

The Serbian Society for Ceramic Materials
Institute for Multidisciplinary Research (IMSI), University of Belgrade
Institute of Physics, University of Belgrade
Center of Excellence for the Synthesis, Processing and Characterization of
Materials for use in Extreme Conditions "CEXTREME LAB" - Institute of
Nuclear Sciences "Vinča", University of Belgrade
Faculty of Mechanical Engineering, University of Belgrade
Center for Green Technologies, Institute for Multidisciplinary Research,
University of Belgrade
Faculty of Technology and Metallurgy, University of Belgrade
Faculty of Technology, University of Novi Sad



PROGRAMME and the BOOK of ABSTRACTS

5CSCS-2019

5th Conference of
the Serbian Society for Ceramic Materials
June 11-13.2019. Belgrade Serbia

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Branko Matović
Zorica Branković
Aleksandra Dapčević
Vladimir V. Srdić

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SPECIAL THANKS TO



Република Србија
МИНИСТАРСТВО ПРОСВЕТЕ,
НАУКЕ И ТЕХНОЛОШКОГ РАЗВОЈА



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the estimation of nanoparticles' suspension stability in aqueous media. The success of subsequent coating with carbohydrates and the differences between coated nCeO₂ have been proven with FT-IR spectra. Turbidity measurement showed the best stability of levan- and glucose-coated nCeO₂ suspensions. It can be concluded that coating with carbohydrates improved the stability of the nCeO₂ suspension by decreasing the size of aggregated particles. The obtained results open new horizons for further ecotoxicity investigation and nCeO₂ application.

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RELEVANT PROPERTIES OF GREEN SELF-COMPACTING CONCRETE

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The production of durable concrete with a high content of supplementing cementitious materials and recycled aggregate presents a step towards sustainability in the concrete industry. The paper presents the findings of the study, conducted on four series of concrete with self-compacting properties, which embodied recycled concrete aggregate, as a substitution for natural sand and gravel. Besides, this concrete possessed high content of fly ash, therefore qualifying as ecological (green) one. Particle packing method was used in the design of this concrete. Fresh properties included: density, slump flow, V-funnel, L-box and temperature, while compressive and tensile strengths were evaluated in the hardened state. Although certain difficulties in the application were recognized concerning the fast loss of workability in the fresh state, all of the tested mixtures exceeded the requirements of hardened structural concrete.

Keywords: self-compacting concrete, sustainability, physical and mechanical properties