Supporting Information

High-performance $SrNb_{0.1}Co_{0.9-x}Fe_xO_{3-\delta}$ perovskite cathodes for low temperature solid oxide fuel cells

Yinlong Zhu, Jaka Sunarso, Wei Zhou, Shanshan Jiang, and Zongping Shao**

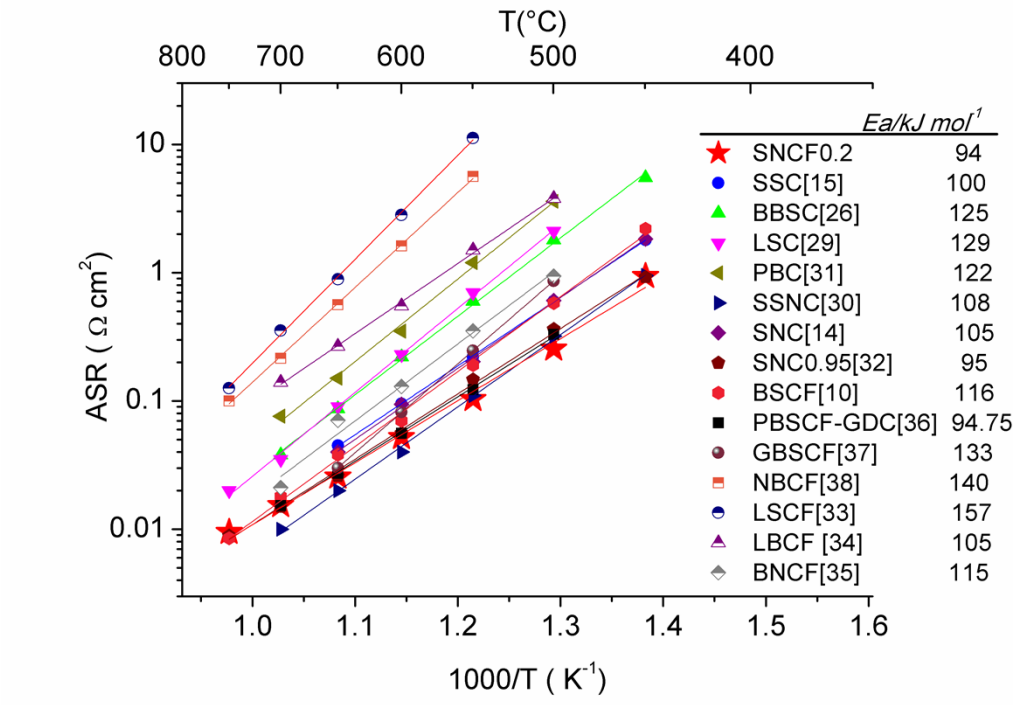

Fig. S1 Performance mapping of area specific resistance (ASR) and activation energy (E_a) of SNCF0.2 cathode against other high performance cathodes prepared under identical conditions. The cathode materials compared in this figure are cited in the paper.

