

## Supplementary Information

Oxygen nonstoichiometry and thermodynamic characterization of Zr  
doped ceria in the 1573 – 1773 K temperature range

M. Takacs,<sup>a</sup> J. R. Scheffe<sup>a,\*</sup> and A. Steinfeld<sup>a</sup>

<sup>a</sup>*Department of Mechanical and Process Engineering, ETH Zurich, 8092 Zurich, Switzerland.*

\*Corresponding author.

University of Florida, Dept. of Mechanical and Aerospace Engineering, 231 MAE-A  
Building, P.O.Box 116250, Gainesville, FL 32611-6250

Tel: (352) 352-0839    email: jscheffe@ufl.edu

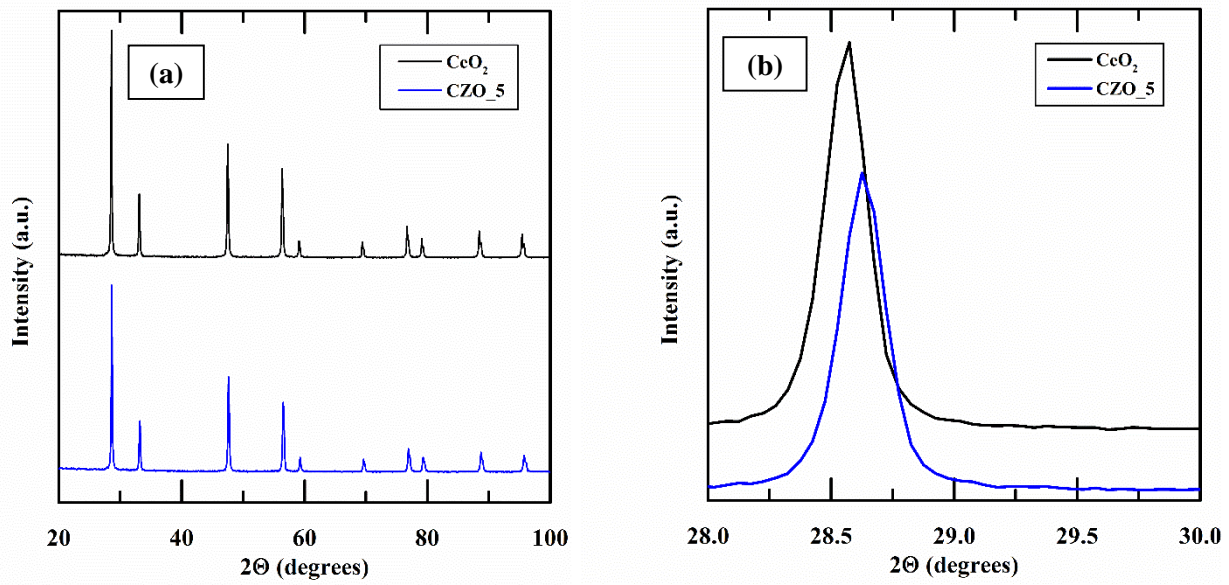


Figure 1. (a) XRD patterns of CeO<sub>2</sub> and CZO\_5. (b) (111) reflection of CeO<sub>2</sub> in comparison with CZO\_5.

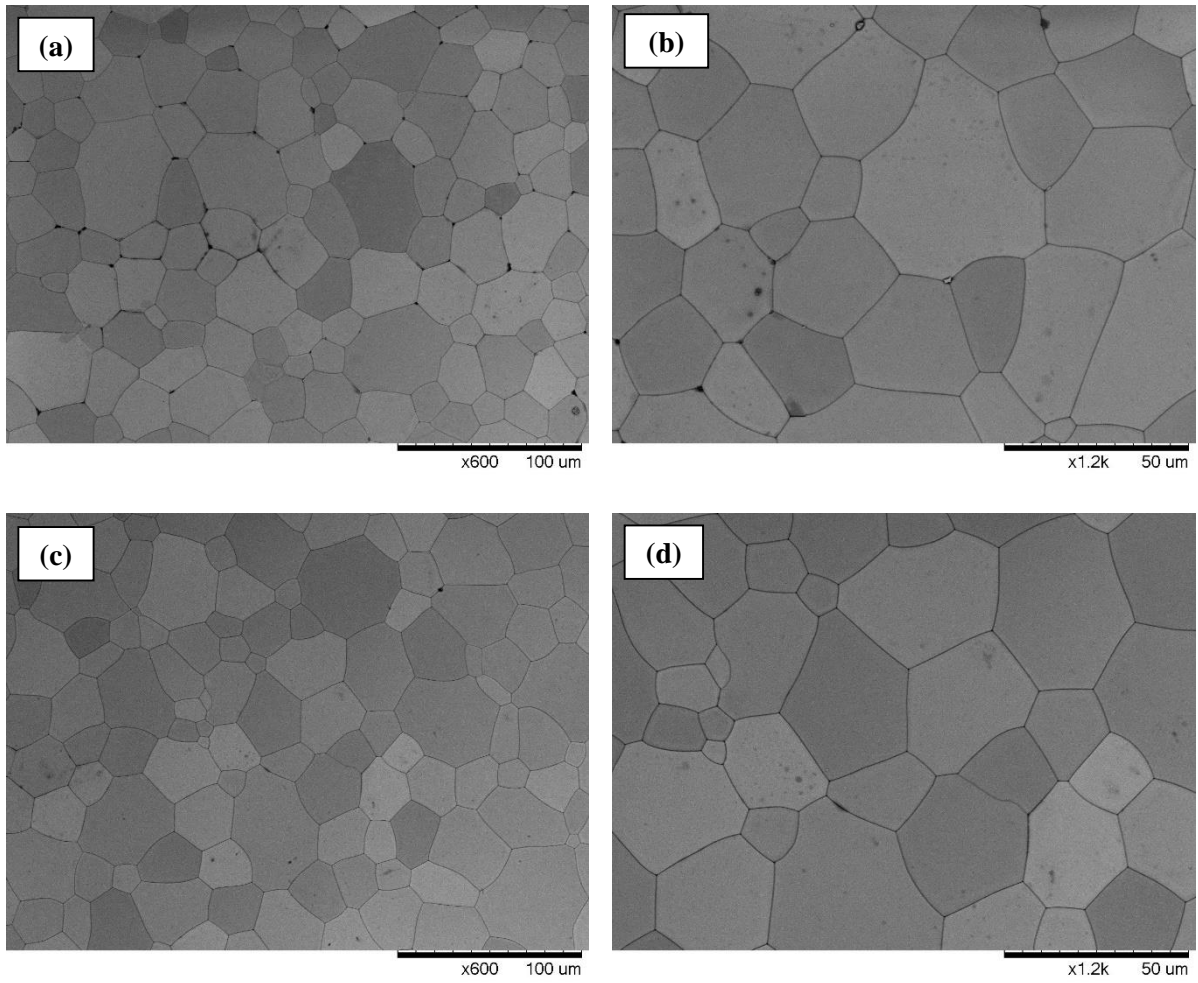


Figure 2. SEM images of the  $\text{CeO}_2$  pellet (a) and (b) and of the  $\text{CZO}_5$  pellet (c) and (d).