

# Supplementary Materials

## Direct Electrophoretic Deposition and Characterization of Thin-film Membranes Based on Doped BaCeO<sub>3</sub> and CeO<sub>2</sub> for Anode-supported Solid Oxide Fuel Cells

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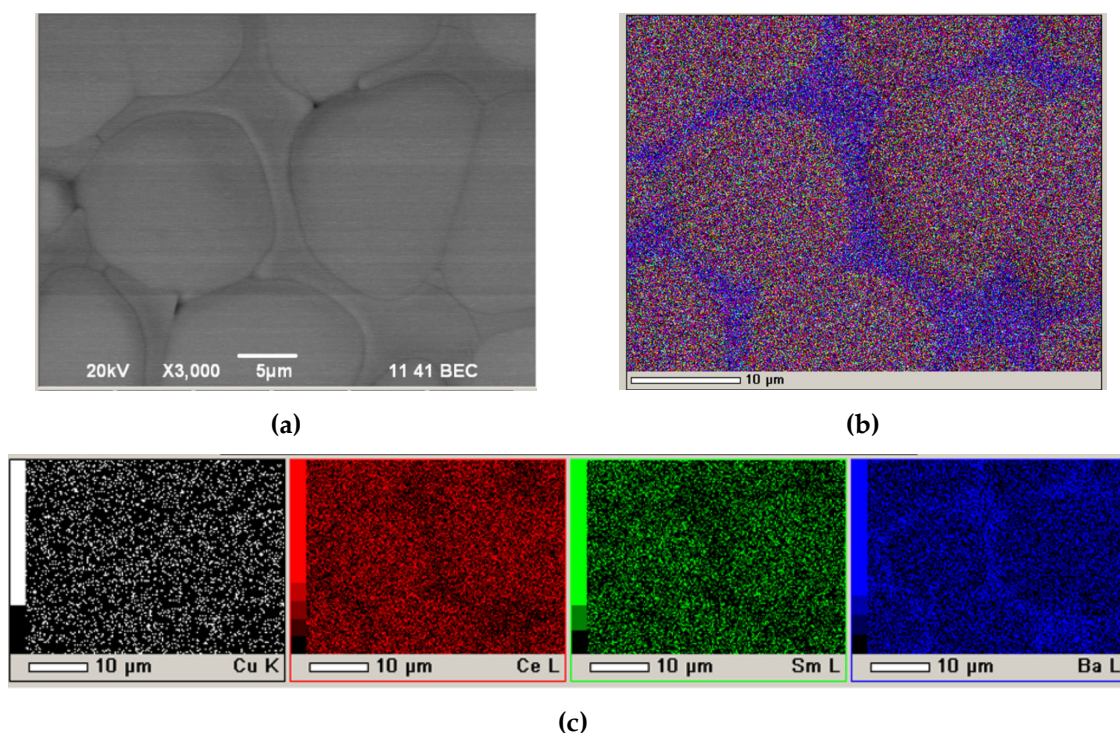
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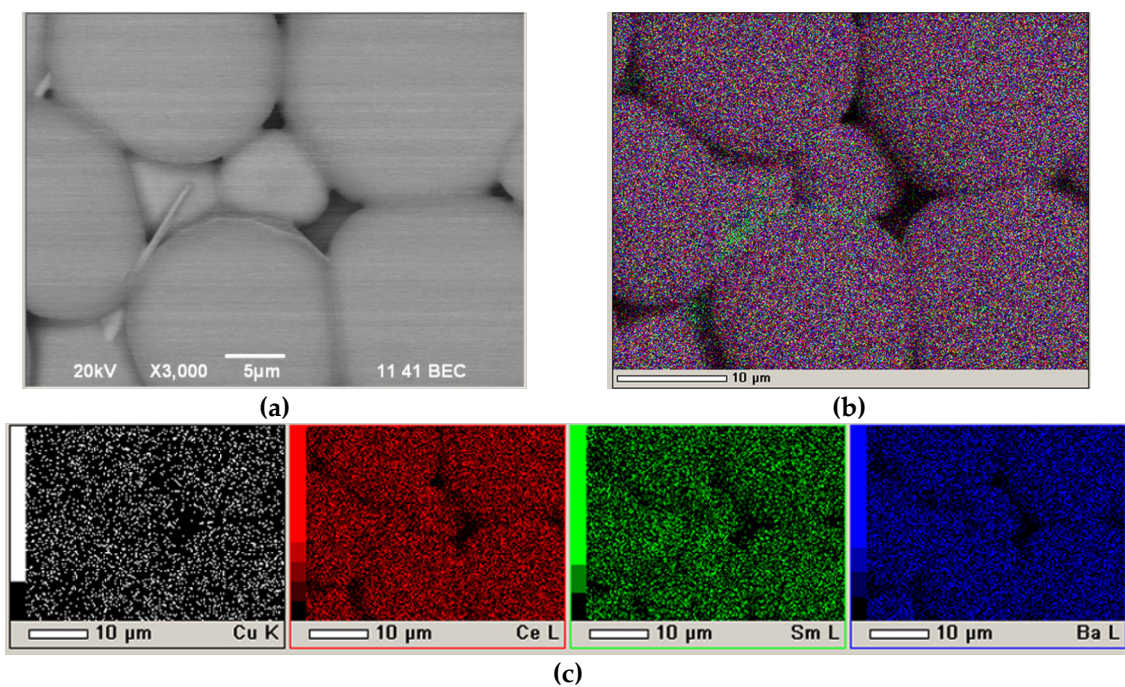
