Supporting Information

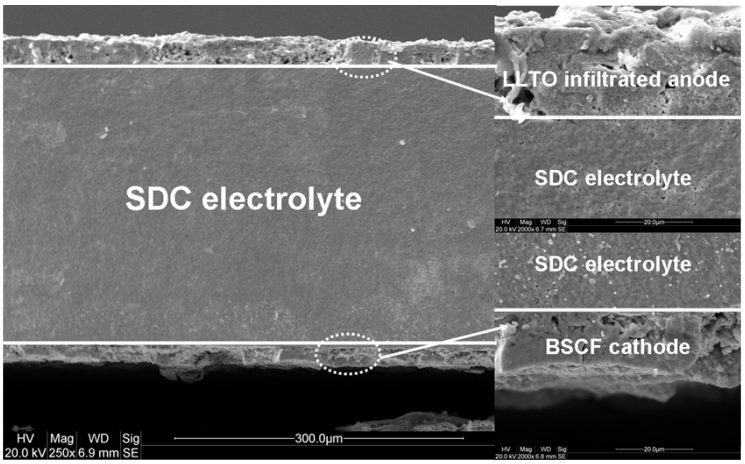

Figure S1 A typical SEM image of a cross-section of a fuel cell with a LLTO-infiltrated SDC anode.

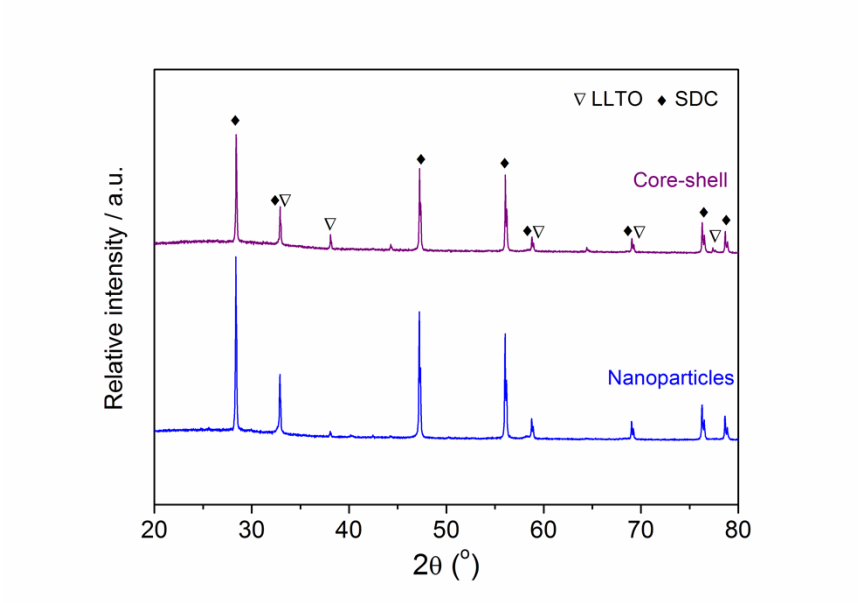

Figure S2. XRD patterns of LLTO-infiltrated SDC anodes after long-term operation using 1000 ppm H_2S-H_2 fuel.

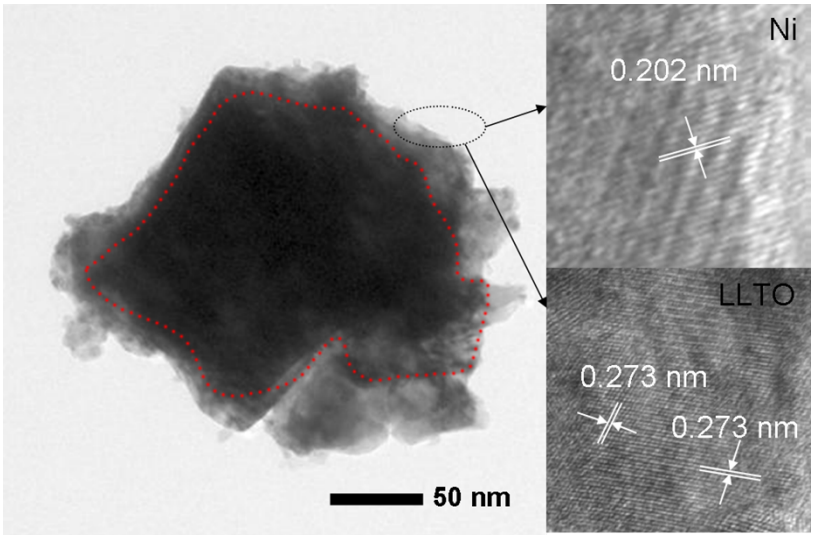

Figure S3 TEM results under different magnifications of the core-shell structured Ni-LLTO co-infiltrated SDC anodes.