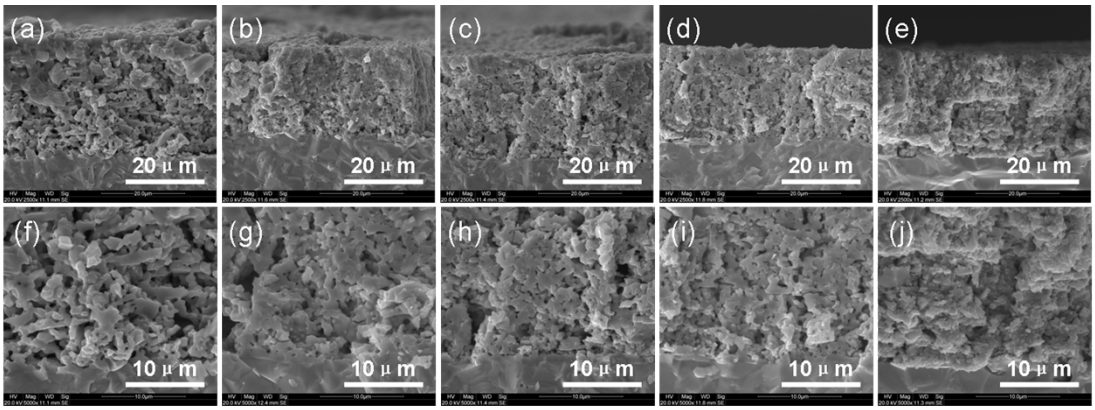

Fig. S2 Additional SEM images of the cross-section of $SrNb_{0.1}Co_{0.9-x}Fe_xO_{3-\delta}$ ($0 \leq x \leq 0.5$) cathodes fired at 1000 °C for 2 h in air: (a, f) x=0, (b, g) x=0.1, (c, h) x=0.2, (d, i) x=0.3, (e, j) x=0.5.

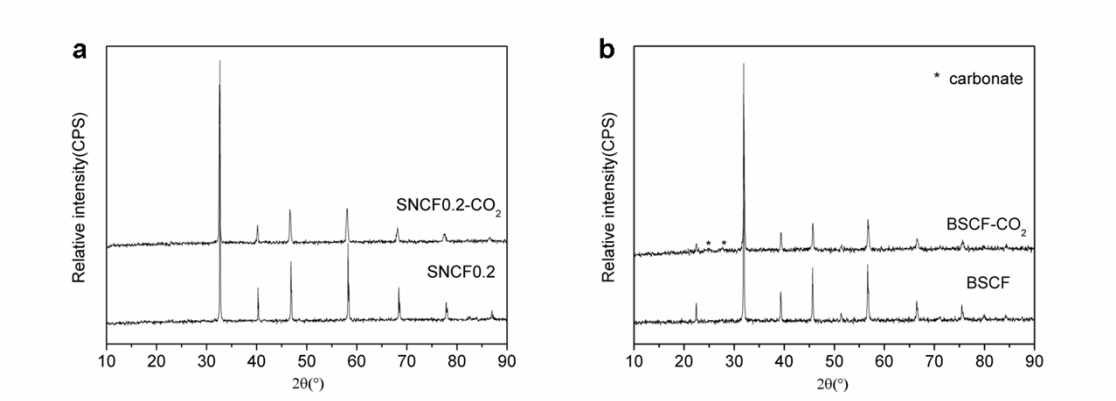

Fig. S3 Powder x-ray diffraction patterns of (a) fresh SNCF0.2 and SNCF0.2 after CO_2 exposure, (b) BSCF and BSCF after CO_2 exposure for 1h at 600 °C.

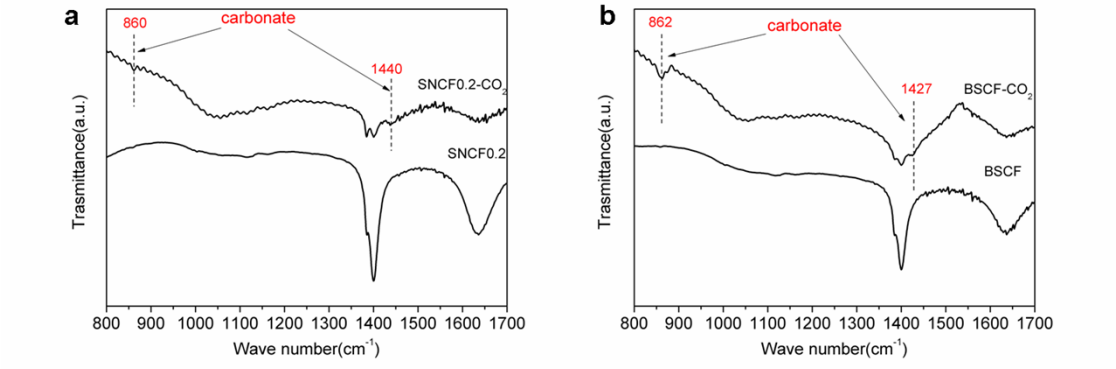

Fig. S4 Fourier-Transform Infra-Red spectra of (a) fresh SNCF0.2 and SNCF0.2 after CO_2 exposure, (b) BSCF and BSCF after CO_2 exposure for 1h at 600 °C.