

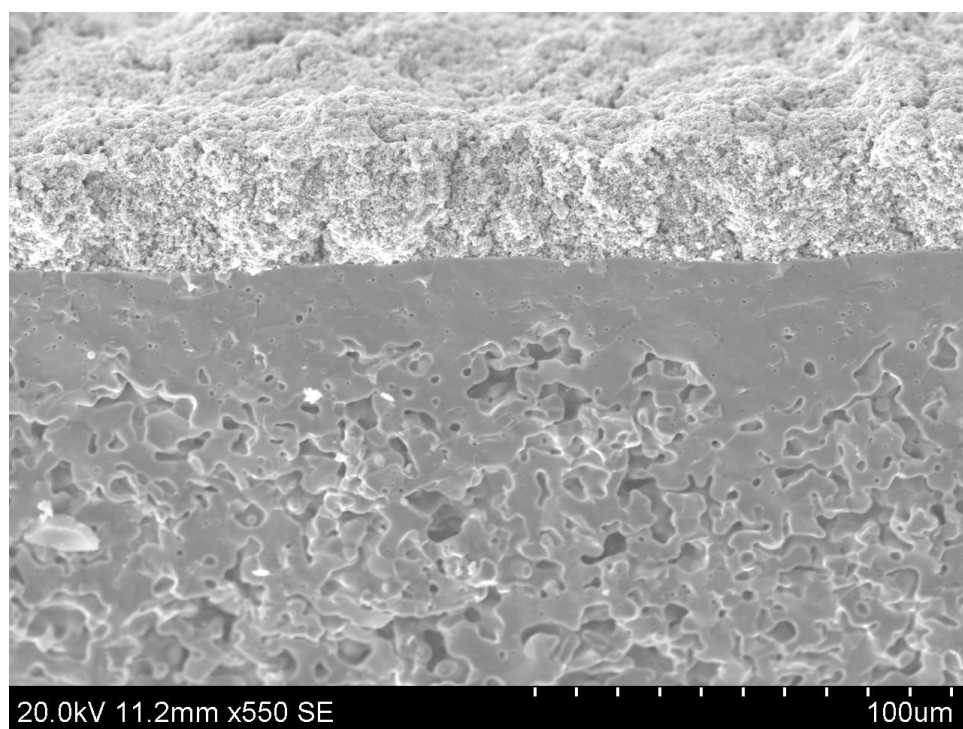


Fig. S1 Fracture cross-sectional scanning electron micrograph of thin LSGM electrolyte SOFCs without nickel infiltration.