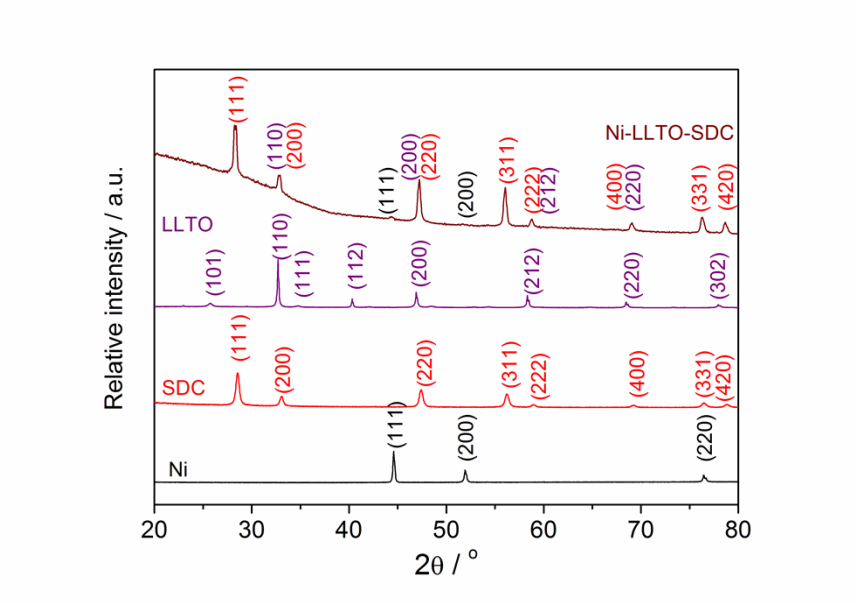

Figure S4 XRD patterns of Ni-LLTO co-infiltrated SDC anodes after calcination at 900 °C for 2 hours, as well as the pure phases such as Ni, SDC and LLTO.

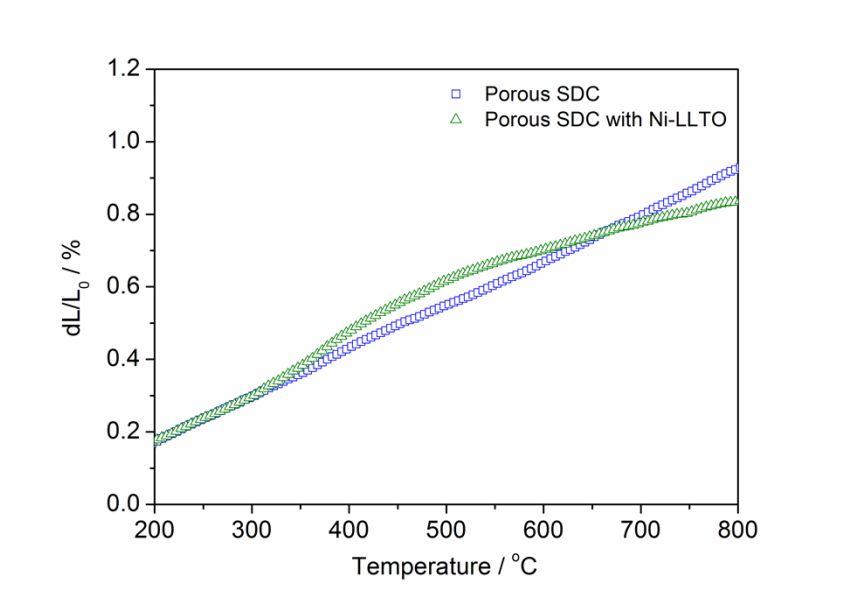

Figure S5 Thermal expansion behaviors of the porous SDC and Ni-LLTO co-infiltrated SDC bars sintered at 900 °C.

