

SUPPORTING INFORMATION

Redox-reversible niobium-doped strontium titanate decorated with *in-situ* grown nickel nanocatalyst for high-temperature direct steam electrolysis

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Captions

Figure S1: XPS results of Sr (a1) and O (a2) in the oxidized STNNO sample; Sr (b1) and O (b2) in the reduced STNNO samples.

Figure S2: Rp of the electrolysis cells with cathodes based on STNO (a) and STNNO (b) in 5% H_2O /5% H_2 /Ar (a) and 5% H_2O /Ar (b) under different applied potentials at 800 °C.

Figure S3: The cross-sectional views of the symmetric cells based on YSZ/STNNO-SDC.

Figure S4: The Rp of the symmetric cells with the configuration STNO-SDC /YSZ/STNO-SDC and STNNO-SDC/YSZ/STNNO-SDC tested under different hydrogen partial.

Figure S5: The TEM (a), SEM and EDS (b) results of reduced STNNO sample.

Figure S1:

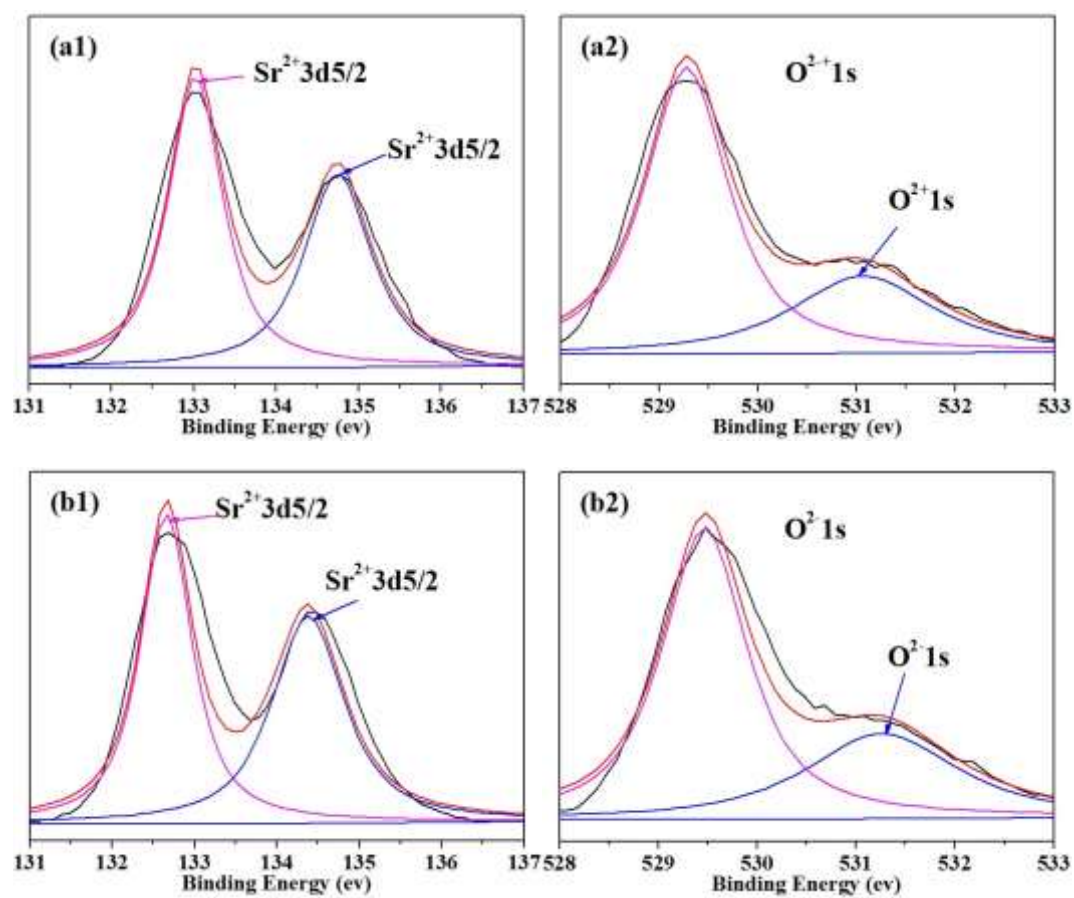


Figure S2:

