Electronic Supplementary Information

Enabling fast ionic transport in CeO_2-$La_{1-2x}Ba_xBi_xFeO_3$ nanocomposite electrolyte for low temperature solid oxide fuel cell application.

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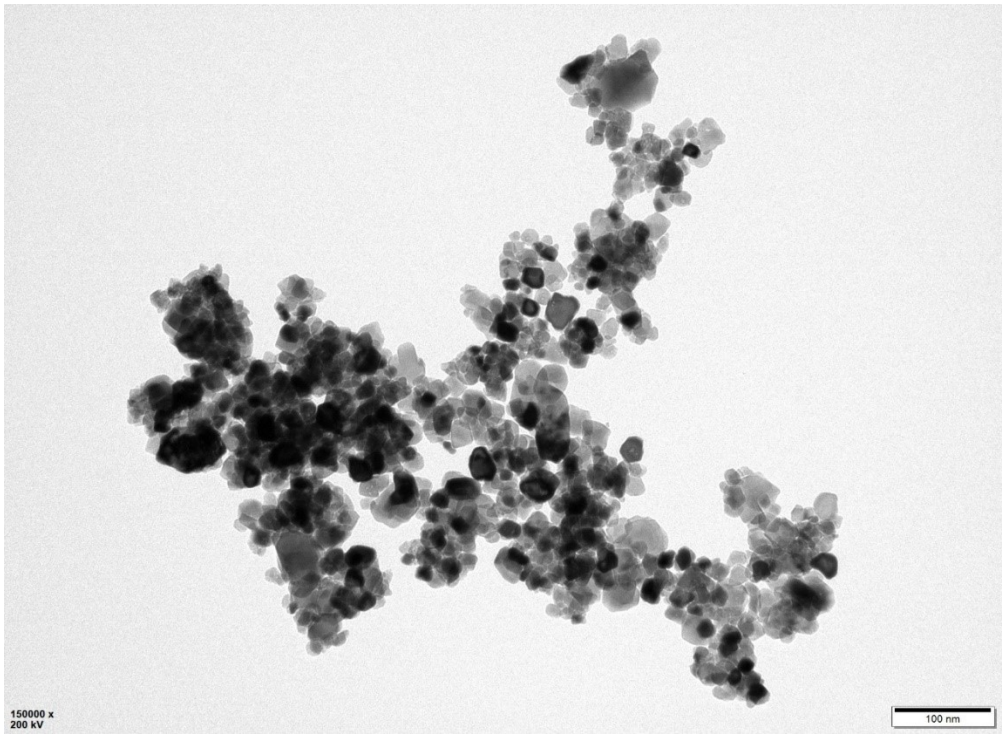