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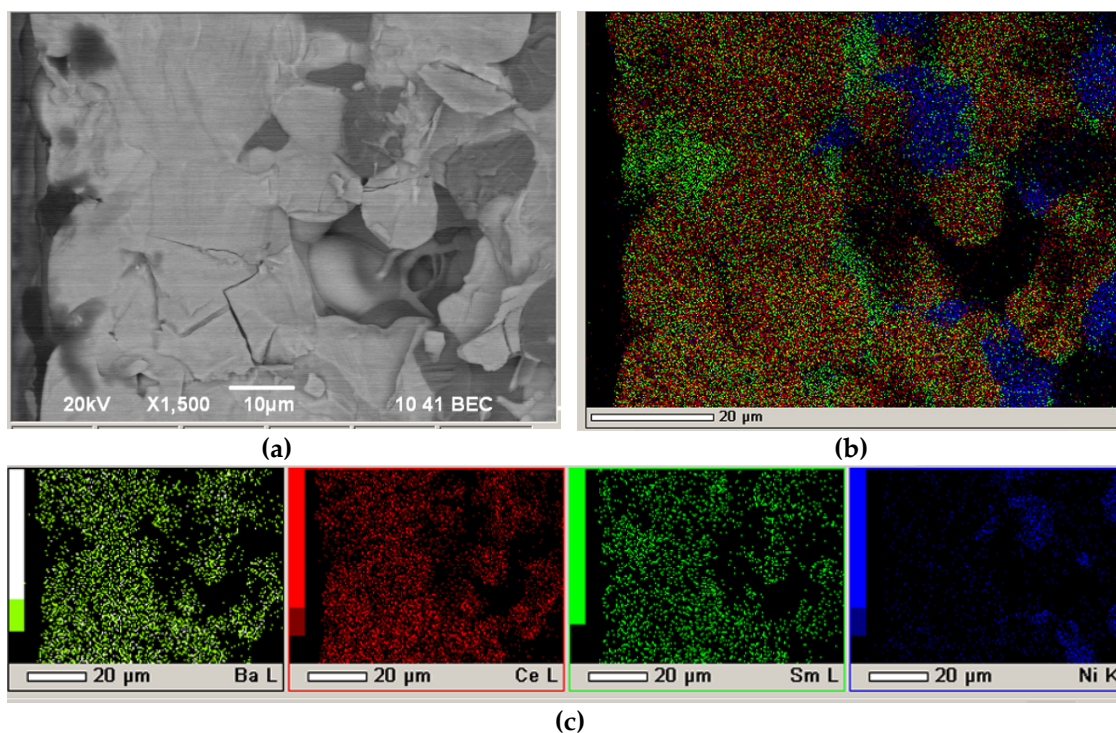
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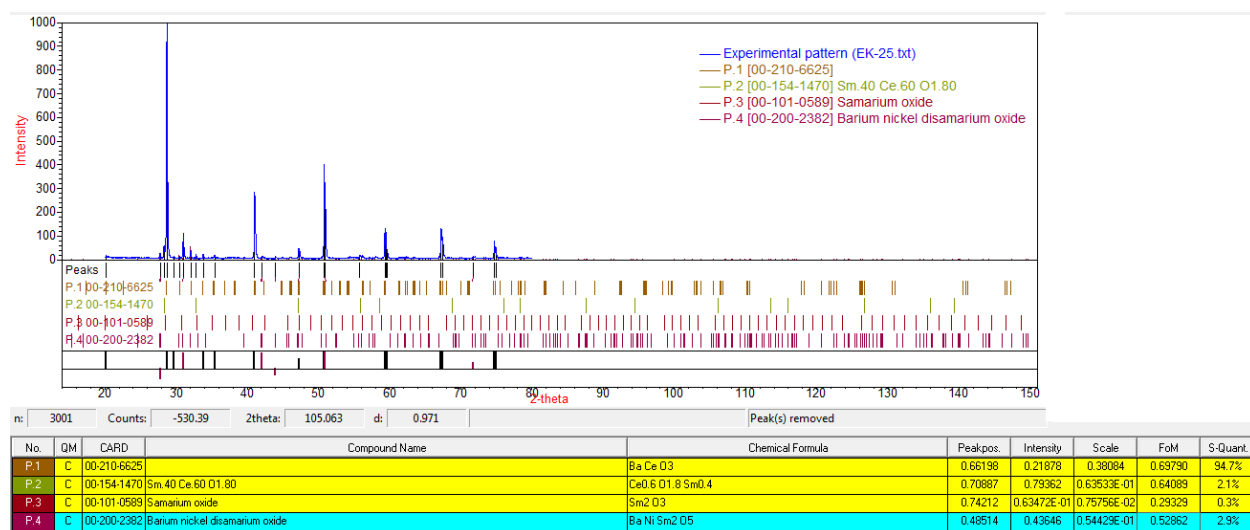
**Figure S1:** The surface of the BCS-CuO/SDC electrolyte layer after sintering at a temperature of 1550 °C for 5 h on the NiO-BCS-CuO anode substrate (BCS-1 sample): (a) SEM image, magnification x3000; (b) Integral map of the elements' distribution; (c) Individual elements' maps.



