

**2nd International Conference on Innovative Materials
in Extreme Conditions**

**PROGRAM
and
BOOK OF ABSTRACTS**

20-22 March 2024

Belgrade, Serbia

Program and Book of Abstracts of the 2nd International Conference on Innovative Materials in Extreme Conditions (IMEC2024) publishes abstracts from the field of material science, physics, chemistry, earth, and computational science on the phenomena arising during the processing and/or exploitation of the innovative materials, which are presented at the international conference on innovative materials in extreme conditions.

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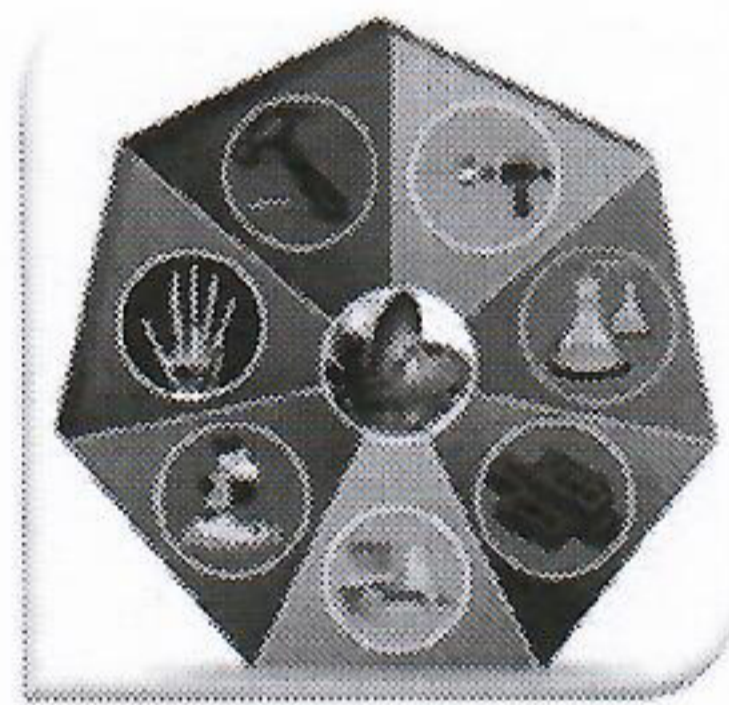
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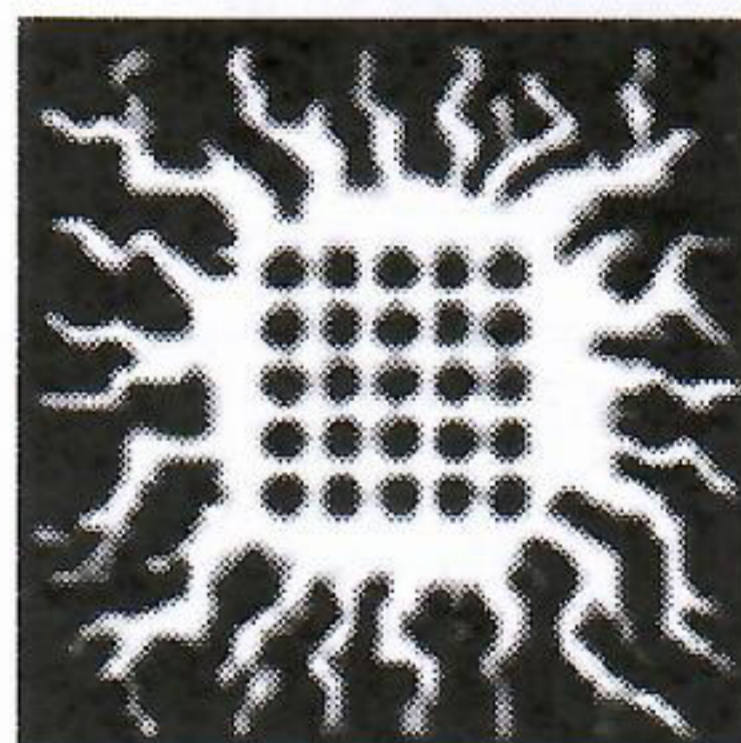


