Supporting Information

Construction of High-Temperature Electronic Conduction Paths for the Scale-up of Solid Oxide Fuel Cell Technology

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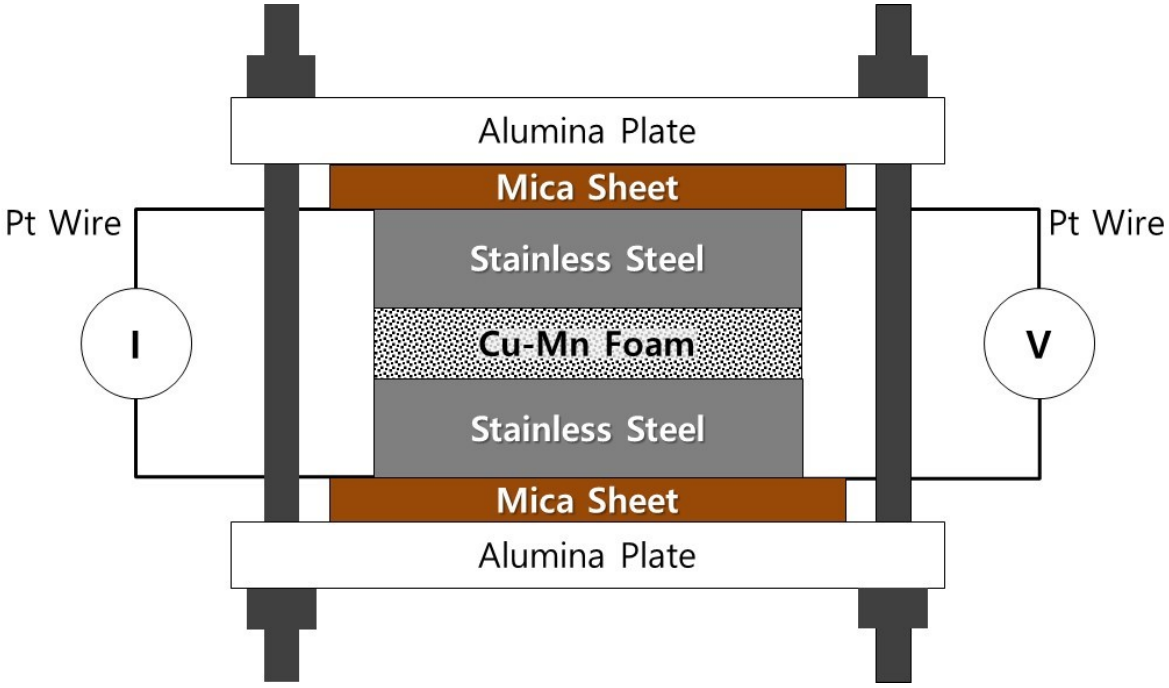

Figure S1. Schematic of the ASR measurement setup.

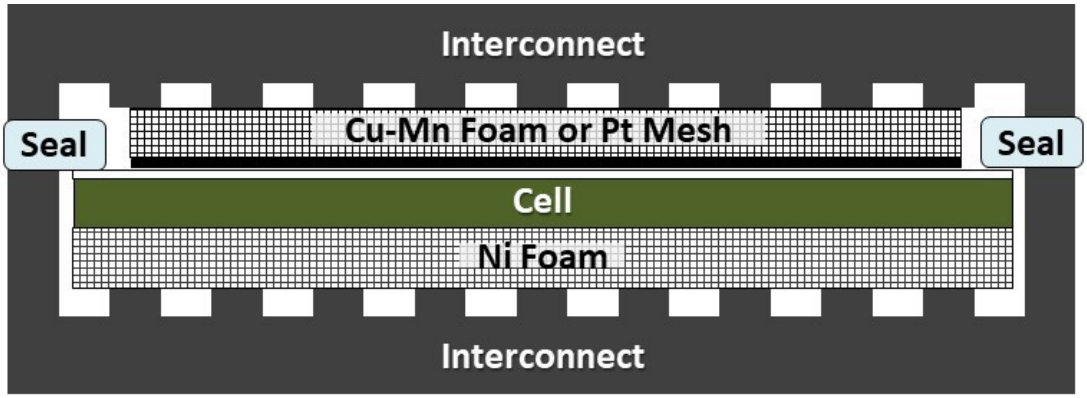

Figure S2. Schematic of the unit cell testing setup.

