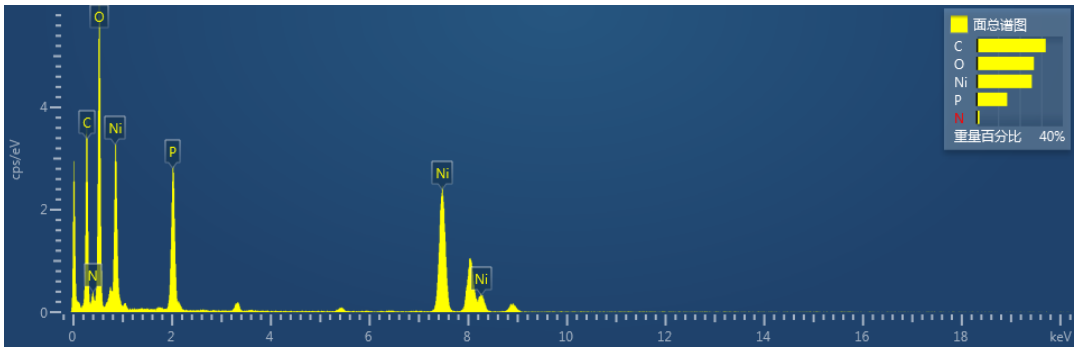

Figure S2. EDS spectrum of the region shown in **Figure 3**a.

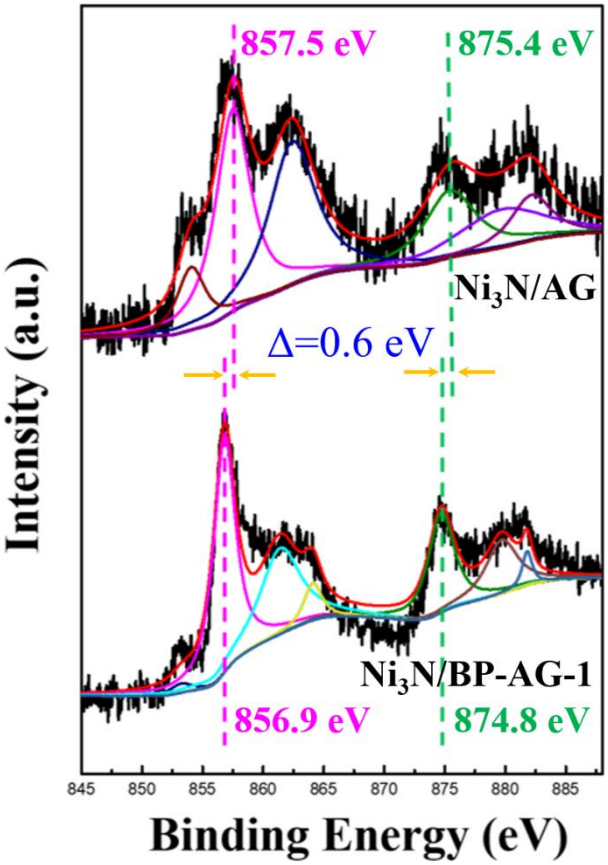

Figure S3. Ni 2p XPS spectra of Ni_3N/BP-AG-1 and Ni_3N/AG.

