

SUPPORTING INFORMATION

Spatially confined catalysis enhanced high temperature carbon dioxide electrolysis

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Fig. S1: TEM results of oxidized of TO (a), reduced TO (b).

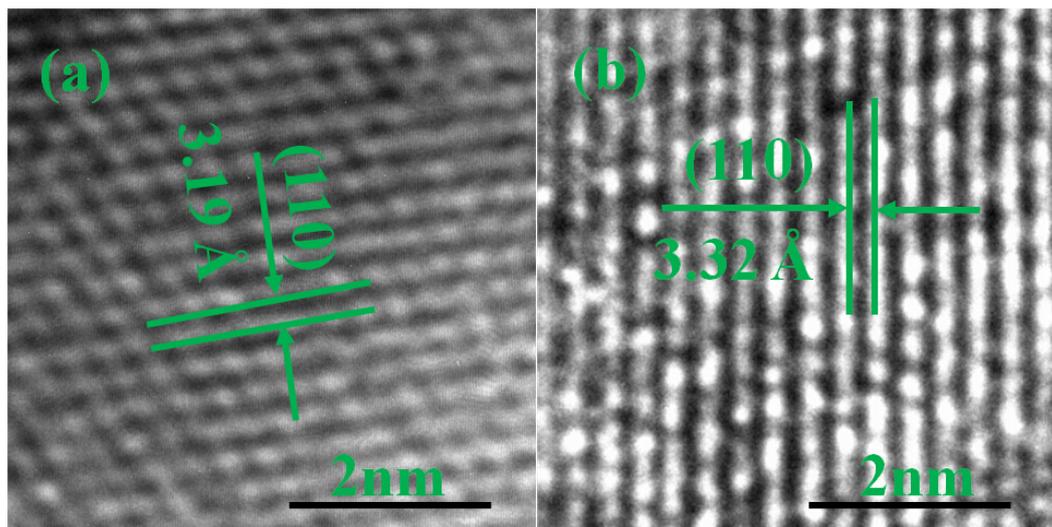


Fig. S2: XPS results of (a) Ti in oxidized TO; (b) Ti in reduced TO.

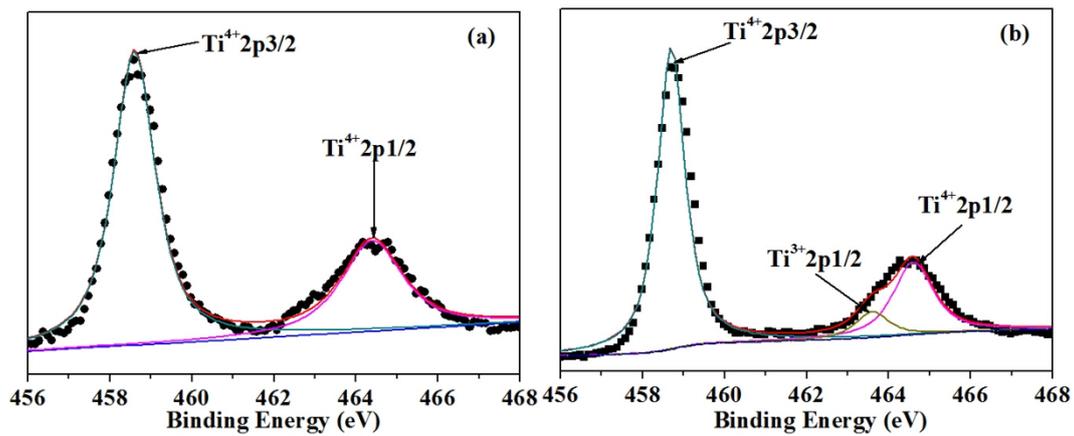


Fig. S3: The Raman spectra of oxidized (a) and reduced (b) TO, oxidized (c) and reduced (d) NTO.