Fig. S1. HR-TEM images of CeO_2-LBBF

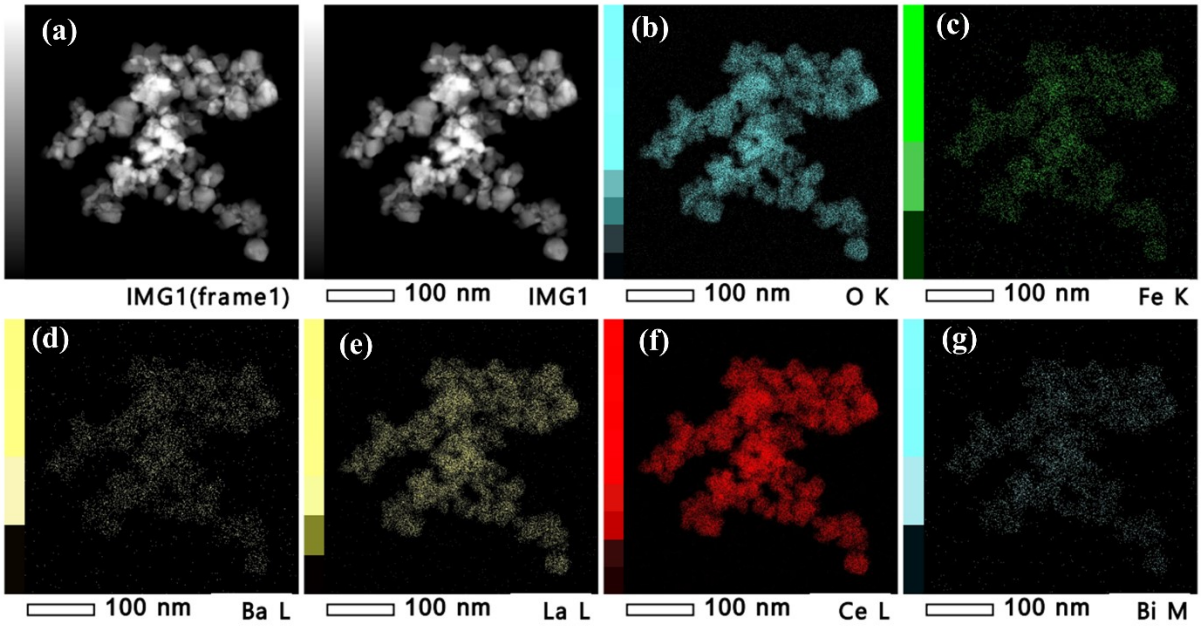

Fig. S2. (a) HR-TEM micrograph of 90CeO_2-10LBBF (b-g) EDS mapping of Ce, La, Ba, Bi, Fe, and O of 90CeO_2-10LBBF.