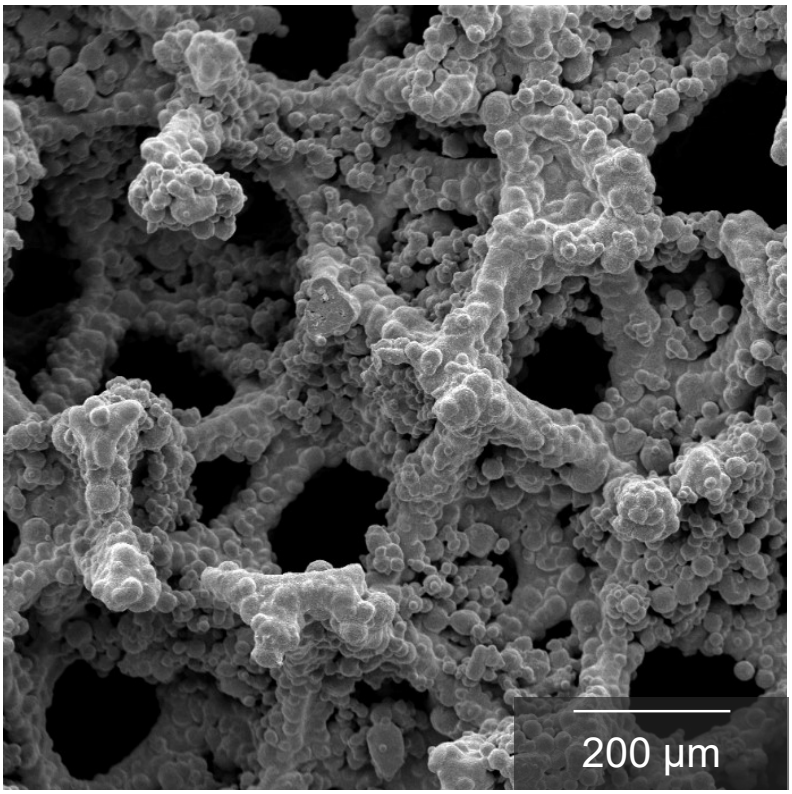

Figure S3. SEM image of the Cu-Mn foam heat-treated at 800°C for 2 hours.

