

Supporting Information

Synthesis and characterization of robust, mesoporous electrodes for solid oxide fuel cells

Laura Almar ^{a,1}, Alex Morata ^a, Marc Torrell ^a, Mingyang Gong ^b, Meilin Liu ^b, Teresa Andreu ^a, Albert Tarancón ^{a,*}

^a Advanced Materials for Energy, Catalonia, Institute for Energy Research (IREC), 1 Jardins de les dones de negre, 08930, Sant Adrià del Besòs (Barcelona), Spain

^b School of Materials Science and Engineering, Center for Innovative Fuel Cell and Battery Technologies, Georgia Institute of Technology, 771 Ferst Drive NW, Atlanta, GA 30332, United States

¹ *Present Address:* Institute for Applied Materials (IAM-WET), Karlsruhe Institute of Technology (KIT), Adenauerring 20b, D-76131 Karlsruhe, Germany

Figures S1 and S2 show the evolution of a reference cell fabricated with commercial powder electrodes at a current density of 400 mA/cm^2 at $750 \text{ }^\circ\text{C}$ during 110 h. **Figure S1** shows the initial and final Nyquist plot of the commercial cell under OCV, an increase of both ohmic and polarization contributions can be observed which increase the ASR of the cell from $0.98 \text{ } \Omega \cdot \text{cm}^2$ to $1.59 \text{ } \Omega \cdot \text{cm}^2$ after 110 h. **Figure S2** shows the evolution of the voltage where a severe degradation was measured during the 110 hours of the test.

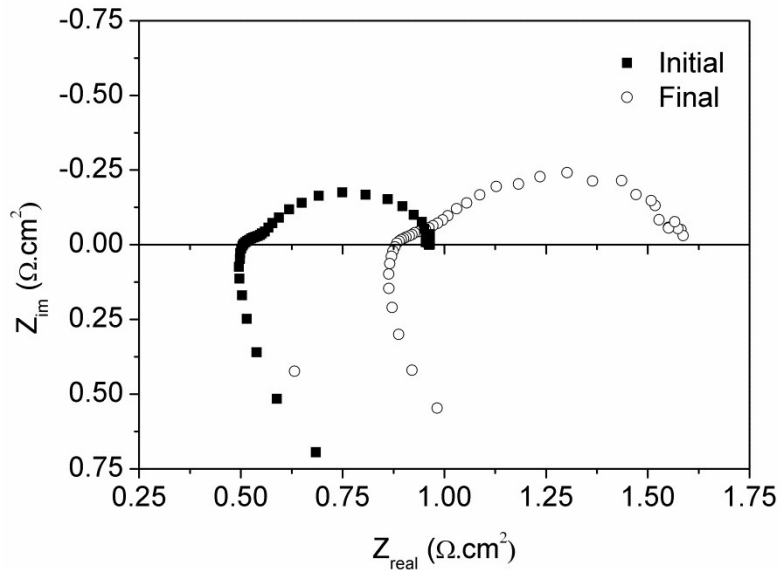


Figure S1. Nyquist plot of the IT-SOFC fabricated with commercial electrodes at $750 \text{ }^\circ\text{C}$ under OCV conditions at the beginning and at the end of the degradation test.

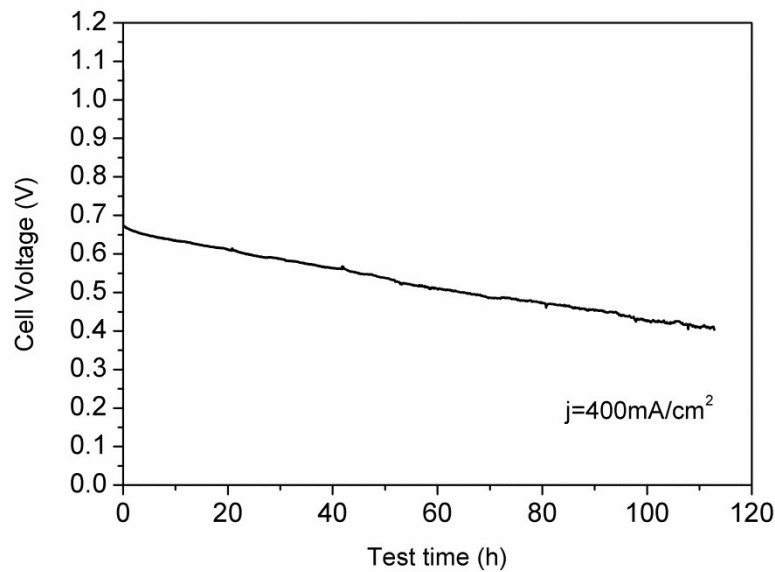


Figure S2. Evolution of the voltage of the reference cell fabricated with commercial electrodes at 400 mA/cm^2 at $750 \text{ }^\circ\text{C}$ for 110 h.