The Serbian Ceramic Society
The Academy of Engineering Sciences of Serbia
Institute for Multidisciplinary Research - University of Belgrade
Institute of Physics - University of Belgrade
Vinča Institute of Nuclear Sciences - University of Belgrade

PROGRAMME and the BOOK of ABSTRACTS

2CSCS-2013

2nd Conference of the Serbian Ceramic Society
June 5-7.2013. Belgrade Serbia

Edited by:
Snežana Bošković
Vladimir V. Srdić
Zorica Branković

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P-1

PHOTOCATALYTIC PROPERTIES OF HYDRO-AND SOLVOTHERMALY PREPARED NANOSIZED ZnO

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Two salts of Zn were used as starting materials: $Zn(CH_3COO)_2 \cdot 2H_2O$ for solvothermal and $Zn(NO_3)_2 \cdot 6H_2O$ for hydrothermal treatment. Initially, $Zn(CH_3COO)_2 \cdot 2H_2O$ was dissolved in ethylene-glycol in the presence of PVP and addition of solid NaOH, while solutions of the $Zn(NO_3)_2 \cdot 6H_2O$ and NaOH were mixed to prepare precursor suspensions. The precursors were subjected to solvo- or hydrothermal treatment at 120 °C during 18 h. The prepared samples are characterized by X-ray diffraction and TG/DSC analysis, while photocatalytic properties were tested according to degradation of Reactive Orange 16.

P-2

NANOPOWDERS OF CEO_2 OBTAINED BY HYDROTHERMAL METHOD FROM THE VARIOUS PRECURSORS

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In this work we have explored different ways for synthesis of nanosized CeO_2. Four different salts of cerium were used as starting materials for the synthesis as the precursors: two salts of cerium (III): $Ce(NO_3)_3 \cdot 6H_2O$ and $CeCl_3 \cdot 7H_2O$, and two salts of cerium (IV): $Ce(SO_4)_2 \cdot 4H_2O$ and $(NH_4)_2Ce(NO_3)_6$. The precipitated precursors were washed and then subjected to hydrothermal treatment at 200 ºC during 18 h. In some cases hydrothermally prepared samples were annealed at higher temperature to obtain phase-pure samples. The phase identification of the samples and analysis were carried out by X-ray diffraction, FTIR spectroscopy, and TG/DSC analysis.