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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CESIUM ADSORPTION AND PHASE TRANSFORMATION OF CLINOPTILOLITE

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This work was focused to provide promising solid-phase materials that combine relatively inexpensive and high removal capacity of some radionuclides from low-level radioactive liquid waste. Cesium adsorption from aqueous solutions onto clinoptilolite and their thermal transformation in this work was investigated. All samples were characterized by scanning electron microscopy and X-ray diffraction analysis. The elemental composition of the zeolitic material clinoptilolite was also determined with XRF. The content of Al and Si was determined using ICP-OES. The cesium adsorption by zeolites was carried on in a batch system where a contact time was 24 h. The cesium was detected by atomic absorption spectrometer. The results for Cs adsorption efficiency of clinoptilolite are very satisfactory, especially for concentration of 10 mg/l, but this material didn't change into pollucite stable phase.

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EXAMINATION OF NANOSTRUCTURED $Ca_{1-x}Gd_xMnO_3$ (x=0.05; 0.1; 0.15; 0.2) OBTAINED BY MODIFIED GLYCINE NITRATE PROCEDURE

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Starting $Ca_{1-x}Gd_xMnO_3$ powders (x=0.05, 0.10, 0.15, 0.20) were prepared by combustion of solutions containing mixture of glycine with metal nitrates in their appropriate stoichiometric ratios. The so-obtained powders were annealed at the temperature of 850 ^oC to 950 ^oC for 10 minutes to produce final nanostructured