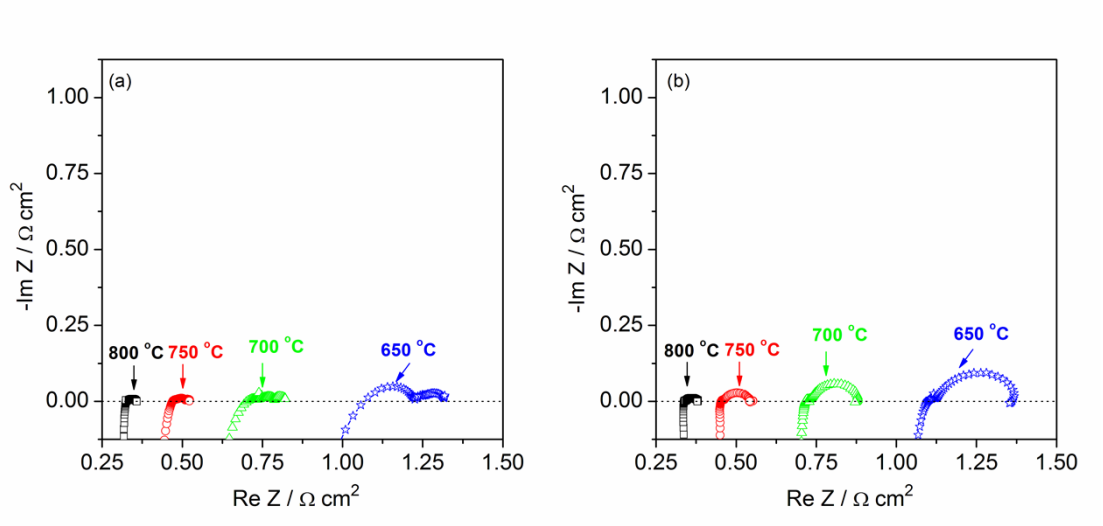

Figure S6 EIS spectra of the fuel cell with Ni-LLTO co-infiltrated SDC anode operating on H_2 (a) and 1000 ppm H_2S-H_2 (b) fuels at 800 ^oC.

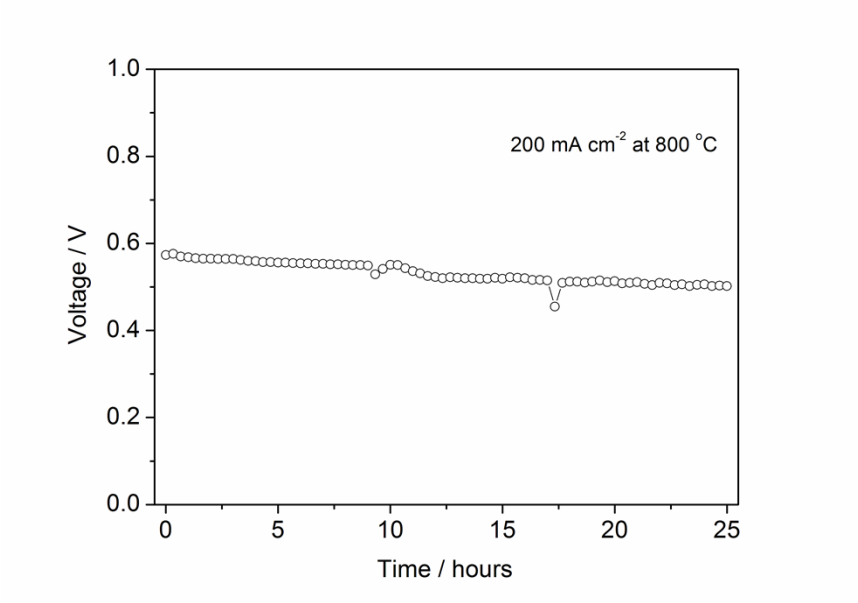

Figure S7 Time-dependent voltage of the fuel cell with Ni-LLTO co-infiltrated SDC anodes operating on 1000 ppm H_2S-H_2 under a current density of 200 mA cm^{-2} at 800 °C.