Sinteractive anodic powders improve densification and electrochemical properties of $BaZr_{0.8}Y_{0.2}O_{3-\delta}$ electrolyte films for anode-supported solid oxide fuel cells

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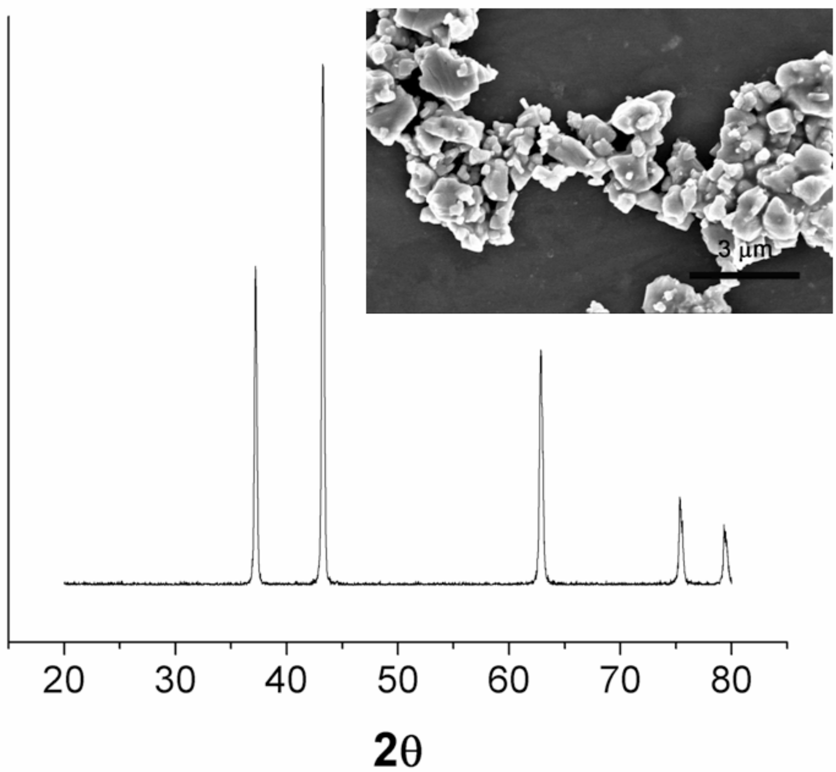

Figure S1 XRD pattern and SEM micrograph of commercial NiO powder.

