

Electronic supplement information

Structure engineering of core/shell Si@Ta₃N₅
heterojunction nanowires array for
photoelectrochemical water oxidation

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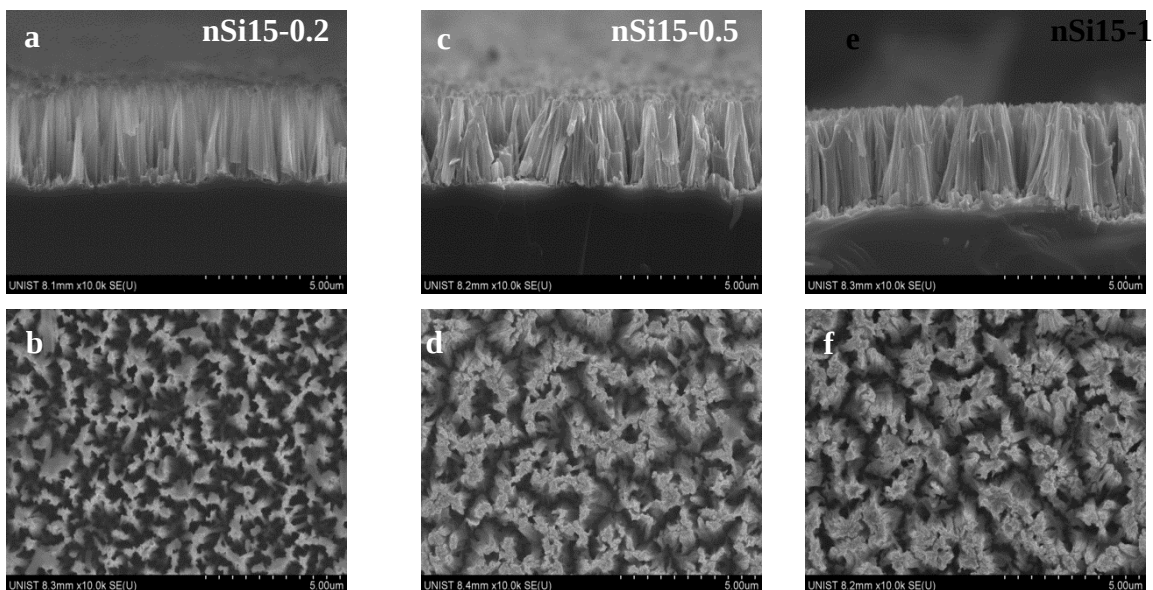


Figure S1. Cross-sectional and surface SEM images of (a, b) nSi15-0.2, (c, d) nSi15-0.5, (e, f) nSi15-1, respectively.

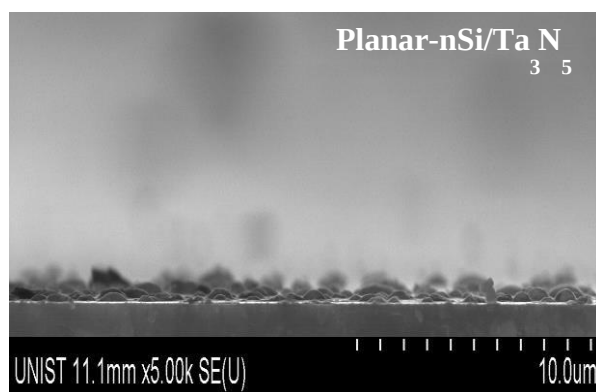


Figure S2. Cross-sectional SEM images of the planar Si@Ta₃N₅ composite.

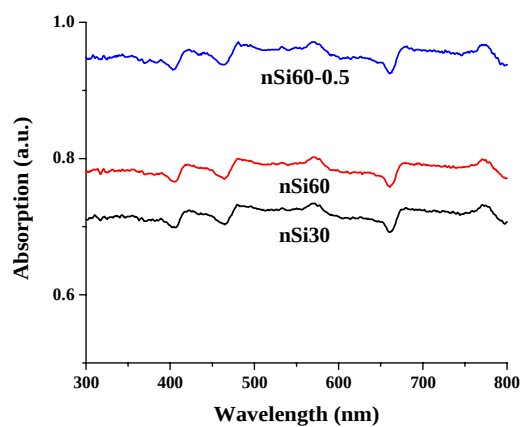


Figure S3. UV-visible absorption spectra of the as-prepared prototypical samples.

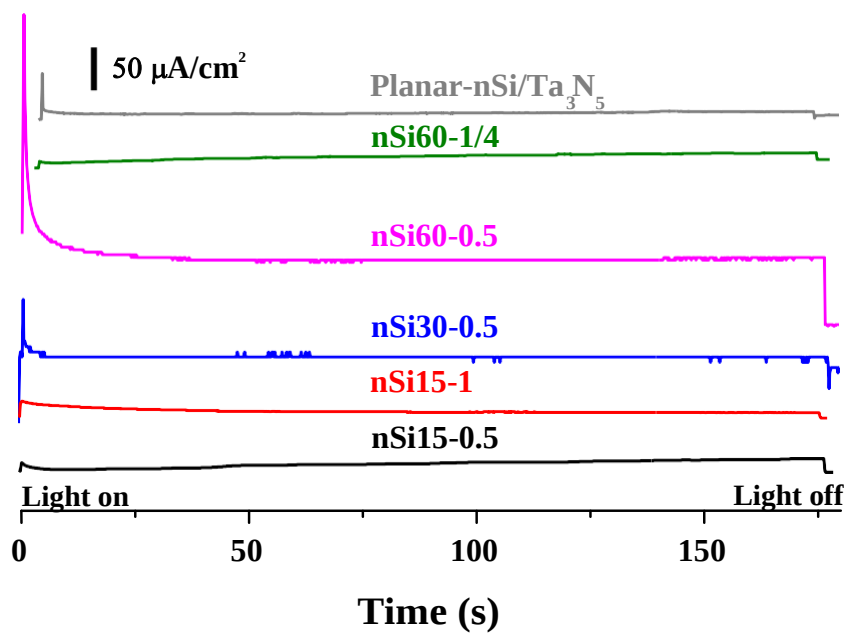


Figure S4. Amperometric photocurrent-time curves of the Si@Ta₃N₅ NWs array and the planar Si/Ta₃N₅ photoanodes at 1.23 V_{RHE} in 0.5M Na₂SO₄ electrolyte (pH 6.5) under AM 1.5G solar simulator irradiation (100 mW/cm²).