catalysts

Supplementary Materials: Unexpected Link between the Template Purification Solvent and the Structure of Titanium Dioxide Hollow Spheres

Tamás Gyulavári [1,2], Kata Kovács [2], Klára Magyari [1,3], Kornélia Baán [2], Anna Szabó [2], Gábor Veréb [1,4,*], Zsolt Pap [1,3,5,*] and Klara Hernadi [1,2,*]

[1] Research Group of Environmental Chemistry, Institute of Chemistry, University of Szeged, H-6720 Szeged, Tisza Lajos krt. 103, Hungary; gyulavarit@chem.u-szeged.hu (T.G.); klara.magyari@ubbcluj.ro (K.M.)
[2] Department of Applied and Environmental Chemistry, University of Szeged, H-6720 Szeged, Rerrich tér 1, Hungary; kovacs.katus5@gmail.com (K.K.); kornelia.baan@chem.u-szeged.hu (K.B.); szabo.anna@chem.u-szeged.hu (A.S.)
[3] Nanostructured Materials and Bio-Nano-Interfaces Center, Interdisciplinary Research Institute on Bio-Nano-Sciences, Babes-Bolyai University, RO-400271 Cluj-Napoca, Treboniu Laurian 42, Romania;
[4] Department of Process Engineering, Faculty of Engineering, University of Szeged, H-6725 Szeged, Moszkvai krt. 9, Hungary
[5] Institute of Environmental Science and Technology, University of Szeged, H-6720 Szeged, Tisza Lajos krt. 103, Hungary
* Correspondence: verebg@mk.u-szeged.hu (G.V.); pzsolt@chem.u-szeged.hu (Z.P.); hernadi@chem.u-szeged.hu (K.H.); Tel.: +36-62-546-582 (G.V.); +36-62-544-338 (Z.P.); +36-62-544-626 (K.H.)

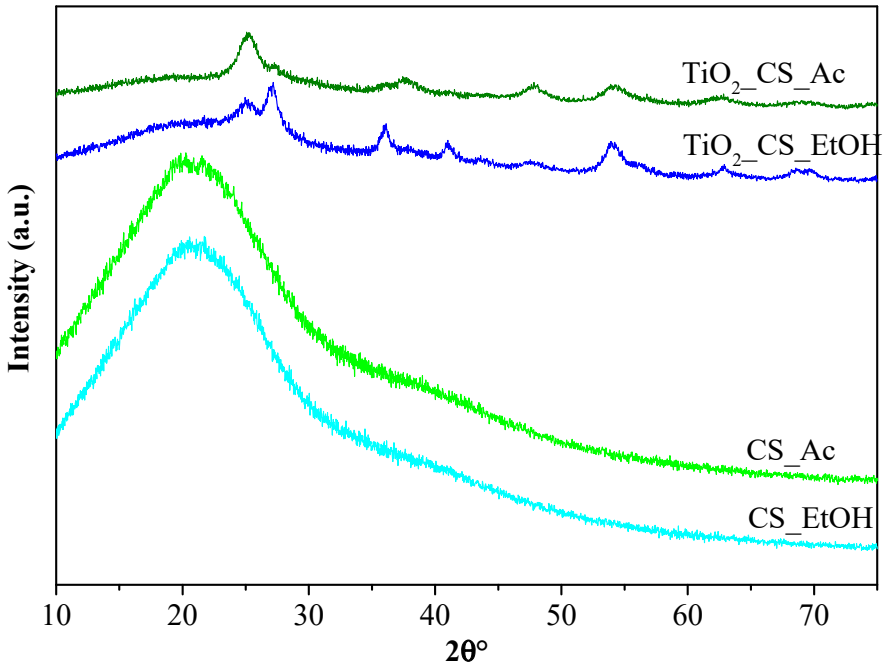

Figure S1. X-ray diffraction patterns of carbon sphere templates purified either with acetone (CS_Ac) or ethanol (CS_EtOH) and their corresponding CS-TiO_2 composites. For CS_Ac and CS_EtOH only one broad diffraction pattern was observed at ~22° that belongs to amorphous carbon. For TiO_2_CS_Ac the diffraction at 25.6° indicates the formation of anatase crystal phase, while for TiO_2_CS_EtOH the reflection at 27.2° can be attributed to the presence of rutile phase. The samples retained their crystalline composition after calcination as well (i.e. for TiO_2_HS_Ac and TiO_2_HS_EtOH.

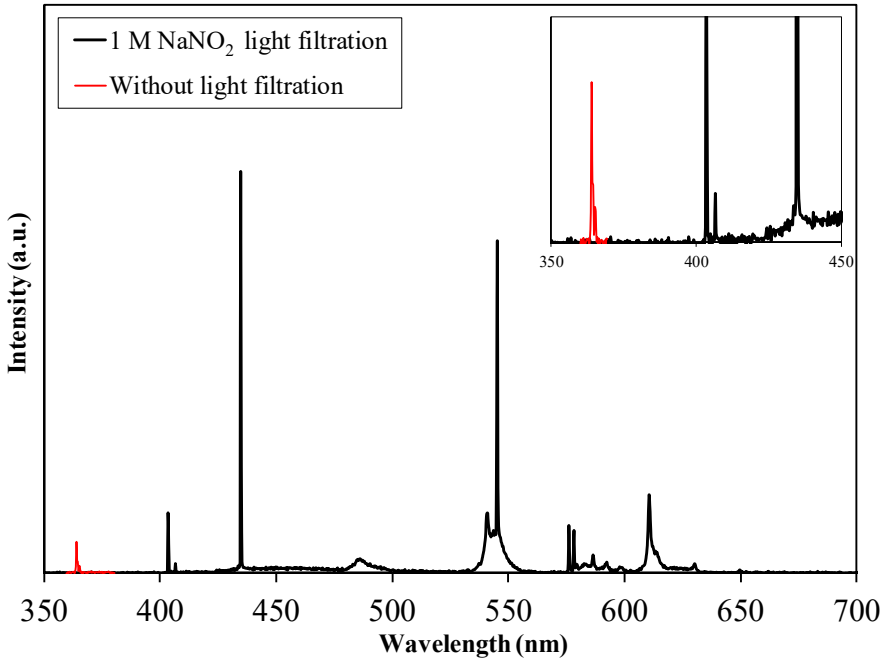

Figure S2. Emission spectrum of the applied visible-light-emitting lamps that was modified with $NaNO_2$ to absorb UV photons and provide solely visible light irradiation.