

# Zinc Oxide Nanostructures: From Chestnut Husk-Like Structures to Hollow Nanocages, Synthesis and Structure

Domenica Scarano <sup>1</sup>, Federico Cesano <sup>1,\*</sup>, Serena Bertarione <sup>1</sup> and Adriano Zecchina <sup>1</sup>

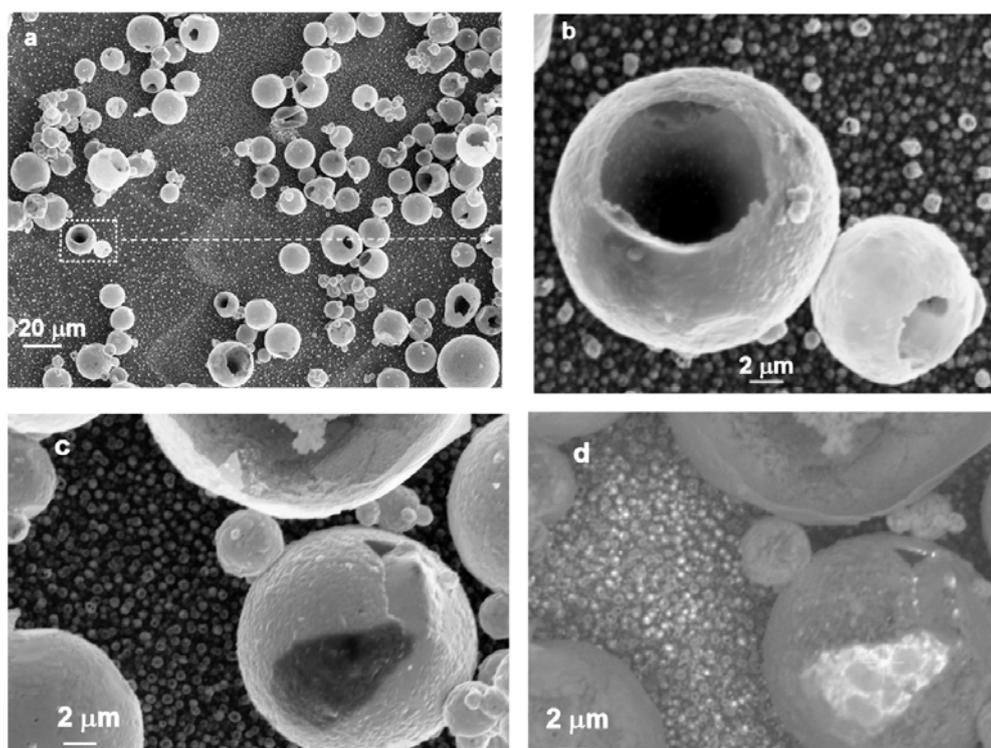
<sup>1</sup> NIS (Nanostructured Interfaces and Surfaces) Inter-Departmental Centre, University of Torino, Via P. Giuria 7, I-10125 Torino, Consorzio INSTM (UdR of Torino), Italy; domenica.scarano@unito.it; federico.cesano@unito.it; serena.bertarione@titac.it; adriano.zecchina@unito.it.

\* Correspondence: federico.cesano@unito.it; Tel.: +39-011-670-7834

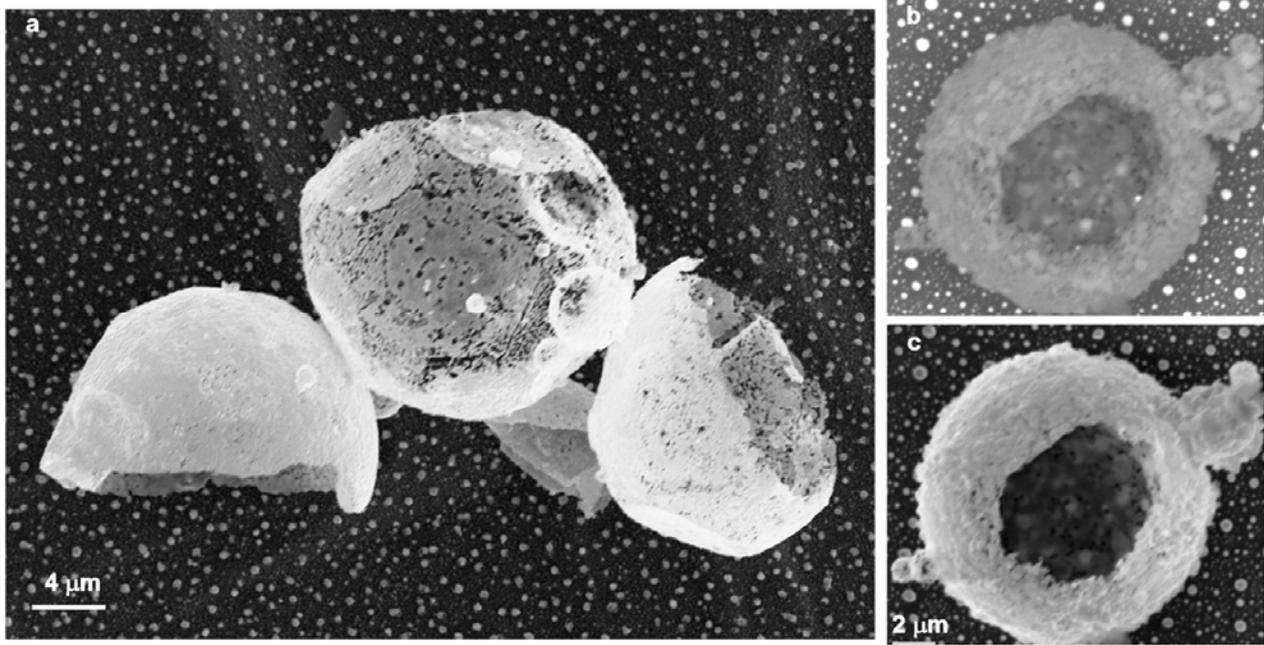
## Supplementary Materials

**Table 1** ZnO synthesis parameters.

	Sample			
	A	B	C	D
Temperature of the substrate (°C)	700	700	800	900
Time of reaction (hours)	3	22	4	3
Distance from the substrate (cm)	8	8	8	8
He gas flow (heating time) [ml/min]	100	100	100	100
He/air gas synthesis mixtures [ml/min]	100 + 25	100 + 25	100 + 25	100 + 25



**Figure S1.** SEM image of ZnO spherical micro- and nanocages grown on Au thin film at 700°C for 22h a). In figures b) hollow microcages with smooth and thick walls of a selected area of a) are reported. Back scattered electron c) and secondary electron d) images of ZnO spherical microcages.



**Figure S2.** SEM images of ZnO microcages grown on Au thin film at 900°C for 3 h (a). Back scattered electron (b) and secondary electron (c) images of a ZnO spherical microcage.