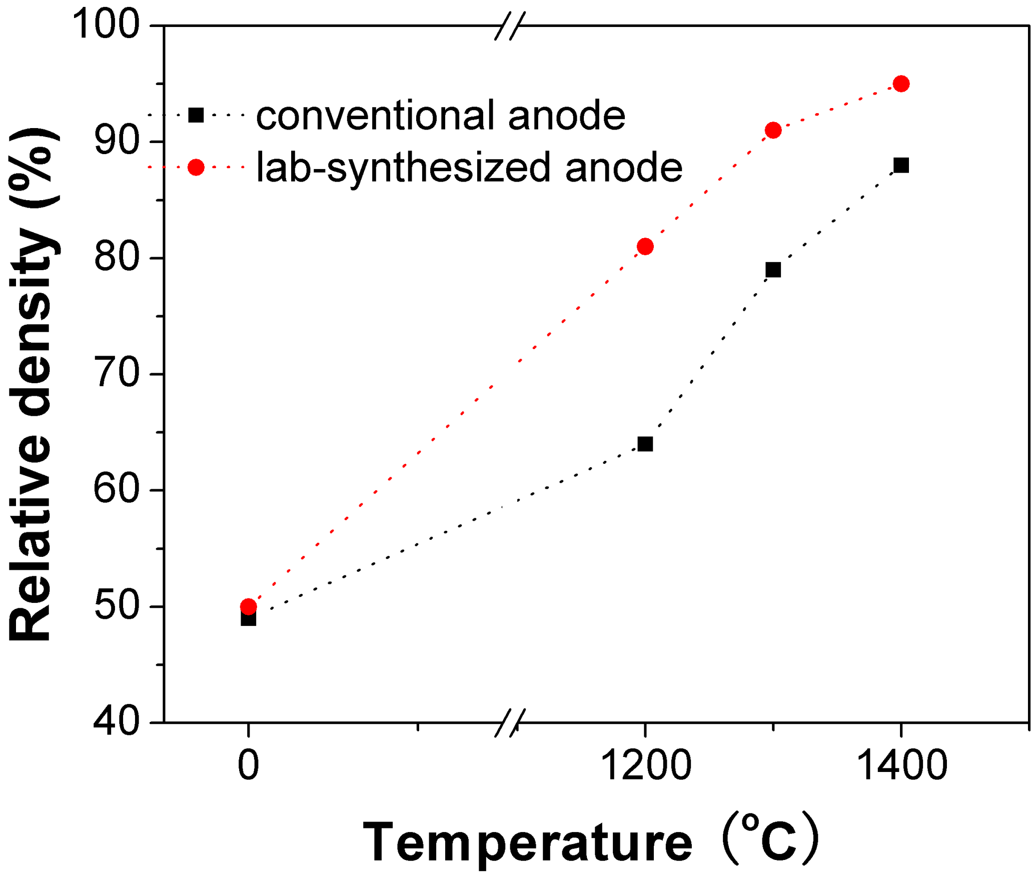

Figure S2 Relative density of lab-synthesized NiO-BZY20 and conventional NiO-BZY20 anode after sintering at different temperatures, including the density of starting green anodes, showing that the density of lab-synthesized anodes is larger than that of the conventional one after sintering at the same temperature, although the green anode densities are similar.