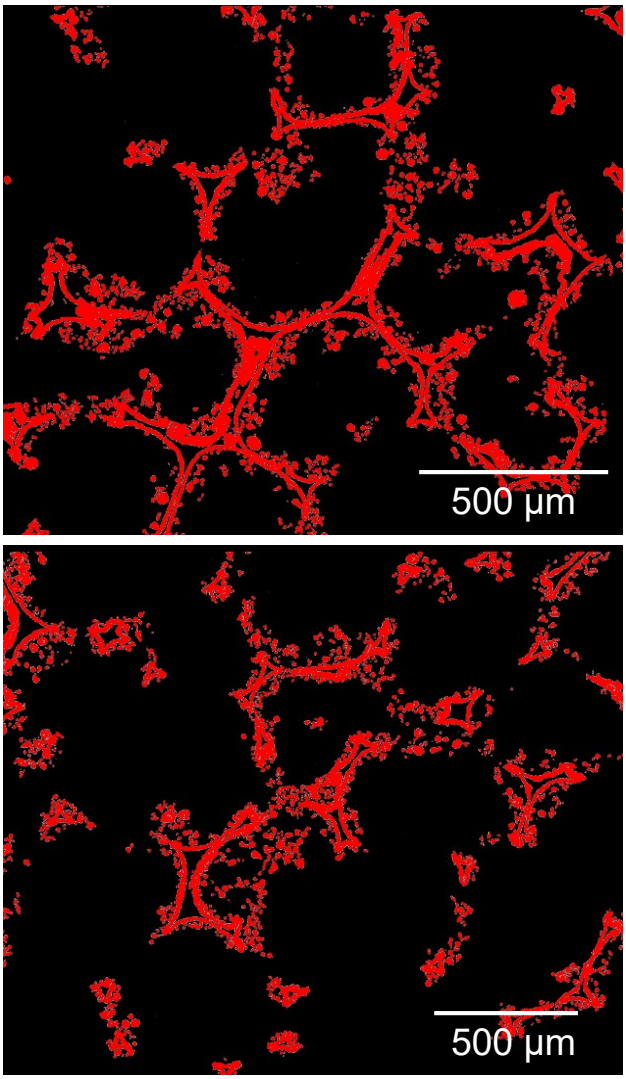

Figure S4. Example of image analysis of Cu-Mn foam for the calculation of porosity.

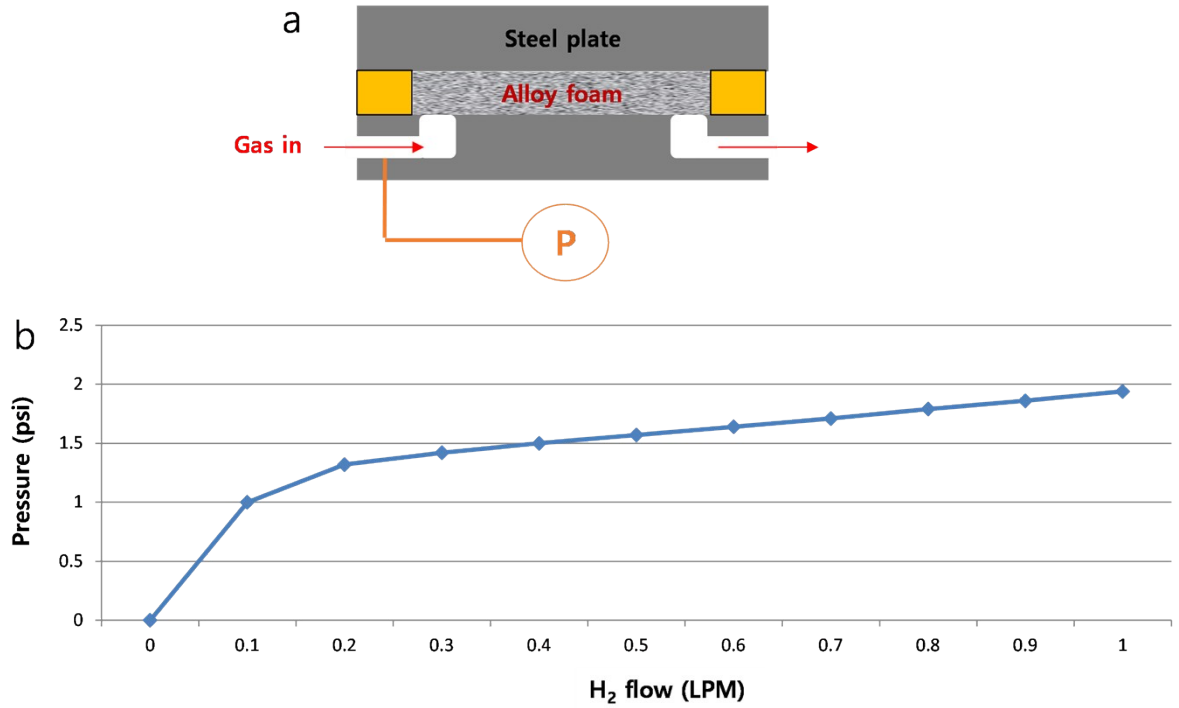

Figure S5. (a) Schematic of gas permeability measurement setup, and (b) measured pressure as a function of gas flow rate. No pressure drop occurs across Cu-Mn foam, indicating facile gas transport.