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TABLE OF CONTENTS

14	PROGRAM
14 20 th March 2024
15 21 st March 2024
17 22 nd March 2024
18
20	PLENARY LECTURES
20
21	Rapid hot-pressed silicon carbide ceramics for ultra-high temperature applications.....
	<i>Pavol Šajgalik, Ondrej Hanzel, Michal Hičák, Alexandra Kovalčíková, Chengyu Zhang, Alexander Mukasyan</i>
22	Hydrogen embrittlement in additively manufactured metals: A concise review
	<i>Miloš Đukić, Alireza Behvar, Meysam Haghsheenas, Gordana M. Bakić, Dejan Zagorac, Aleksandar Sedmak, Bratislav Rajčić</i>
23	MAX Phases: Overcoming the challenges of extreme environments.....
	<i>Miladin Radović</i>
24	Small-scale mechanical testing of entropy stabilized ceramics
	<i>Ravi Kumar</i>
25	INVITED LECTURES.....
26	The high-temperature applicability of the Ti,Nb-Al-C MAX phases-based bulk materials and vacuum-arc deposited films
	<i>Tejana Prikhna, T.B. Serbenyuk, O.P. Ostash, V.B. Sverdun, A.S. Kuprin, B. Matović, I. Cvijović-Alagić, V.Ya. Podhurska</i>
27	A role of micro/nano graphene platelets on strengthening and toughening mechanisms of TiB ₂ -SiC ceramic composites
	<i>Alexandra Kovalčíková, P. Tatarko, Z. Chlup, R. Sedláč, E. Múdra, J. Dušza</i>
28	Growth and stability of Ni ₃ N layers obtained in pure ammonia at high temperatures
	<i>Matej Fonović, Dario Kvržić</i>
29	Order amidst disorder in multicomponent high entropy oxides (HEOs): synthesis, characterization and applications
	<i>Subramshu Shekar Bhattacharya</i>

- Peter Tatarko, Naser Hosseini, Fabrizio Valenza, Hakan Unsul, Zdeněk Chlup, Alexandra Kovalčíková, I. Dlouhý*
Development and integration of entropy stabilized ceramics 30
- Shanti Bhattacharya*
Nano and micro optics on fibre tip: A possible solution for measurements in harsh environments 31
- Maria Čebela, Vitalii Turchenko, Milena Rosić, Dragana Jordanov, Vladimir Dodevski, Dejan Zagorac*
Enhancement of weak ferromagnetism, exotic structure prediction and diverse electronic properties in bismuth ferrite and holmium-substituted multiferroic bismuth ferrite 32
- Thomas Bräuniger*
NMR spectroscopy as a structure elucidation tool for compounds synthesised under high temperature and high pressure conditions 33
- ORAL PRESENTATIONS** 34
- Tajana Volkov-Husović, Sanja Martinović, Ana Ahić*
Cavitation erosion resistance behavior of some refractory ceramics 35
- Hakan Unsul, Alexandra Kovalčíková, Michal Hičák, Zdeněk Chlup, Ivo Dlouhý, Branko Matović, Peter Tatarko*
Ablation performance of rare-earth modified ZrB₂-SiC composites under oxyacetylene torch test 36
- Manuel Gruber, Peter Supancic, Raul Bermejo*
Mechanical testing of brittle materials: from single crystals to ceramic systems 37
- Bratislav Rajčić, Aleksandar Maslarević, Gordana Bakić, Vesna Maksimović, Miloš Đukić*
Erosion wear of HfCl alloys 38
- Lenka Daková, Monika Hrubovčáková, Alexandra Kovalčíková, Jana Andrejovská, Jan Dušza*
Effect of SiC whiskers on microstructure, mechanical and tribological properties of (TiZrHfNbTa)C 39
- Alper Güneren, Prangya P. Sahoo, Boris Hudec, Matej Mičušik, Zoltán Lenčes, Karol Fröhlich*
Atomic layer deposition assisted graphite/ZnO composite anodes in Li-ion batteries 40
- Marko Jelić, Ekaterina Korneeva, Nikita Kirilki, Tatiana Vershinin, Oleg Orelovich, Vladimir Skuratov, Zoran Jovanović, Sonja Jovanović*
Physicochemical properties of bismuth vanadate photoanode irradiated by swift heavy ions 41

Cavitation Erosion Resistance Behavior of Some Refractory Ceramics

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Cavitation erosion application could be observed as dangerous phenomena which have large influence on engineering materials behavior and life time in working conditions. This phenomenon is related to fluid flow conditions, which could cause pits and defects formation resulting in mechanical properties degradation, as well as potential risk of failure of the part. In this paper results for cordierite and alumina (low cement high alumina castable, LCC), based refractories subjected to cavitation erosion testing will be presented. Testing of the samples will be according standard method, with stationary sample in ultrasonic vibratory method. Degradation of the samples will be monitored by mass and volume loss, as well as changes in morphological characteristics. Image analysis will be applied for pits characteristics (number, average diameter, area, roundness) determination.

Keywords: cavitation resistance, cordierite, low cement high alumina castable, LCC, image analysis

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