

MATERIALS RESEARCH SOCIETY OF SERBIA
INSTITUTE OF TECHNICAL SCIENCES OF SASA

Programme and the Book of Abstracts

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

Belgrade, December 1-3, 2021



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

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Program and the Book of Abstracts

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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 2022.

Sponsors



ANALYSIS
LABORATORY EQUIPMENT

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**Synthesis of Samarium and Zirconium-doped TiO₂ nanofibers
with improved photocatalytic activity**

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Samarium and zirconium-doped TiO₂ nanofibers (3 and 5 wt.%) were synthesised by a simple modified electrospinning method. The effects of calcination temperature on the size of the as-spun doped titania fibers was investigated. As-spun nanofibers were studied and characterized through thermal gravimetric analysis (TG-DTA), Fourier Transform Infrared Spectroscopy (FTIR) and Scanning electron microscopy (SEM), while the structure and morphology of calcined fibers was studied by X-Ray Diffraction (XRD), Field Emission Electron Microscopy (FESEM) and spectroscopic techniques (FT-IR and DRS UV-vis). The influence of dopant type and amount on the photocatalytic degradation of Methylene blue (MB) was investigated.