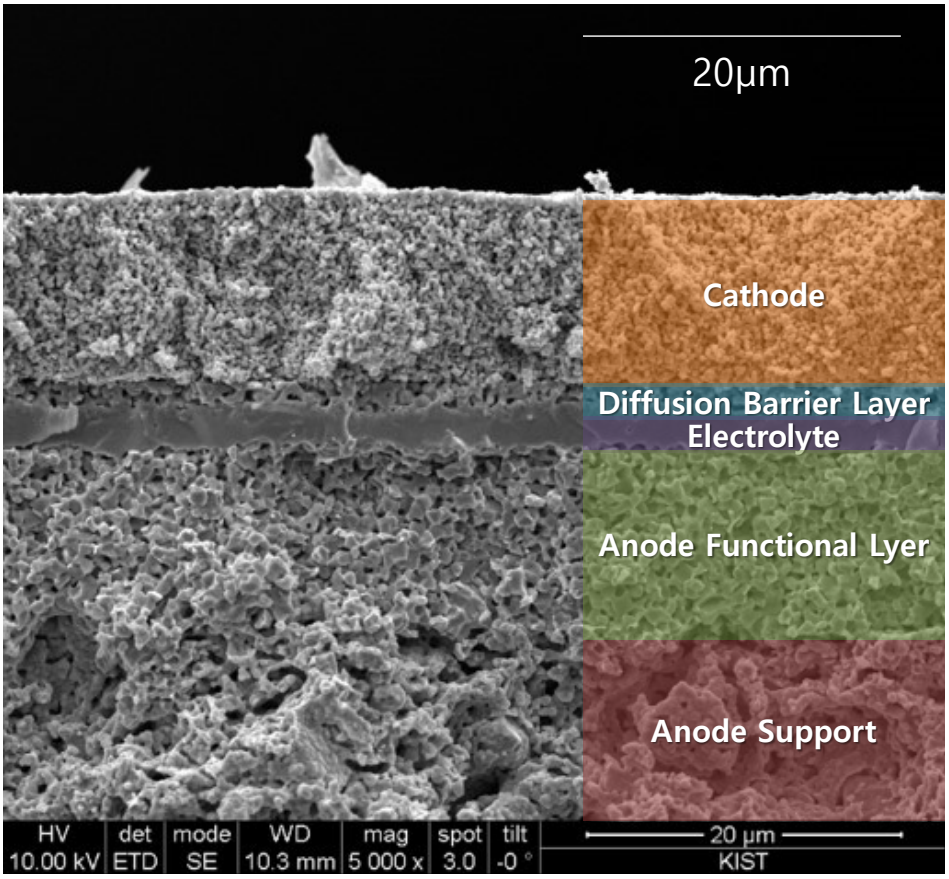

Figure S6. SEM image of the cross-section of tested button cell.

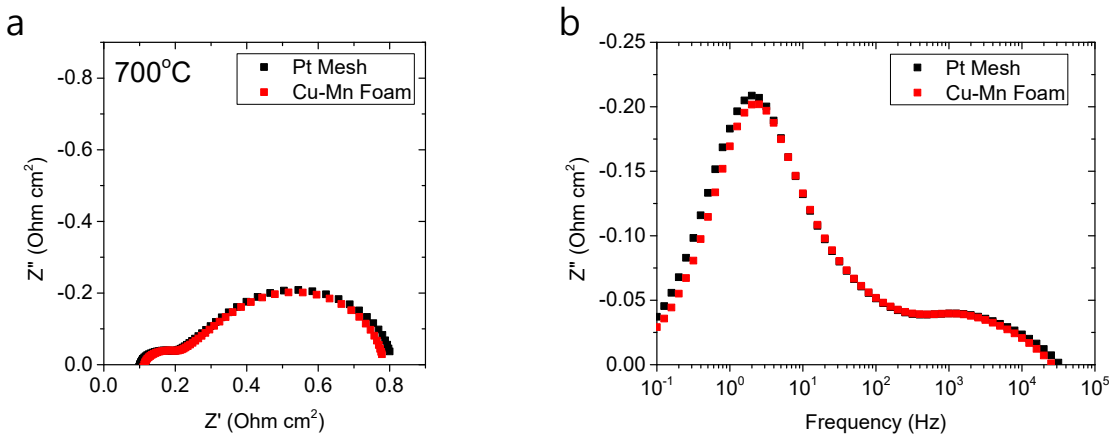

Figure S7. (a) Nyquist and (b) Bode plots of impedance spectra of the cells tested with Pt mesh and Cu-Mn foam measure at 700°C.

