

MATERIALS RESEARCH SOCIETY OF SERBIA
INSTITUTE OF TECHNICAL SCIENCES OF SASA



Programme and the Book of Abstracts

**EIGHTEENTH YOUNG RESEARCHERS' CONFERENCE
MATERIALS SCIENCE AND ENGINEERING**

Belgrade, December 4–6, 2019

<http://www.mrs-serbia.org.rs/index.php/young-researchers-conference>

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**Materials Research Society of Serbia
&
Institute of Technical Sciences of SASA**

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Aim of the Conference

Main aim of the conference is to enable young researchers (post-graduate, master or doctoral student, or a PhD holder younger than 35) working in the field of materials science and engineering, to meet their colleagues and exchange experiences about their research.

Topics

Biomaterials
Environmental science
Materials for high-technology applications
Materials for new generation solar cells
Nanostructured materials
New synthesis and processing methods
Theoretical modelling of materials

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Results of the Conference

Beside printed «Program and the Book of Abstracts», which is disseminated to all conference participants, selected and awarded peer-reviewed papers will be published in journal “Tehnika – Novi Materijali”. The best presented papers, suggested by Session Chairpersons and selected by Awards Committee, will be proclaimed at the Closing Ceremony. Part of the award is free-of-charge conference fee at YUCOMAT 2020.

Sponsors



ANALYSIS
LABORATORY EQUIPMENT

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11-3

**Implementation of image analysis for cavitation erosion determination
of refractory samples based on talc and domestic zeolite from Igroš**

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Domestic zeolite from Igroš as raw material for ceramic samples for application in condition of cavitation erosion was used. Samples based on talc with 15% of zeolite, from Igroš sintered at 1200°C were used in this investigation. The ultrasonic vibratory cavitation set up with stationary specimen was used. Mass loss was measured as well as the degradation level of the samples using image analysis. Image analysis was used for level of damage determinations, as well for number and area of the formed pits. Analysis of the pits formation and growing will be used for description of mechanism of degradation during cavitation erosion testing. Obtained results showed good resistance of the sample to the cavitation erosion, which gives the possibility for future application of ceramic samples based on talc and zeolite in conditions where cavitation erosion is expected.