



**Serbian Ceramic Society Conference
ADVANCED CERAMICS AND APPLICATION V
New Frontiers in Multifunctional Material Science and Processing**

**Serbian Ceramic Society
Institute of Technical Sciences of SASA
Institute for Testing of Materials
Institute of Chemistry Technology and Metallurgy
Institute for Technology of Nuclear and Other Raw Mineral Materials
School of Electrical Engineering and Computer Science of Applied Studies**

PROGRAM AND THE BOOK OF ABSTRACTS

**Serbian Academy of Sciences and Arts, Knez Mihailova 35
Serbia, Belgrade, 21st-23rd September 2016.**

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interactions namely the amino-gold interaction with a covalent linkage of the amino-functionalized particles to a self-assembled monolayer of carboxylic acid on the gold surface. This concept can be extended to various other nanomaterials.

INV11

Influence of different pore-forming agents on wollastonite microstructures

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In this study, highly porous macro- and micro-cellular wollastonite-based ceramics was synthesized. Ceramic precursor, methylhydrocyclosiloxane, together with micro-sized CaCO_3 , was used as starting material. After 20 min of ultrasound treatment, and calcination at 250 °C for 30 min, different pore-forming agents were added to the as-obtained powders. Differential thermal analysis was used to determine characteristic temperatures of processes occurring within powders during heating. Based on the obtained results, sintering regime was set up. Prepared mixtures were pressed into pallets and sintered at 900 °C. During the sintering regime, highly porous wollastonite-based ceramics was obtained. The phase composition of the sintered samples as well as microstructures was analyzed by the means of X-ray diffraction method and SEM. Two-phase system was detected in all samples, CaSiO_3 wollastonite and Ca_2SiO_4 larnite, and their ratio varied with each pore-forming agent. It was observed that addition of different pore-forming agent resulted in significantly different microstructures.

INV12

Education and Materials Science in Cultural Heritage Preservation

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Multidisciplinary scientific approach in the field of historical materials and holistic preservation of cultural heritage is facing the absence of appropriate specialized education and training, lack of available equipment and lack of interdisciplinary and intersectoral communications. There is insufficient investment in knowledge, equipping of modern laboratories and development of permanent communication networks among heritage managers, conservators, professionals and engineers of different backgrounds. Common language that would allow to provide information, but also to be understood by those who come from other scientific fields, has not been established yet.