Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Multiscale design of ZnO photocatalytic nanostructured films

A. Ramirez-Canon, M. Medina-Llamas, M. Vezzoli, and D. Mattia*

Supplementary Information

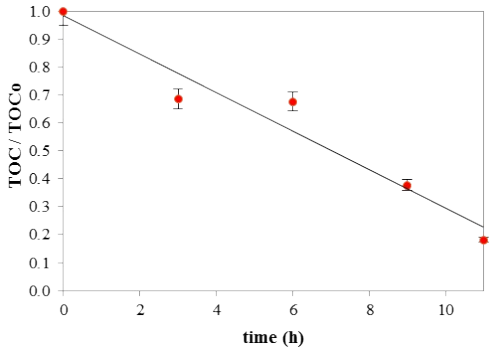

Figure S1. Changes in TOC concentration during 11 hours photocatalytic degradation of phenol in a batch reactor using ZnO-NF as a photocatalyst.

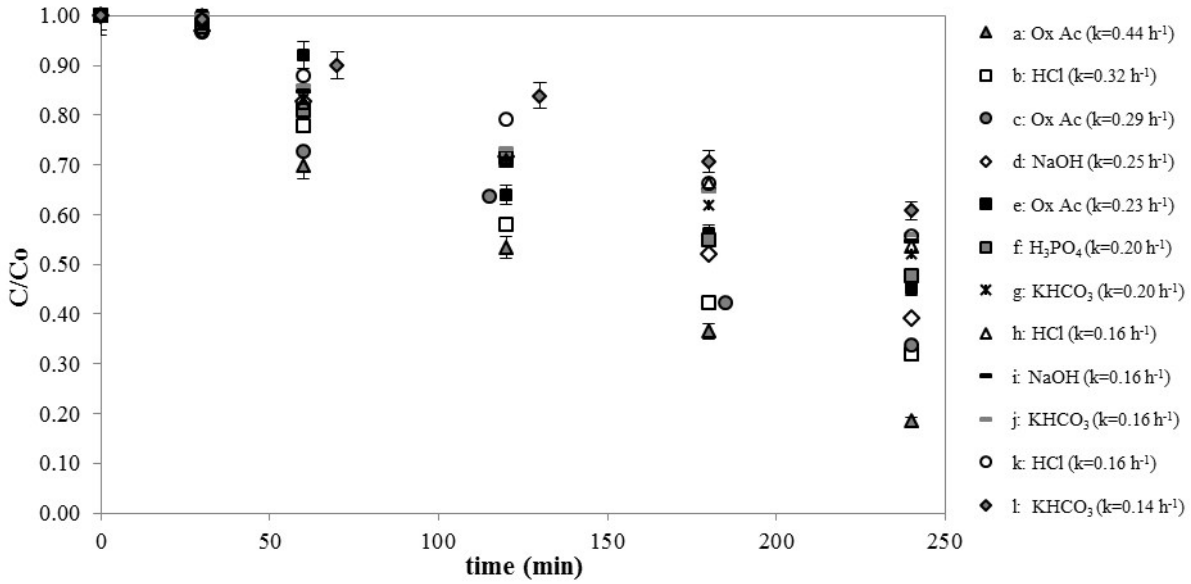

Figure S2. Photocatalytic degradation of phenol with kinetic constants. FESEM micrographs of the ZnO films are shown in Figure 3 and summary of annodization conditions for the production of the ZnO films are displayed in Table 2. The first data point for each sample corresponds to controls for degradation in presence of photocatalyst under darkness conditions.