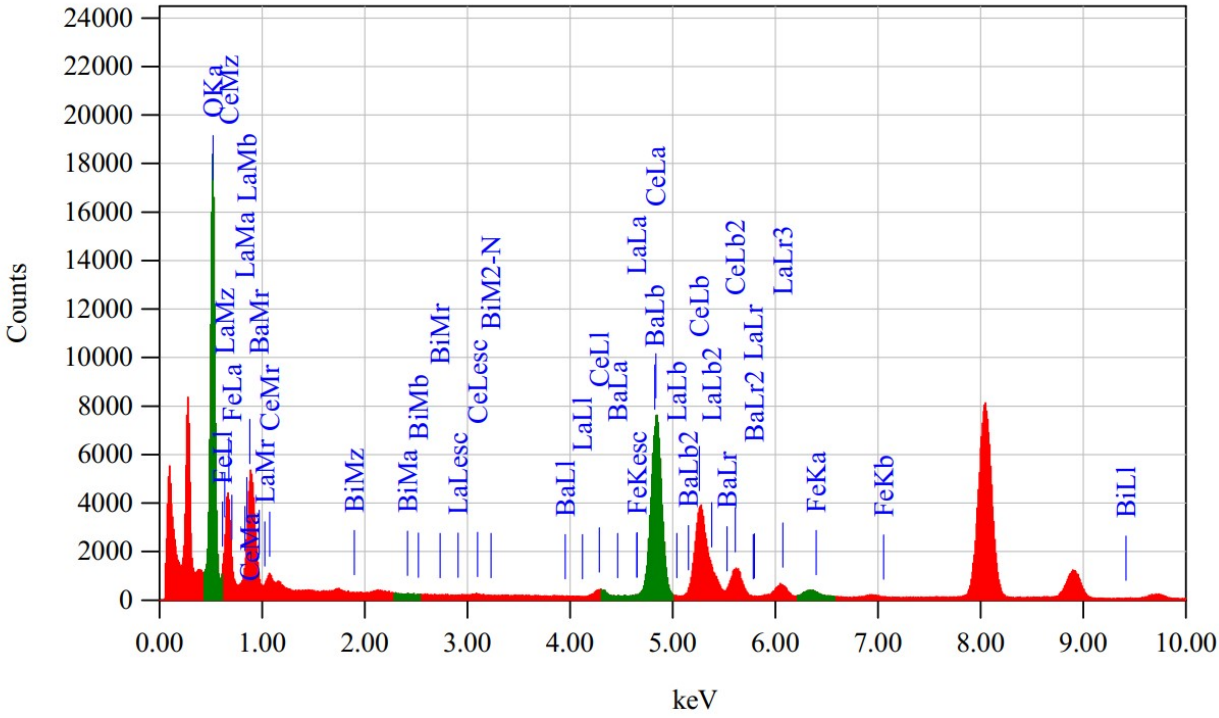

Fig. S3. Elemental mapping graph of 90CeO_2-10LBBF

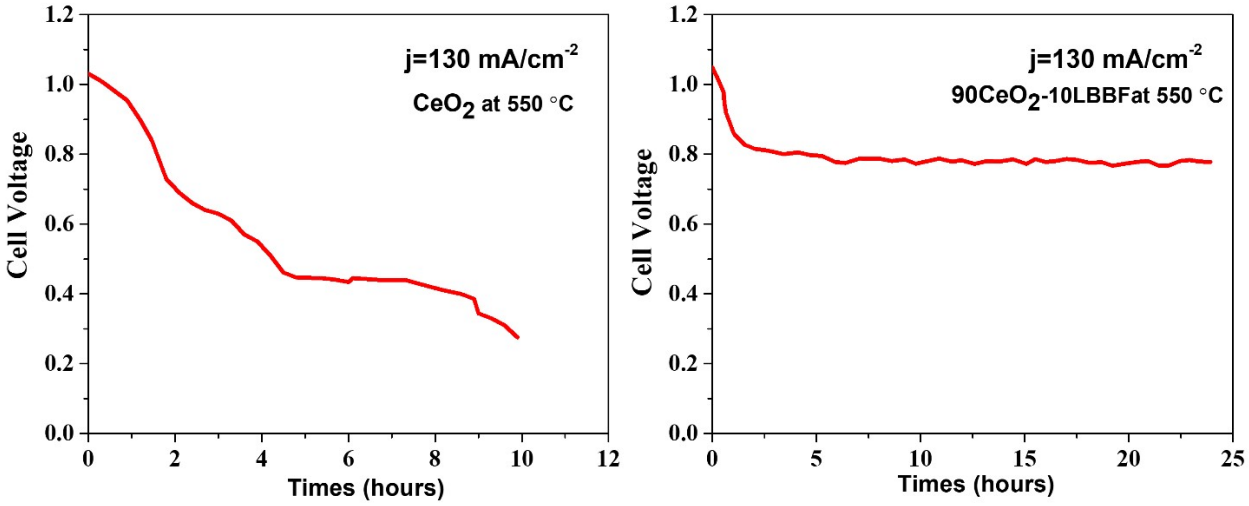

Fig. S4. Stability test of CeO_2 and $90CeO_2$-10LBBF electrolyte-based SOFC device at 550 ºC under current density j= 130 mA cm^{-2}.

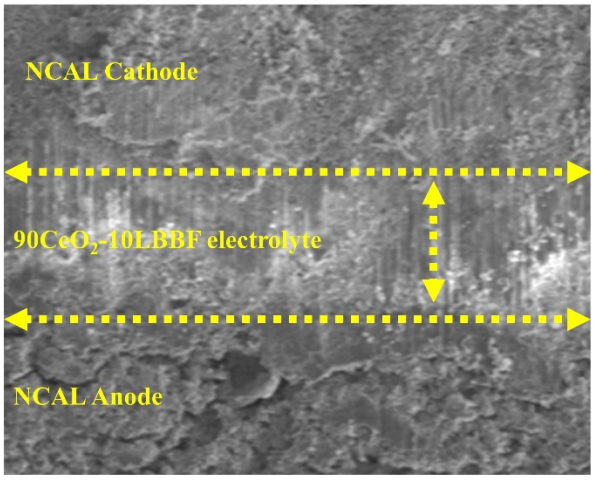

Fig. S5. Cross-sectional SEM of the $90CeO_2$-10LBBF electrolyte after fuel cell performance