



**Serbian Ceramic Society Conference
ADVANCED CERAMICS AND APPLICATION VI
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**

PROGRAM AND THE BOOK OF ABSTRACTS

**Serbian Academy of Sciences and Arts, Knez Mihailova 35
Serbia, Belgrade, 18-20. September 2017.**

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Dear Colleagues,

We have great pleasure to welcome you to the Advanced Ceramic and Application Conference VI organized by the Serbian Ceramic Society in cooperation with the Institute for Testing of Materials, Institute of Technical Sciences of SASA, Institute of Chemistry Technology and Metallurgy and Institute for Technology of Nuclear and Other Raw Mineral Materials.

Advanced Ceramics today include many old-known ceramic materials produced through newly available processing techniques as well as broad range of the innovative compounds and composites, particularly with plastics and metals. Such developed new materials with improved performances already bring a new quality in the everyday life. The chosen Conference topics cover contributions from a fundamental theoretical research in advanced ceramics, computer-aided design and modeling of a new ceramics products, manufacturing of nanoceramic devices, developing of multifunctional ceramic processing routes, etc. Traditionally, ACA Conferences gather leading researchers, engineers, specialist, professors and PhD students trying to emphasize the key achievements which will enable the wide spread use of the advanced ceramics products in High-Tech industry, renewable energy utilization, environmental efficiency, security, space technology, cultural heritage, prosthesis, etc.

Serbian Ceramic Society has been initiated in 1995/1996 and fully registered in 1997 as Yugoslav Ceramic Society, being strongly supported by American Ceramic Society. Since 2009, it has continued as Serbian Ceramic Society in accordance to the Serbian law procedure. Serbian Ceramic Society is almost the only one Ceramic Society in the South-East Europe, with members from more than 20 Institutes and Universities, active in 16 sessions, by program and the frames which are defined by the American Ceramic Society activities.

For the first time Advanced Ceramic and Application Conference hosting delegations from Republics of Ghana, Nigeria, Niger and Cameroon with the idea to connect, share and provide positive influence to the scientific and industrial communities all around world.



Prof. Dr Vojislav Mitić
President of the Serbian Ceramic Society
World Academy Ceramics Member
European Academy of Sciences&Arts Member



Prof. Dr Olivera Milošević,
President of the General Assembly of the
Serbian Ceramic Society
Academy of Engineering Sciences of Serbia Member

Conference Topics

- Basic Science & Sintering of Ceramics
- Nano, Bio- & Opto Ceramic
- Electro & Multifunctional Ceramics
- Magnetic, Catalytic & Composite Materials
- Renewable Energy, Heritage & Archeology
- Industrial Talks

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bricks containing MS is feasible. In fact, ceramic thermal insulation is slightly improved whereas the mechanical performance only slightly deteriorates. It should be emphasized that a specific experimental study carried out during sintering showed zero emission of dangerous pollutants. Moreover, standard leaching tests conducted predicted negligible quantities of dangerous leachate elements, indicating the effective encapsulation of heavy metals in the ceramic matrix, towards environmentally friendly ceramic materials.

OR-REHA1

Copmarative analysis of mortars from the archeological sites Gamzigrad (Romuliana) and Caričin Grad for the purpose of making compatible repair mortars

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The paper presents a comparative analysis of mortars found at two significant archeological sites in Serbia. Specifically, those are Gamzigrad (Romuliana) near Zajecar and the archeological site Caricin Grad near Leskovac. In the previous papers, we dealt with the characterization of mortars from both sites. It was the first examination of mortars from both locations. The comparative analysis of mortars was performed based on the data obtained by testing physical-mechanical properties such as: water absorption, porosity, gravity and specific mass. Mineralogical composition (both quantitative and qualitative) was obtained based on XRD / XRF and SEM/EDS analyses. The comparative analyses of the mortar obtained from the mentioned archeological sites indicated that mortars from both locations contained grains of river aggregate, crushed limestone aggregate and crushed masonry bricks. The share percentage varied. Regarding the binder, the mortar from the Gamzigrad (Romuliana) site had limestone used for the binder, while the mortar from the Caricin Grad site had clay and powdered masonry bricks. The obtained results of mortar analysis pave the way for further research with an aim of making repair mortars.