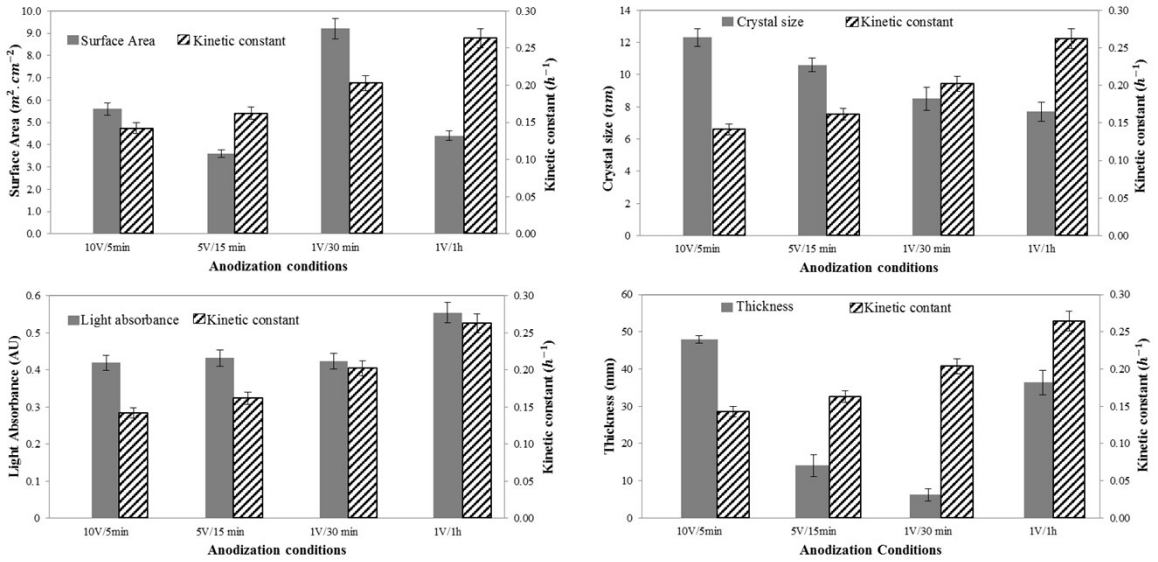

Figure S3. Graphical correlation of kinetic constants of phenol degradation produced by the ZnO-NFs displayed in Figure 6 with their morphological properties (surface area, thickness, crystal size distribution and light absorbance) Table 3.

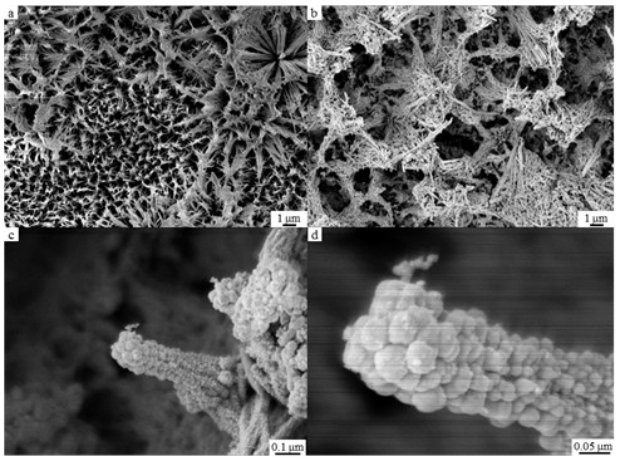

Figure S4. FESEM micrographs of Zn-NF before (a) and after (b-d) deposition of new nanostructures on the surface of nanowires. New nanostructures are shown at different magnifications (c-d).

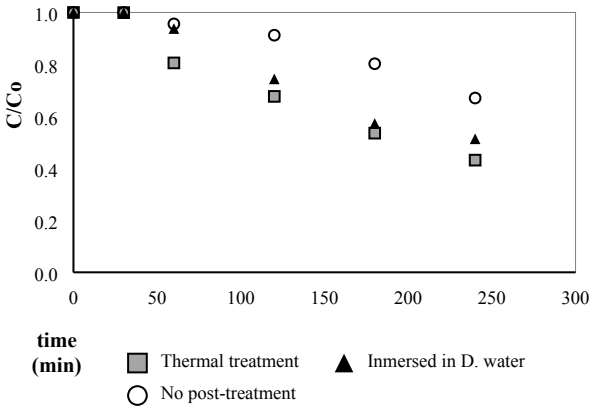

Figure S5. Comparison of the photocatalytic performance of ZnO-NFs with and without deposition of new nanostructures on the surface of the nanowires (photocatalytic degradation of phenol).