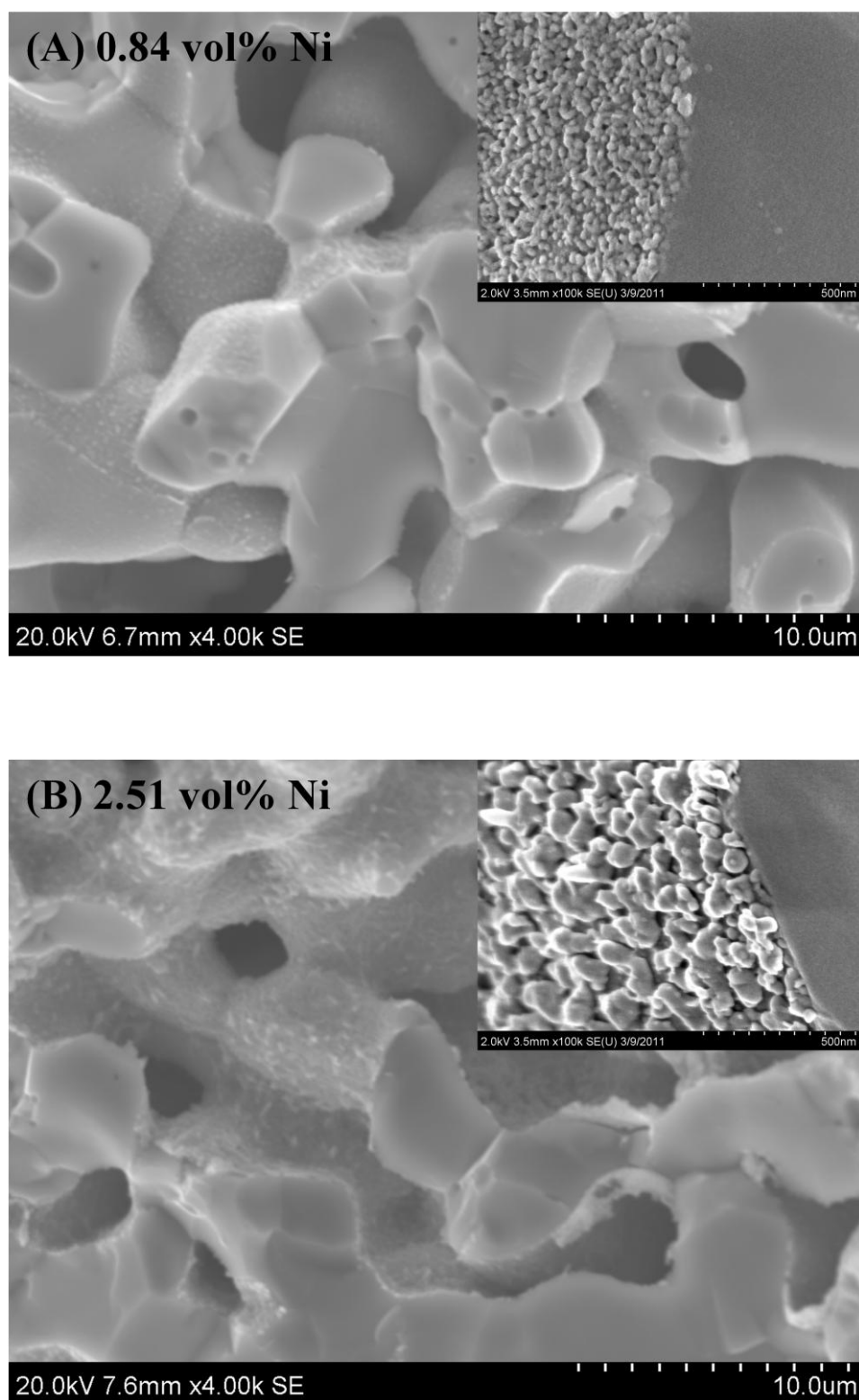


Fig. S2 Fracture cross-sectional scanning electron micrograph of the porous LSGM anodes at (A) 0.84 vol% and (B) 2.54 vol% nickel infiltrations. Insets are high resolution SEM images. Insets are higher magnification SEM images.

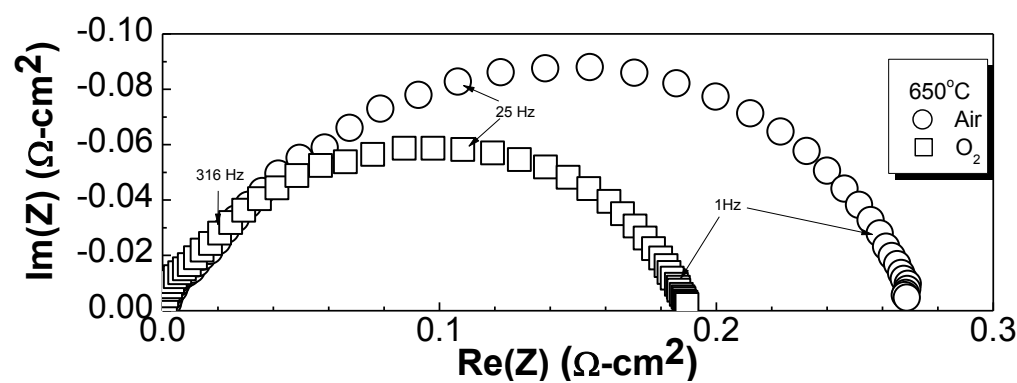


Fig. S3 Nyquist plots of the electrochemical impedance spectroscopy obtained at 650°C from LSCF-LSGM/LSGM/LSCF-LSGM symmetric cells.

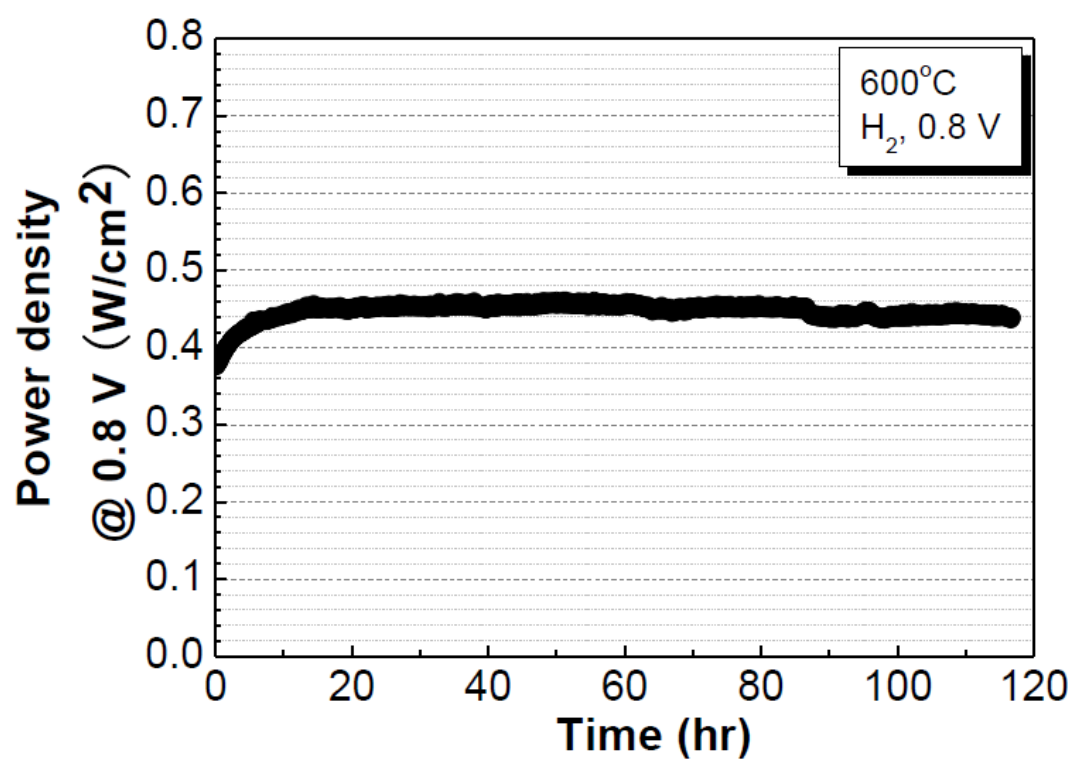


Fig. S4 Life tests of thin LSGM electrolyte SOFCs with nanoporous nickel anodes (2.54 vol%) operating on humidified hydrogen and air at 600°C.