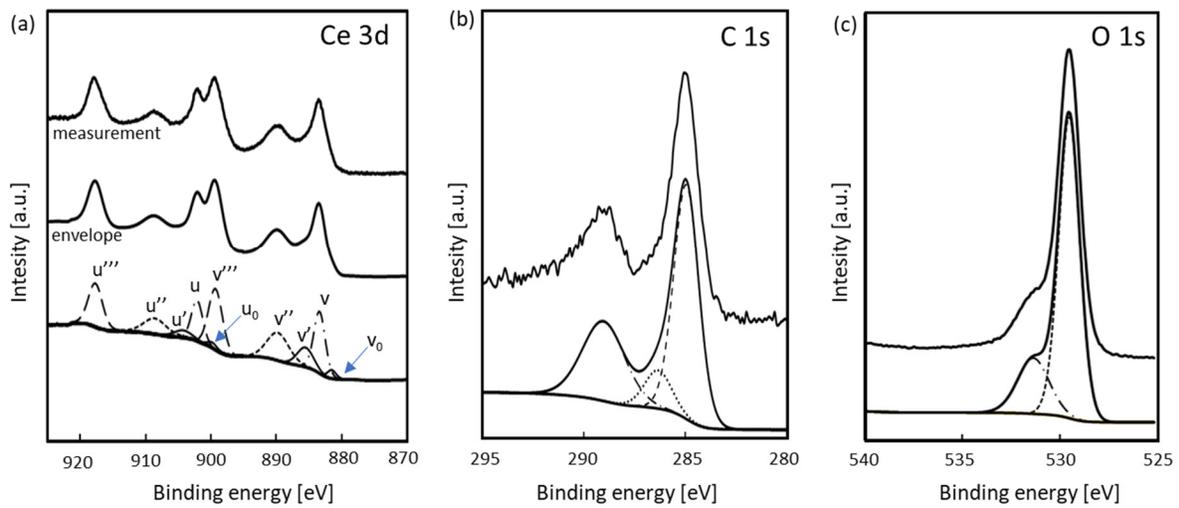
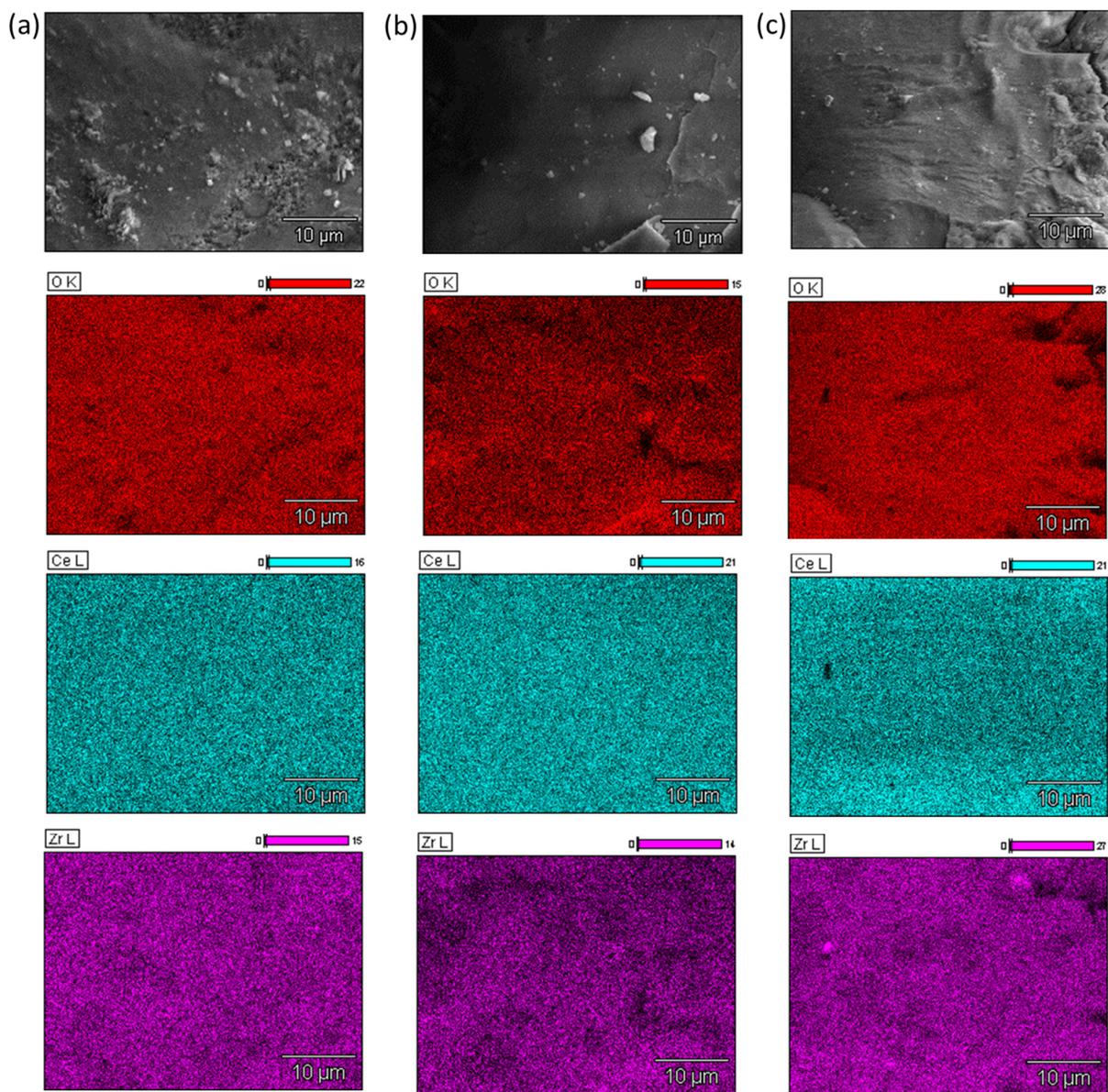


**Figure S1.** XPS results of the three types of ceria supports and ceria-zirconia: (a) survey spectra, and (b) Ce 3d detailed regions.



**Figure S2.** XPS results: peak fitting of the detailed regions of the spectrum for precipitated ceria ( $C_p$ ): (a) Ce 3d, (b) C 1s and (c) O 1s.



**Figure S3.** SEM-EDX results: maps of the distribution of O, Ce and Zr in (a) Au/CZ, (b) 0.3at%Na/CZ and (c) Au+0.3at%Na/CZ.