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Supporting Information

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Figure S1 SEM image of the composite photoanode.



Figure S2 TEM images of (a) SnO₂/CeO₂:Yb,Er HNSs and (b) CeO₂:Yb,Er.



Figure S3 XRD spectra of (a) CeO₂:Yb,Er, (b) SnO₂/CeO₂:Yb,Er HNSs.



Figure S4 TEM image of SnO₂ HNSs.



Figure S5 The equivalent circuit of the DSSCs.