

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

Edited by:
Branko Matović
Aleksandra Dapčević
Vladimir V. Srdić

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SPECIAL THANKS TO



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WELCOME MESSAGE

On behalf of the organizers and organizing committee of the 6th Conference of the Serbian Society for Ceramic Materials (6CSCS-2022), I would like to extend my warmest welcome to all of you for attending the 6CSCS-2022. The conference is hosted and organized by the Serbian Society for Ceramic Materials, and co-organized by 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, Center of excellence for green technologies, Institute for Multidisciplinary Research - University of Belgrade, and Faculty of Technology and Metallurgy - University of Belgrade.

The goal of the Conference is to provide a platform for academic exchange among participants from universities, institutes, companies around the region in the field of ceramics research as well as to explore new direction for future development. 6CSCS-2022 aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results about all aspects of ceramic materials. It also provides the premier inter-multi-trans-disciplinary forum for researchers, practitioners and educators to present and discuss the most recent innovations, trends, and concerns, practical challenges encountered and the solutions adopted in the field of ceramic materials. We have received 75 abstracts with researchers from 17 countries.

The Conference will feature two plenary lectures, 16 invited talks and 57 oral and poster presentations as well as exhibitions of some new ceramic materials and devices. 6CSCS-2022 includes Ceramic powders, characterization and processing, High temperature phenomena, sintering, microstructure design and mechanical properties, Electro and magnetic ceramics, Ceramic composites, membranes and multimaterials, Traditional ceramics and Computing in materials science. Exhibitions from company sponsors will be held at the Conference as well.

We are grateful for the support from the Ministry of Education, Science and Technological Development of the Republic of Serbia. We would also like to express our sincere thanks to the symposia organizers, session chairs, presenters, exhibitors and all the Conference attendees for their efforts and enthusiastic support in this exciting time in Belgrade. I look forward to meeting you and interacting with you at Conference.

6CSCS-2022 President

Branko Matović

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BLAST FURNACE REFRACTORIES: PAST, PRESENT AND FUTURE

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Most of the refractories used today are related to iron and steel industry. Grate part of the refractory lining related to blast furnace are combination of different refractory materials selected for different parts of furnace, as well as different process conditions and temperature range. Selection of appropriate refractory combination depends on knowledge and demands for iron making system in combination with the physical, mechanical and chemical properties of the proposed refractories. An improper understanding of the above factors often leads to a refractory failure which, subsequently, becomes a complex problem to solve. Refractory linings whether it is of a blast furnace or any other furnace, usually fail due to any number or combination of such factors. For the convenience of understanding, here we will discuss the types of refractory lining required in a blast furnace area as well as the trend in the refractory lining pattern that has been used during the last decades.

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