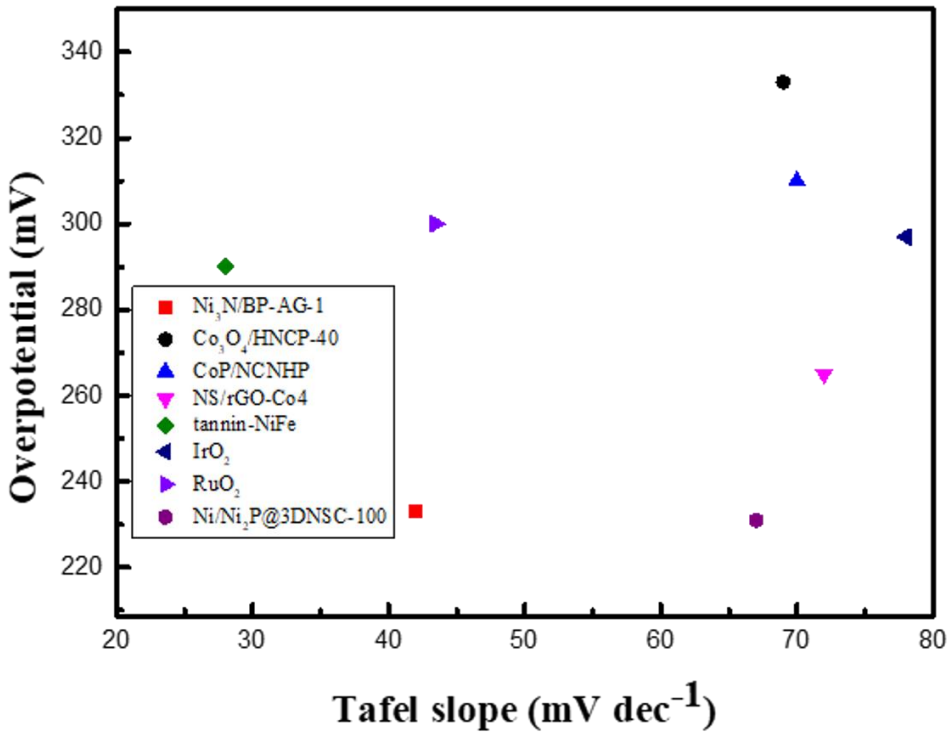

Figure S4. Contrast of property for OER between the as-prepared Ni_3N/BP-AG-1 and other electrocatalysts in literatures. All tests were performed in 1M KOH.

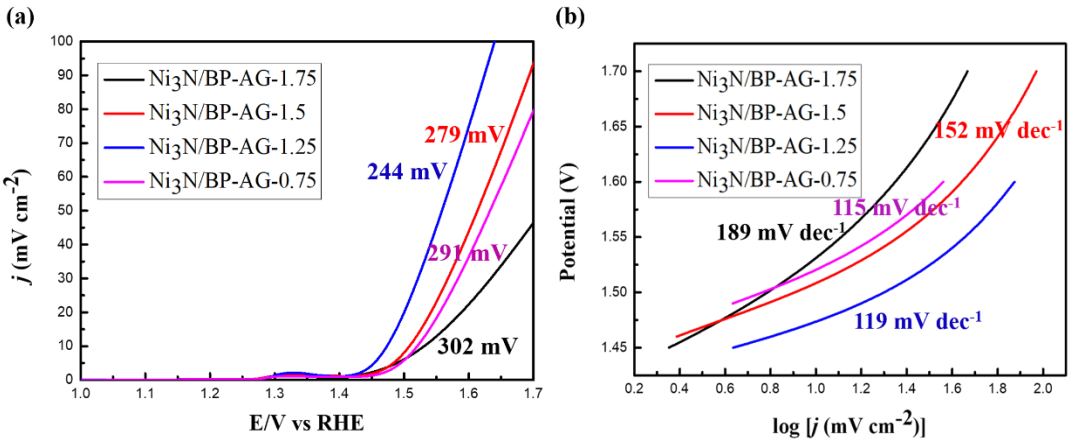

Figure S5. (a) IR compensated polarization curves of the Ni_3N/BP-AG-1.75, Ni_3N/BP-AG-1.5, Ni_3N/BP-AG-1.25 and Ni_3N/BP-AG-0.75 in 1 M KOH, scan rate: 5 mV s^{-1}, (b) Tafel slopes.