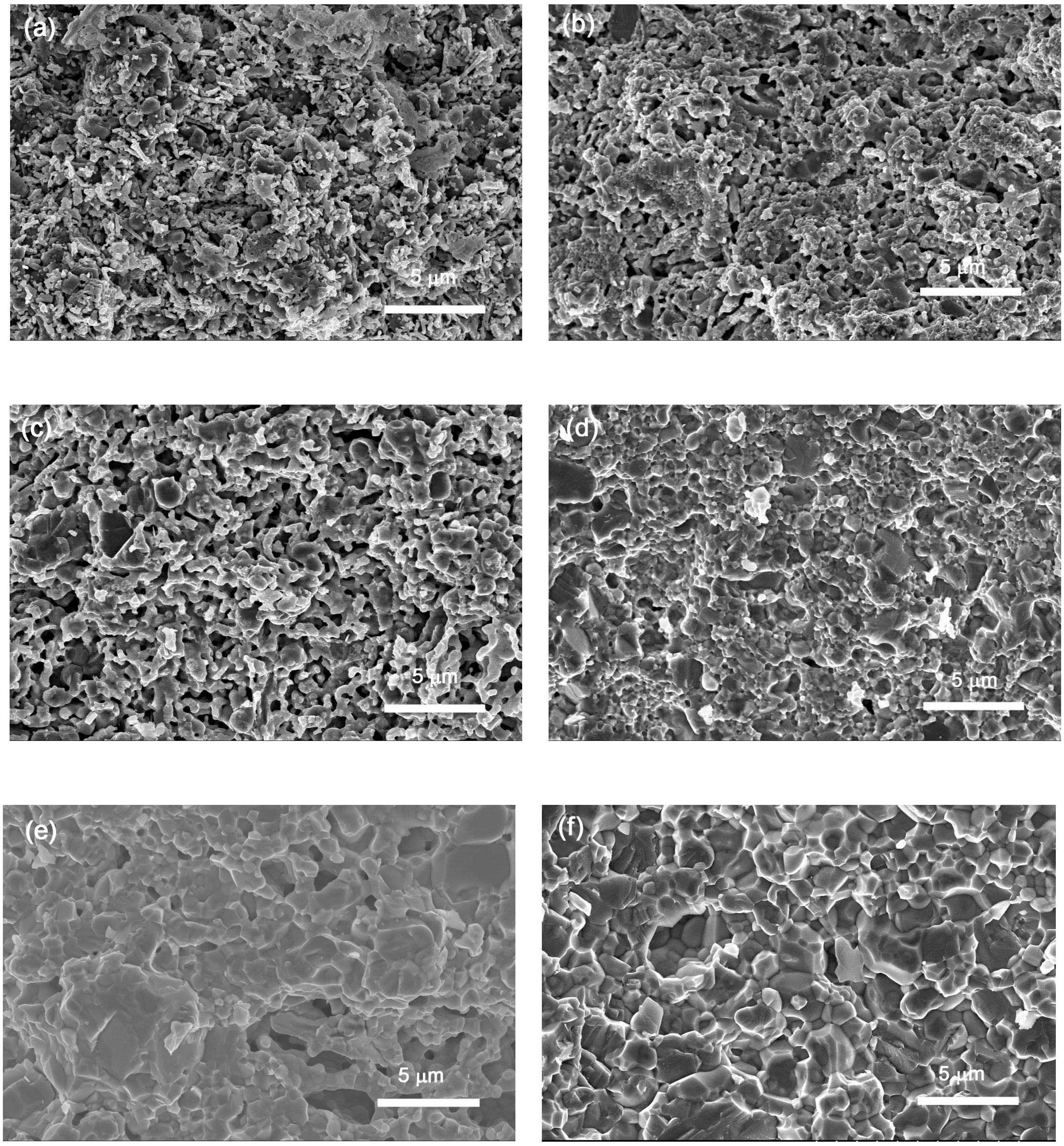

Figure S3 SEM micrographs of the conventional NiO-BZY20 anodes after firing at (a) 1200 ^{o}C, (c) 1300 ^{o}C, and (e) 1400 ^{o}C, and of the lab-synthesized NiO-BY20 anodes after firing at (b) 1200 ^{o}C, (d) 1300 ^{o}C, and (f) 1400 ^{o}C, showing a less porous microstructure for the lab-synthesized anodes than for the conventional anodes.

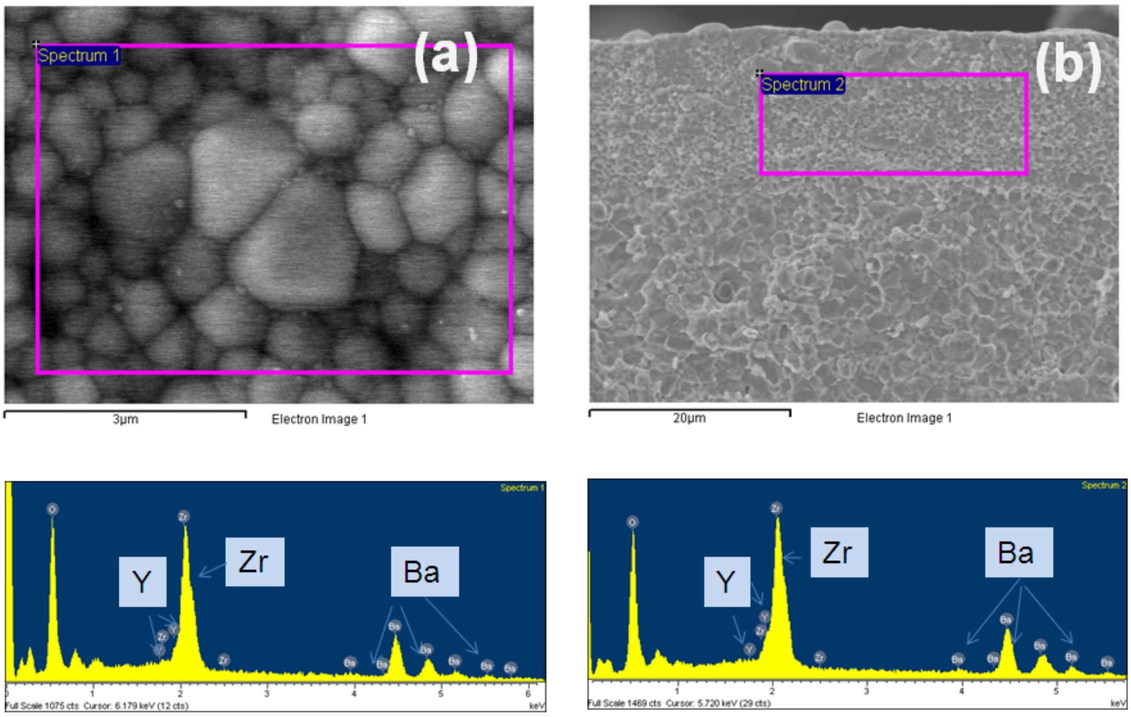

Figure S4 SEM-EDS analysis of the BZY20 film (a) surface and (b) fracture after sintering at 1400 ^{o}C, showing the presence of Ba, Y, and Zr, and the absence of Ni.