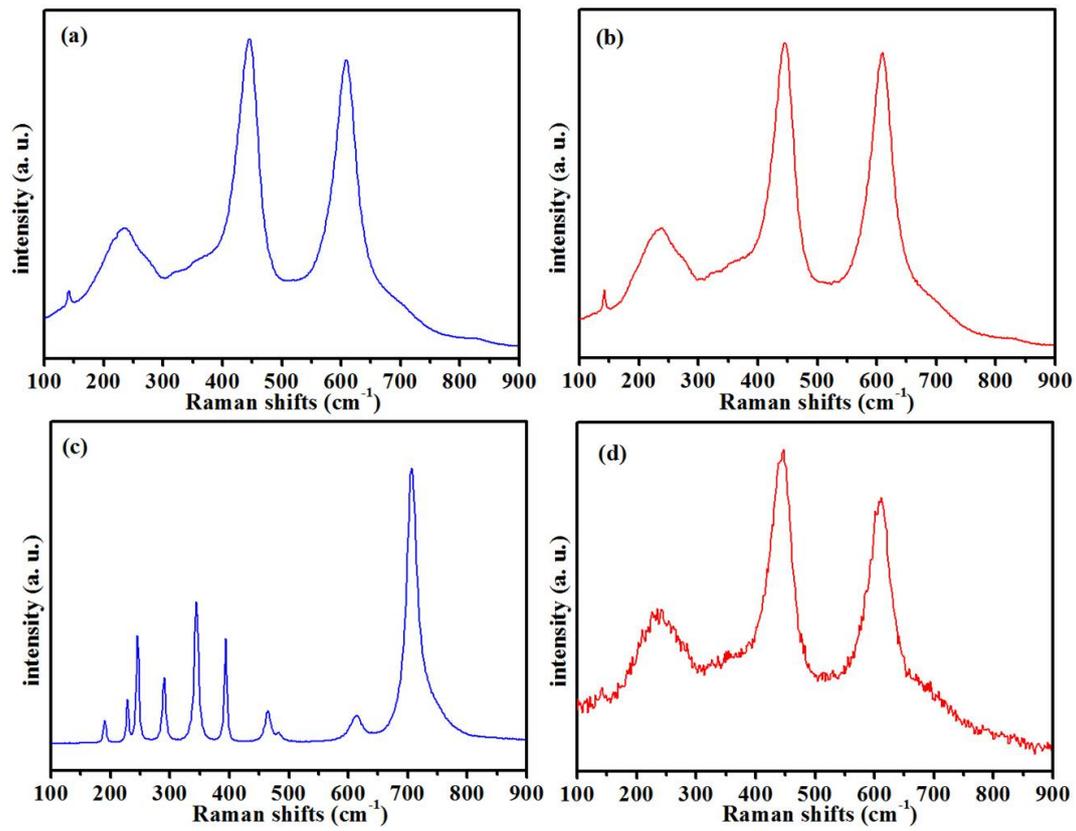


Fig. S4: The AC impedance spectra of symmetrical cells (a) TO-SDC/YSZ/TO-SDC and (b) NTO-SDC/YSZ/NTO-SDC at different current densities in pure hydrogen at 800 °C, respectively.

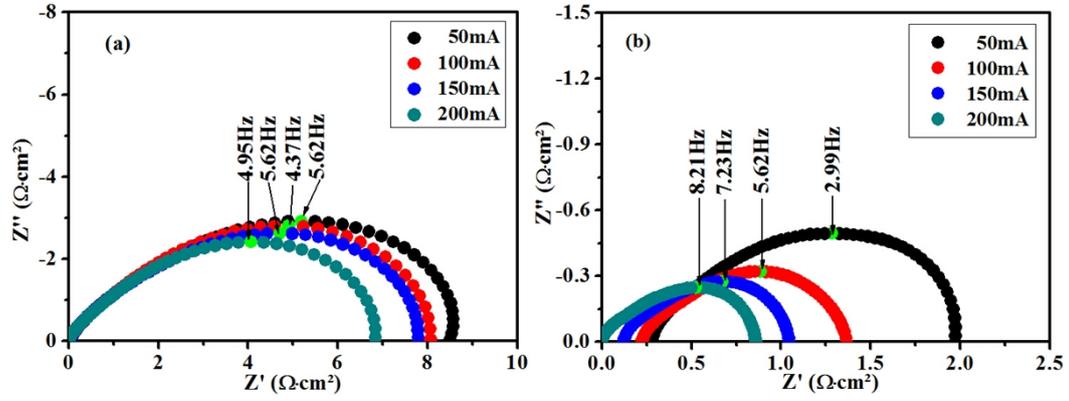


Fig. S5: Microstructure of the composite NTO-SDC cathode of solid oxide electrolyzer before testing (a) and after testing (b).

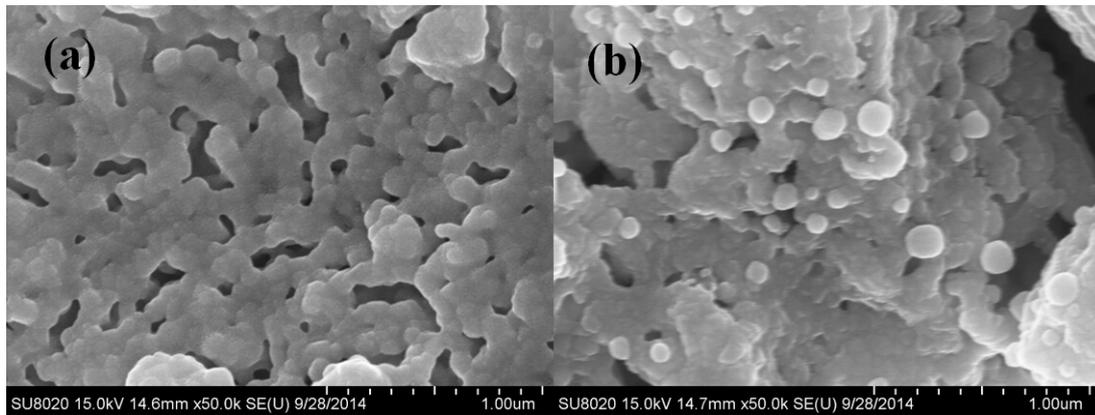


Fig. S6 Short-term performance of single electrolyzer based on NTO composite cathode with the flow of CO₂ at 1.4 V at 800 °C.

