

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 of Excellence for Green Technologies, Institute for Multidisciplinary
Research, University of Belgrade
Faculty of Technology and Metallurgy, University of Belgrade

PROGRAMME and the BOOK of ABSTRACTS

6CSCS-2022

6th Conference of
the Serbian Society for Ceramic Materials
June 28-29. 2022. Belgrade Serbia

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Branko Matović
Aleksandra Dapčević
Vladimir V. Srdić

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**HYDROTHERMAL SYNTHESIS, CHARACTERIZATION AND
APPLICATION OF ACTIVATED CARBON MATERIALS
OBTAINED FROM SACCHARIDES**

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In presented work, influence of temperature, starting material concentration and different hydroxides on properties and morphology of activated carbon obtained from saccharose were investigated. The samples were prepared by hydrothermal treatment and activated using KOH, NaOH and LiOH. Two saccharose concentrations (0.5, 1.0 mol/dm³) and three different temperatures (160, 200, 240 °C) were changed in hydrothermal treatment. Activation processes were performed at 750 °C under inert atmosphere. Obtained samples were characterized by X-ray powder diffractometry, elemental analysis, N₂ adsorption-desorption measurements, Fourier–transform infrared spectrometry, scanning electron microscopy and thermal analysis. The obtained samples were tested for potential application in dyes removal (Methylene Blue and Methyl Orange) from water solutions.