

A novel cobalt-free cathode with triple-conduction for proton-conducting solid oxide fuel cells with unprecedented performance

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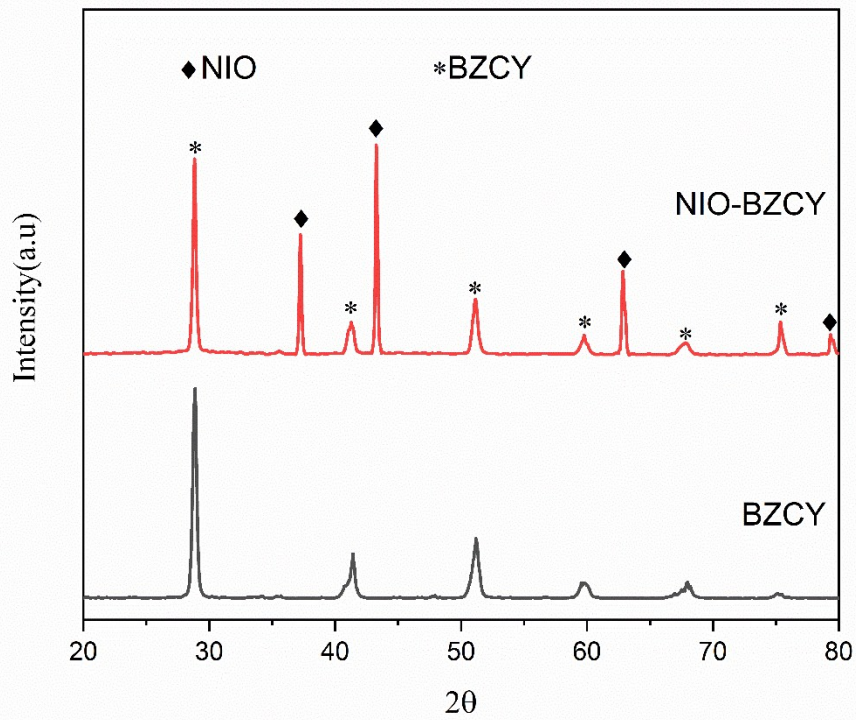


Figure S1. XRD patterns of NiO-BaZr_{0.1}Ce_{0.7}Y_{0.2}O_{3- δ} (NiO-BZCY) and BaZr_{0.1}Ce_{0.7}Y_{0.2}O_{3- δ} (BZCY) powders fired at 1000 °C for 3 h.

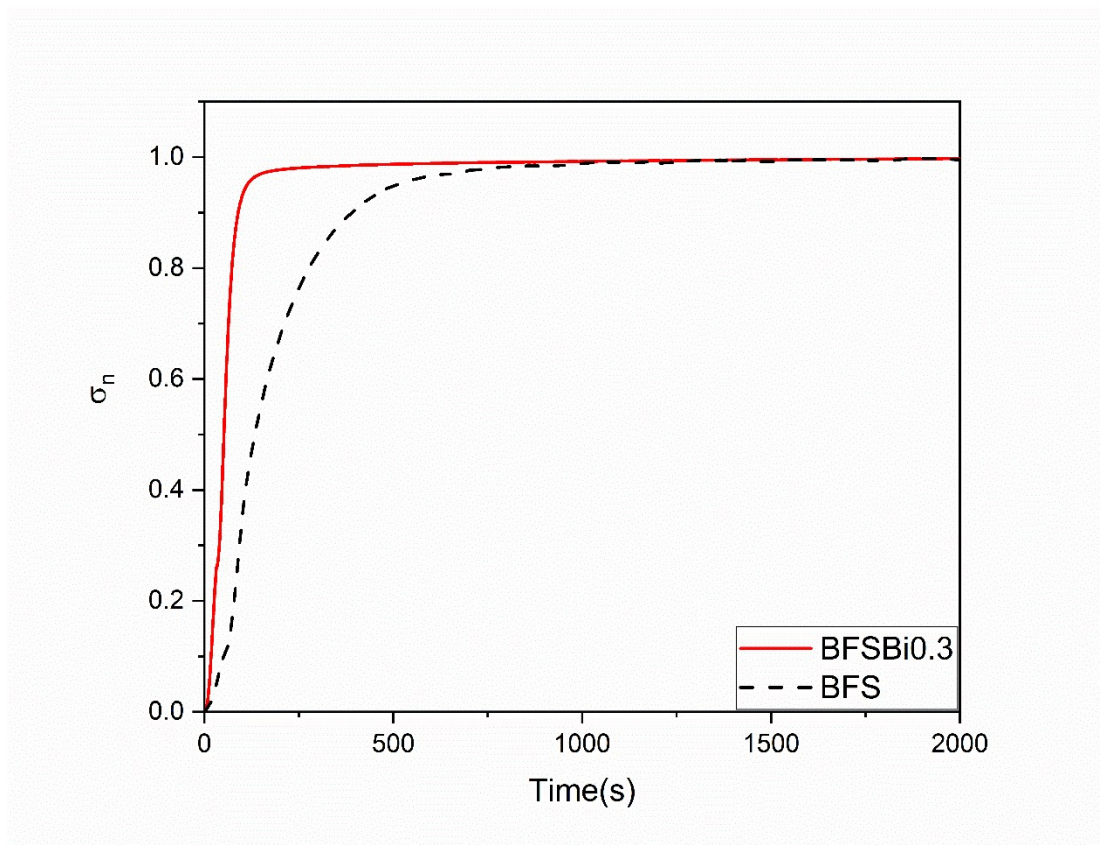


Figure S2. The ECR response of BFS and BFSBi0.3 at 700 °C.

