The Serbian Society for Ceramic Materials

Institute for Multidisciplinary Research, 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

PROGRAMME and the BOOK of ABSTRACTS

4CSCS-2017

4th Conference of the Serbian Society for Ceramic Materials
June 14-16.2017. Belgrade Serbia

Edited by:
Branko Matović
Zorica Branković
Dušan Bućevac
Vladimir V. Srdić

Programme and Book of Abstracts of The Fourth Conference of The Serbian Society for Ceramic Materilas **publishes abstracts from the field of ceramics, which are presented at international Conference.**

Editors-in-Chief
Dr Branko Matović
Dr. Zorica Branković
Dr. Dušan Bučevac
Prof. Vladimir V. Srdić

Publisher
Institute for Multidisciplinary Research, University of Belgrade
Kneza Višeslava 1, 11000 Belgrade, Serbia

For Publisher
Prof. Dr Sonja Veljović Jovanović

Printing layout
Vladimir V. Srdić

Press
Zonex, Beograd, Serbia
Circulation: 140 copies

CIP- Каталогизација у публикацији
Народна библиотека Србије

666.3/.7(048)
66.017/.018(048)

DRUŠTVO za keramičke materijale Srbije. Konferencija (4 ; 2017 ; Beograd)

Programme ; and the Book of Abstracts / 4th Conference of The Serbian Society for Ceramic Materials, 4CSCS-2017, June 14-16, 2017, Belgrade, Serbia ; [organizers] The Serbian Society for Ceramic Materials ... [et al.] ; edited by Branko Matović ... [et al.]. - Belgrade : Institute for Multidisciplinary Research, University, 2017 (Beograd : Zonex). - 116 str. : ilustr. ; 24 cm

Tiraž 140. - Str. 6: Welcome message / Branko Matovic. - Registar.

ISBN 978-86-80109-20-6

a) Керамика - Апстракти
b) Наука о материјалима - Апстракти
c) Наноматеријали - Апстракти

COBISS.SR-ID 236529164

The Serbian Society for Ceramic Materials
Institute for Multidisciplinary Research, 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

PROGRAMME AND THE BOOK OF ABSTRACTS

4th Conference of The Serbian Society for Ceramic Materials

June 14-16, 2017
Belgrade, Serbia
4CSCS-2017

Edited by:
Branko Matović
Zorica Branković
Dušan Bučevac
Vladimir V. Srdić

SPECIAL THANKS TO

JOINT INSTITUTE
FOR NUCLEAR RESEARCH

O-3

INFLUENCE OF SYNTHESIS CONDITIONS ON MORPHOLOGICAL FEATURES OF SBA-15

Maja Kokunešoski[1], Aleksandra Šaponjić[1], Zvezdana Baščarević[2], Zlatko Rakočević[1], Đorđe Šaponjić[1], Branko Matović[1], Biljana Babić[1]

[1]*University of Belgrade, Vinča Institute of Nuclear Sciences, Belgrade, Serbia*
[2]*University of Belgrade, Institute for Multidisciplinary Research, Belgrade, Serbia*

Mesoporous SBA-15 materials, of high specific surface area, (~700 m^2 g^{-1}), were synthesized by using block copolymer Pluronic P123 as a template and tetraethoxysilane as a silica source. The obtained materials were characterized by X-ray diffraction, scanning electron microscopy (SEM), energy dispersive X-ray (EDS) analysis, and atomic force microscopy (AFM). It was found that small modifications of synthesis conditions influenced morphological features of the synthesized SBA-15 samples. The SEM analysis has shown that the SBA-15 synthesized at a lower temperature and a longer time of reaction (80 °C, 48 h) provided elongated rod-shaped grains about 1μm long. The other sample synthesized at a higher temperature and a shorter time of reaction (100 °C, 24 h) has rounded grains and grains of regular spherical shape with diameters up to 2 μm. The EDS analysis confirmed that the particles of both synthesized samples were of SiO_2 content. In addition, the AFM analysis has shown different surface morphologies of the materials synthesized under various conditions.

O-4

NANOSCALE-TO-BULK: SIZE-DEPENDENT CRYSTALLINITY OF CERAMIC OXIDES

Stefan Bromley[1,2]

[1]*Universitat de Barcelona, Barcelona, Spain*
[2]*Institució Catalana de Recerca i Estudis Avançats (ICREA), Barcelona, Spain*

Naturally abundant and inherently a reactive electronegative element, oxygen chemically bonds with almost all other atoms to produce a corresponding oxide. Numerous ceramic oxide materials have had a massive technological impact in fields as diverse as catalysis, abrasives, absorbents, photovoltaics, and electronics. Key to this success is the wide range of chemical and physical properties exhibited