## Synergistic NiO/Fe<sub>2</sub>O<sub>3</sub> heterostructure enhanced electrocatalytic performance in dye-sensitized solar cells

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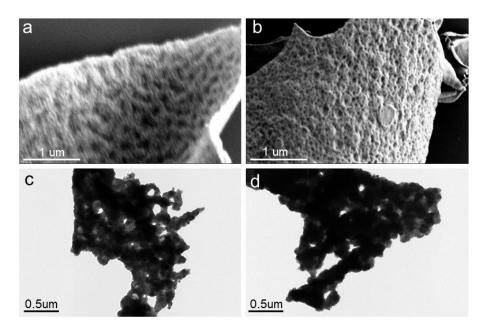


Fig.S(1a and 1b) The SEM images of NiO@NC and Fe<sub>2</sub>O<sub>3</sub>@NC. Fig.S (1c and 1d) the TEM images of NiO@NC and Fe<sub>2</sub>O<sub>3</sub>@NC

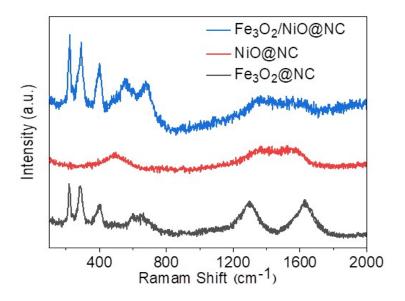


Fig.S2 the Raman of NiO@NC, Fe<sub>2</sub>O<sub>3</sub>@NC and NiO/Fe<sub>2</sub>O<sub>3</sub>@NC.

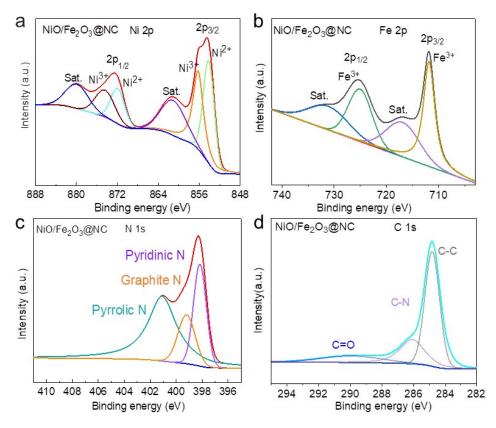


Fig.S3 (a) XPS spectra of Ni 2p for NiO/Fe<sub>2</sub>O<sub>3</sub>@NC. (b) XPS spectra of Fe 2p for NiO/Fe<sub>2</sub>O<sub>3</sub>@NC. (c) XPS spectra of N 1s for NiO/Fe<sub>2</sub>O<sub>3</sub>@NC. (d) XPS spectra of C 1s for NiO/Fe<sub>2</sub>O<sub>3</sub>@NC.