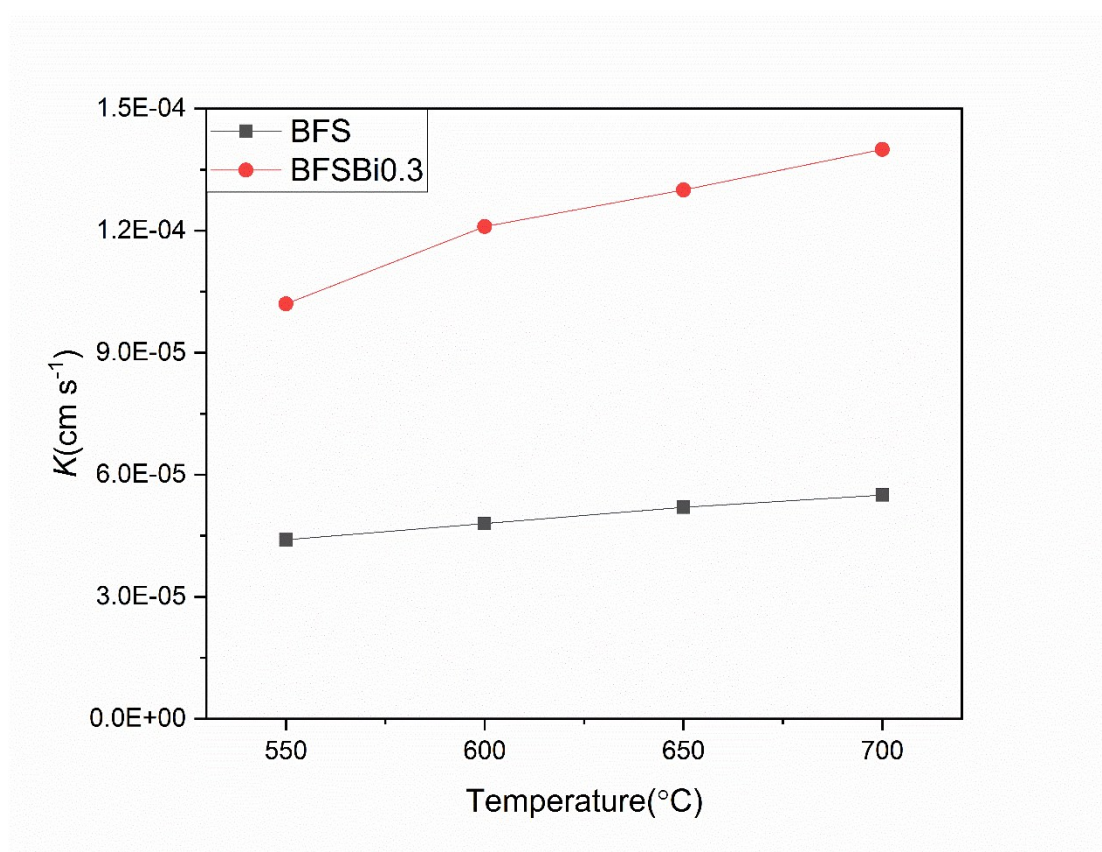


Figure S3. The chemical surface exchange coefficient (K_{chem}) for BFS and BFSBi0.3 from 550 to 700 $^{\circ}\text{C}$.

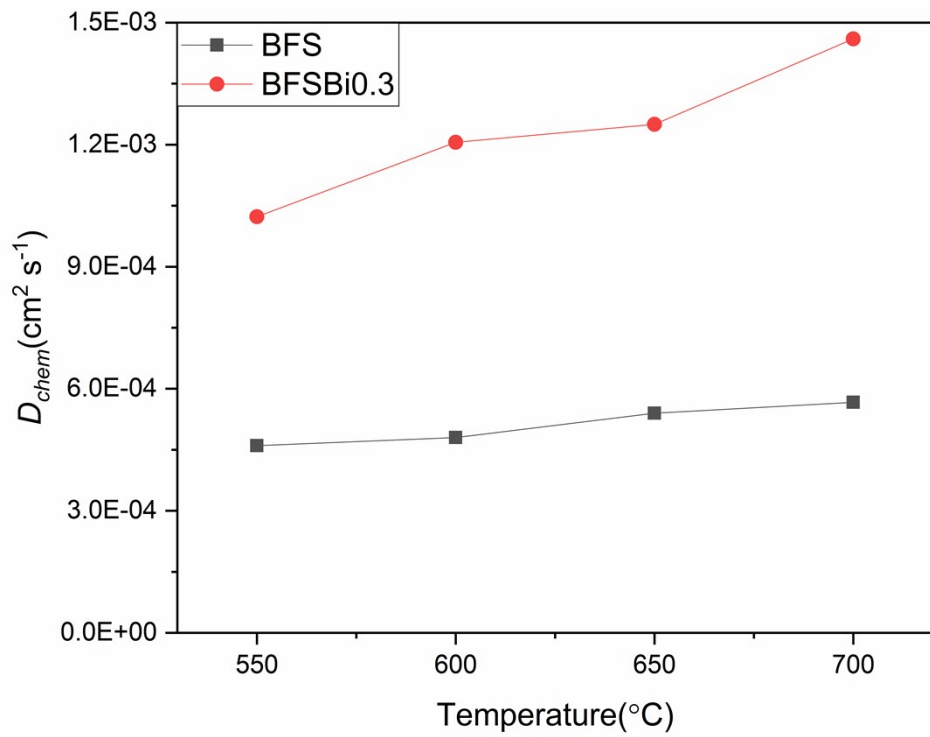


Figure S4. The chemical diffusion coefficient (D_{chem}) for BFS and BFSBi0.3 from 550 to 700 $^{\circ}\text{C}$.