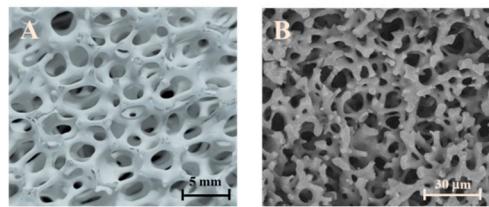
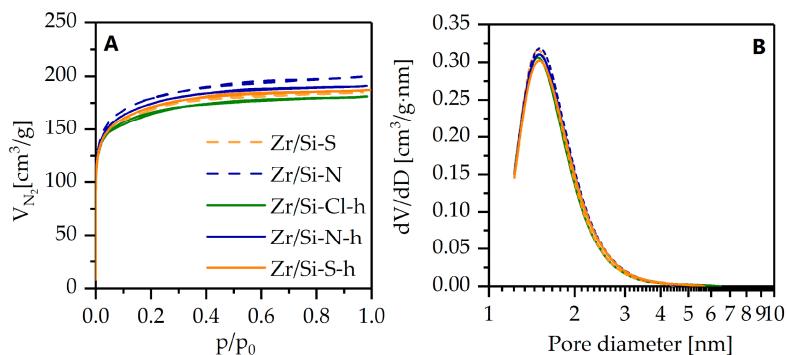


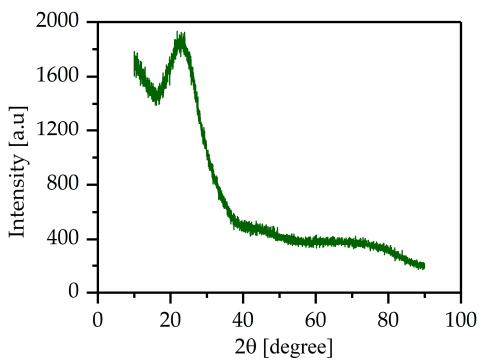
## Supplementary Material



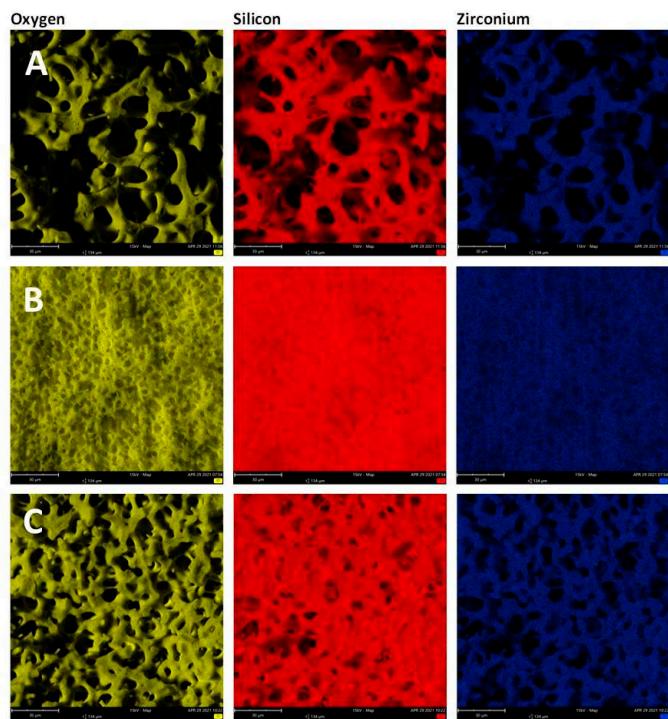
**Figure S1.** SEM images of ceramic foam (A) and silica micro-foam (B) [own images].



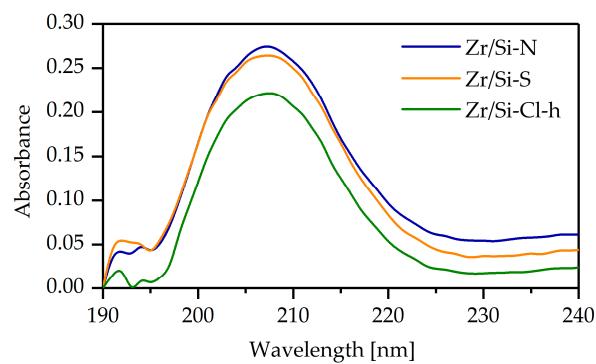
**Figure S2.** Cumulative pore volume (A) and macropore size distribution (B) of zirconia-silica monoliths.



**Figure S3.** XRD spectrum of Zr/Si-Cl-h sample.



**Figure S4.** SEM-EDS mapping images of Zr/Si-Cl-h (A); Zr/Si-N (B) and Zr/Si-S (C) samples.



**Figure S5.** UV-Vis spectra of  $\text{SiO}_2\text{-}\text{ZrO}_2$  monoliths.