

MATERIALS RESEARCH SOCIETY OF SERBIA
INSTITUTE OF TECHNICAL SCIENCES OF SASA

Programme and the Book of Abstracts

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

Belgrade, December 5–7, 2018

Materials Research Society of Serbia

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

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&
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
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 2019.

Sponsors



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Customizing nanotubular titania for photocatalytic activity

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Semiconductor TiO₂ photocatalysis is a heterogeneous catalysis, where the photons of the sun or artificial light source are activating the catalyst that enters in reactions. The targeted real-world applications are in environmental protection and remediation such as wastewater treatment, air purification and decomposition of harmful organic pollutants. In this talk, I present the synthesis of nanotubular, thin TiO₂ coatings with altered morphology and crystallinity made by anodization technique. The influence of the anodization parameters and post-synthesis annealing conditions on the photocatalytic methyl orange dye decomposition was assessed. Different morphology, crystallinity and introducing a dopant into lattice increase electron transport and electron lifetime which further improve photocatalytic activity.