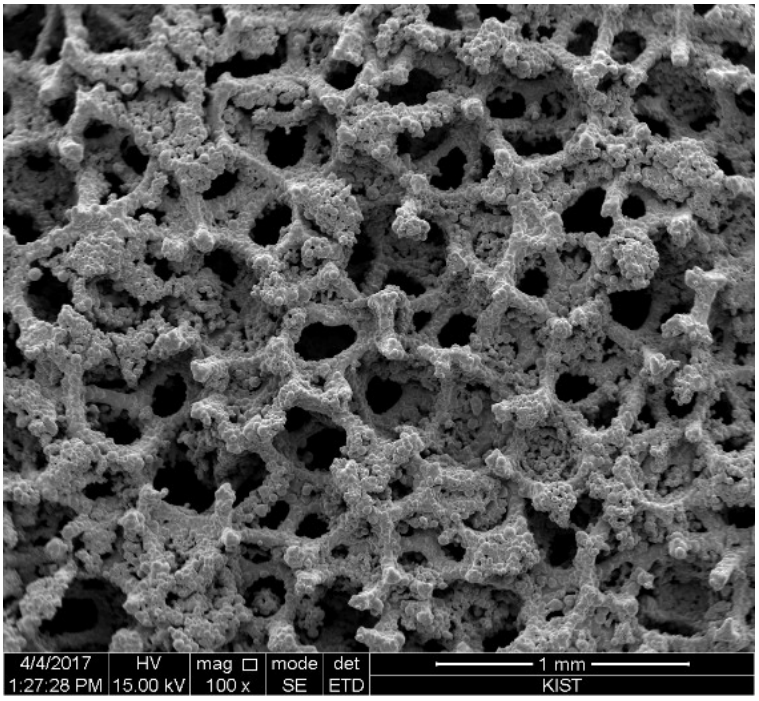

Figure S8. SEM image of the Cu-Mn foam after stack testing.

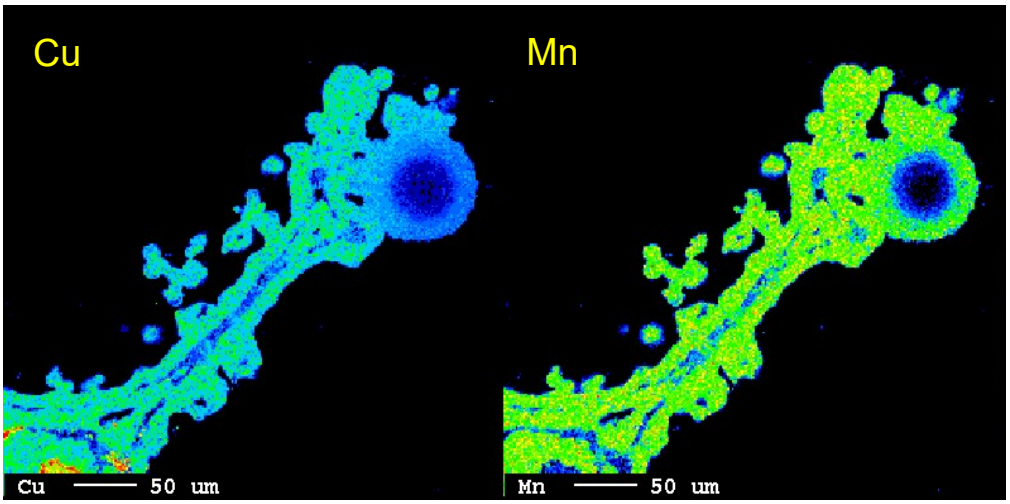

Figure S9. EPMA elemental analysis of Cu–Mn foam after stack testing.