

Faculty of Technology
University of Novi Sad

Conference for Young Scientists in Ceramics

10th Students' Meeting
and
3rd ESR COST MP0904 Workshop

Book of Abstracts

Conference for Young Scientists in Ceramics

SM 2013
COST SIMUFER

Novi Sad, Serbia, November 6-9, 2013

CONFERENCE for YOUNG SCIENTISTS in CERAMICS

**The Tenth Students' Meeting, SM-2013
The Third ESR Workshop, COST MP0904**



PROGRAMME and BOOK OF ABSTRACTS

**November 6-9, 2013
Novi Sad, Serbia**

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T4

THERMAL INDUCED PHASE TRANSFORMATION OF Cs-EXCHANGED LTA FRAMEWORK ZEOLITE

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Cesium aluminosilicate phases are of great interest as possible hosts for ¹³⁷Cs immobilization in radioactive waste management. Cs⁺ exchanged forms of two synthetic zeolites (4A and 3A) were prepared by standard procedure, and content of exchanged ions was determined by ion chromatography. Obtained samples were investigated by differential thermal gravimetry TG/(DTG) and SEM/EDS analysis. All samples were annealed in the range of 600–1500 °C. High temperature phase transformations of Cs⁺ exchanged zeolites (LTA) were investigated. Based on data obtained by XRD analysis of the samples, it was concluded that above 1000 °C Cs-LTA (4A and 3A) frameworks recrystallized in a pollucite phase.

T5

MICROSTRUCTURE AND MECHANICAL BEHAVIOR OF SINTERED MATERIALS MADE OF KAOLIN AND CALCITE MIXTURE

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Microstructure of sintered ceramic materials is complex and depends on the initial composition of masses, forming and sintering process. Microstructure affects the properties of the final material.

In this work, we consider microstructure of sintered materials made of kaolin with addition of different quantity of pure calcite. Two different types of kaolin were used: first with higher content of quartz and smaller content of kaolinite and second with higher content of kaolinite and very small content of quartz. The kaolins had different grain size distribution and indicate different behavior during sintering as it was showed in our former works

We consider microstructure changes with increasing content of calcite and with increasing temperature. The following techniques were used: scanning electron