**Figure S2:** The surface of the BCS-CuO/SDC electrolyte layer after sintering at a temperature of 1500 °C for 5 h on the NiO-BCS-CuO anode substrate (BCS-2 sample): (a) SEM image, magnification x3000; (b) Integral map of the elements' distribution; (c) Individual elements' maps.



**Figure S3:** Fracture images of the BCS-2 sample with the BCS-CuO/SDC electrolyte layer on the NiO-BCS-CuO anode substrate after sintering at a temperature of 1500 °C for 5 h: (a) SEM image, magnification x1500; (b) Integral map of the elements' distribution; (c) Individual elements' maps.



**Figure S4:** XRD-data for the BCS-1 sample, sintered at 1550 °C.

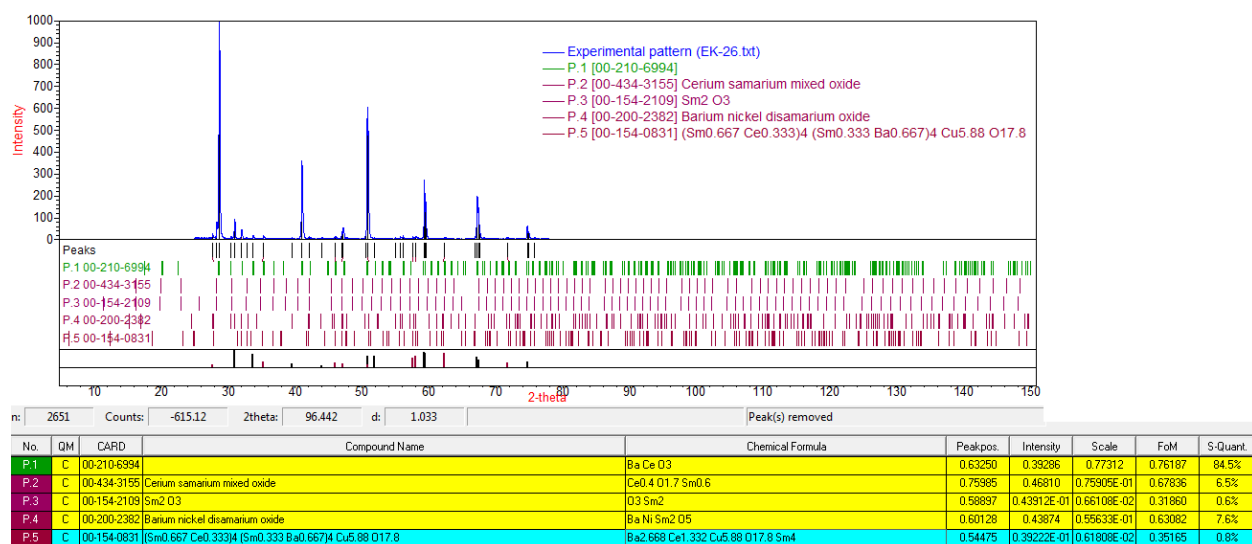


Figure S5: XRD-data for the BCS-2 sample, sintered at 1500 °C

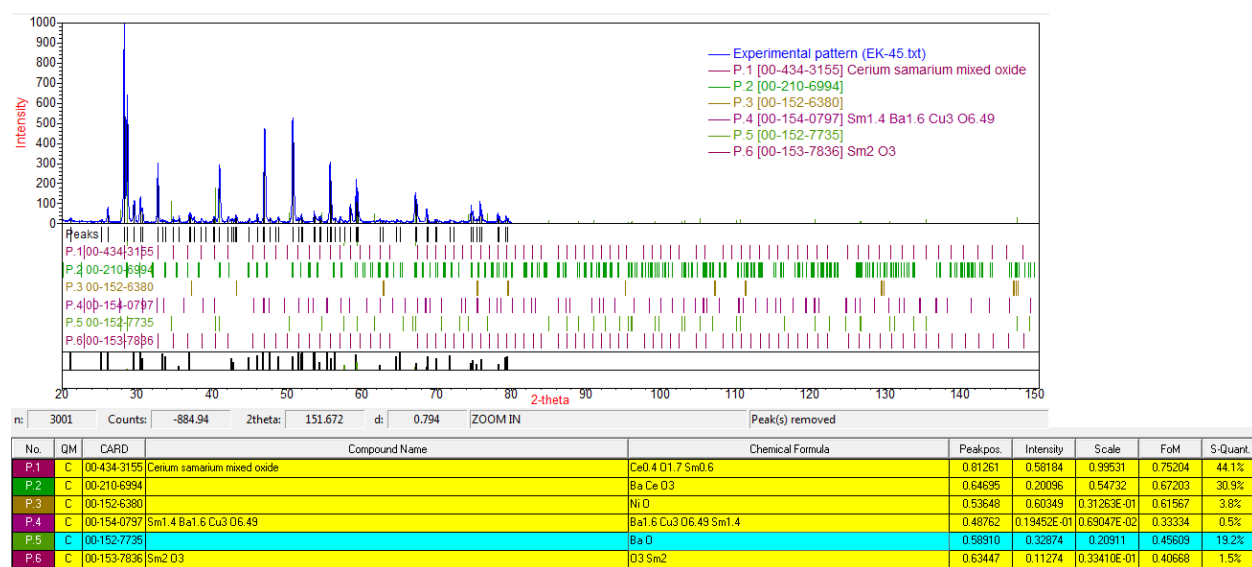


Figure S6: XRD-data for the BCS-4 sample, sintered at 1450 °C

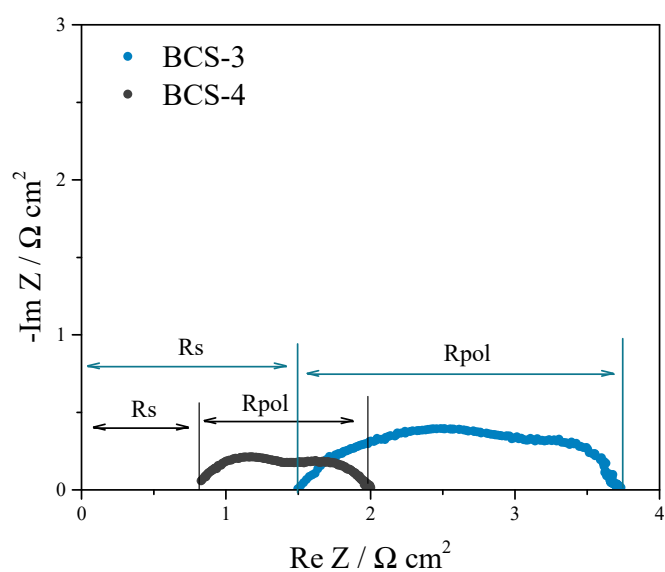


Figure S7: EIS spectra for the BCS-3 and BCS-4 cells collected at 700 °C.