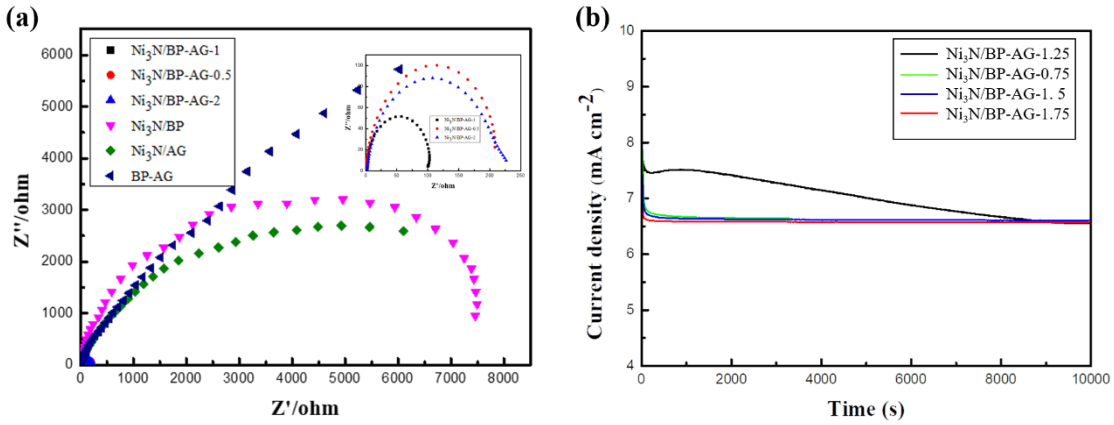

Figure S6. (a) Corresponding Nyquist plots, and (b) I-t curves obtained for OER with other ratios.

(Inset of (a): the magnification of the Nyquist plots)

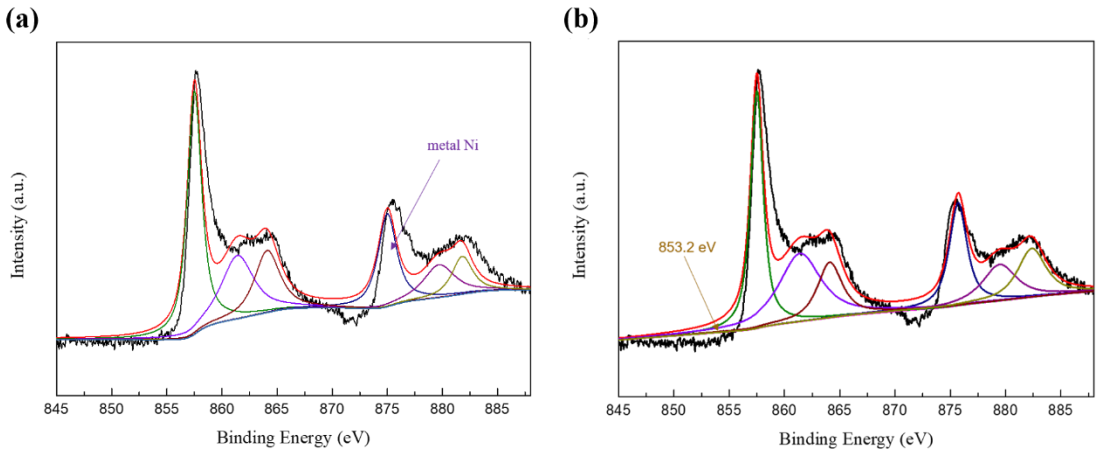

Figure S7. Ni 2p XPS spectra of (a) Ni_3N/BP-AG-2 and (b) Ni_3N/BP-AG-0.5.

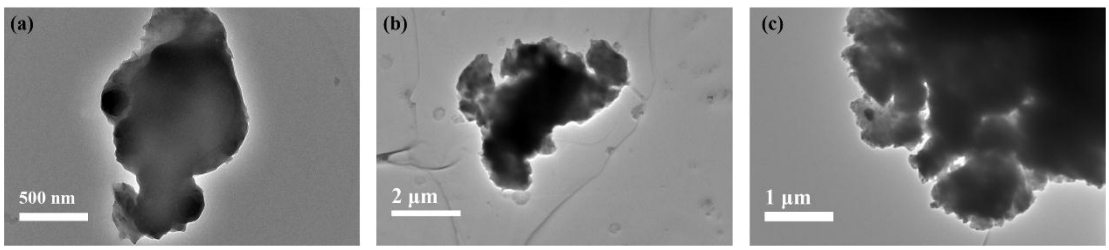

Figure S8. TEM images of (a, b) Ni_3N/BP-AG-2 and (c) Ni_3N/BP-AG-0.5.