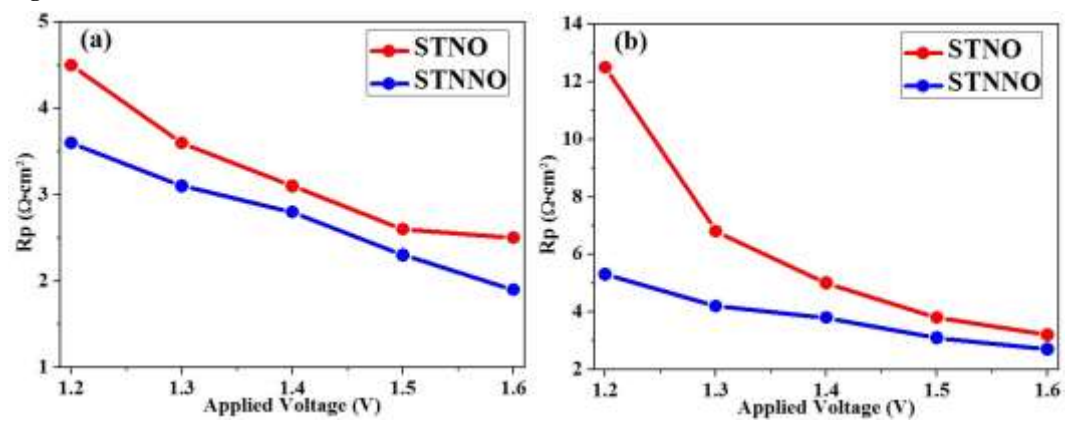


Figure S3:

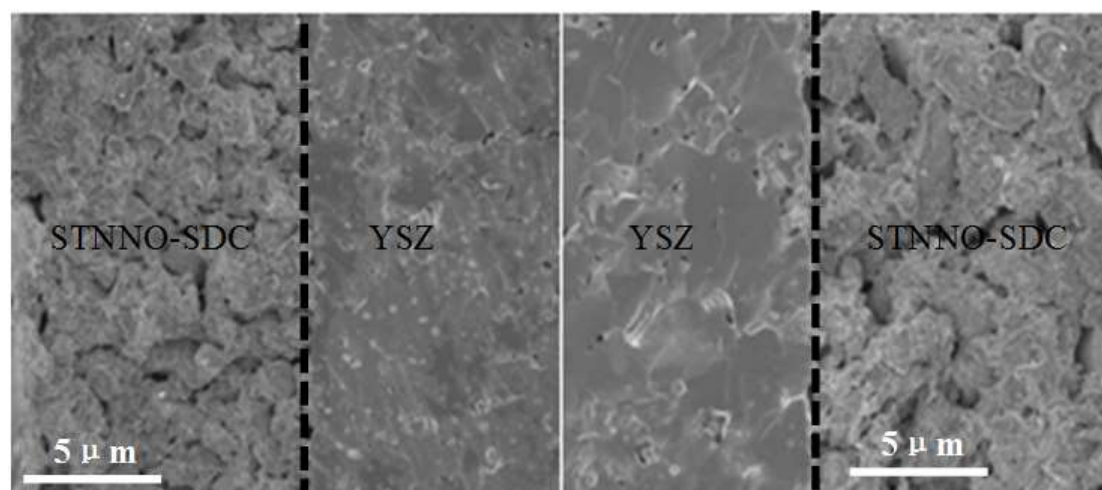


Figure S4:

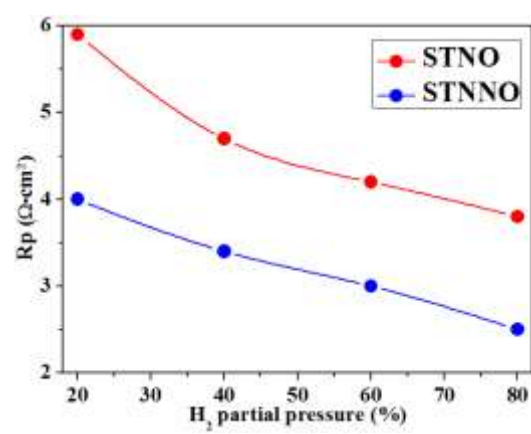


Figure S5:

