

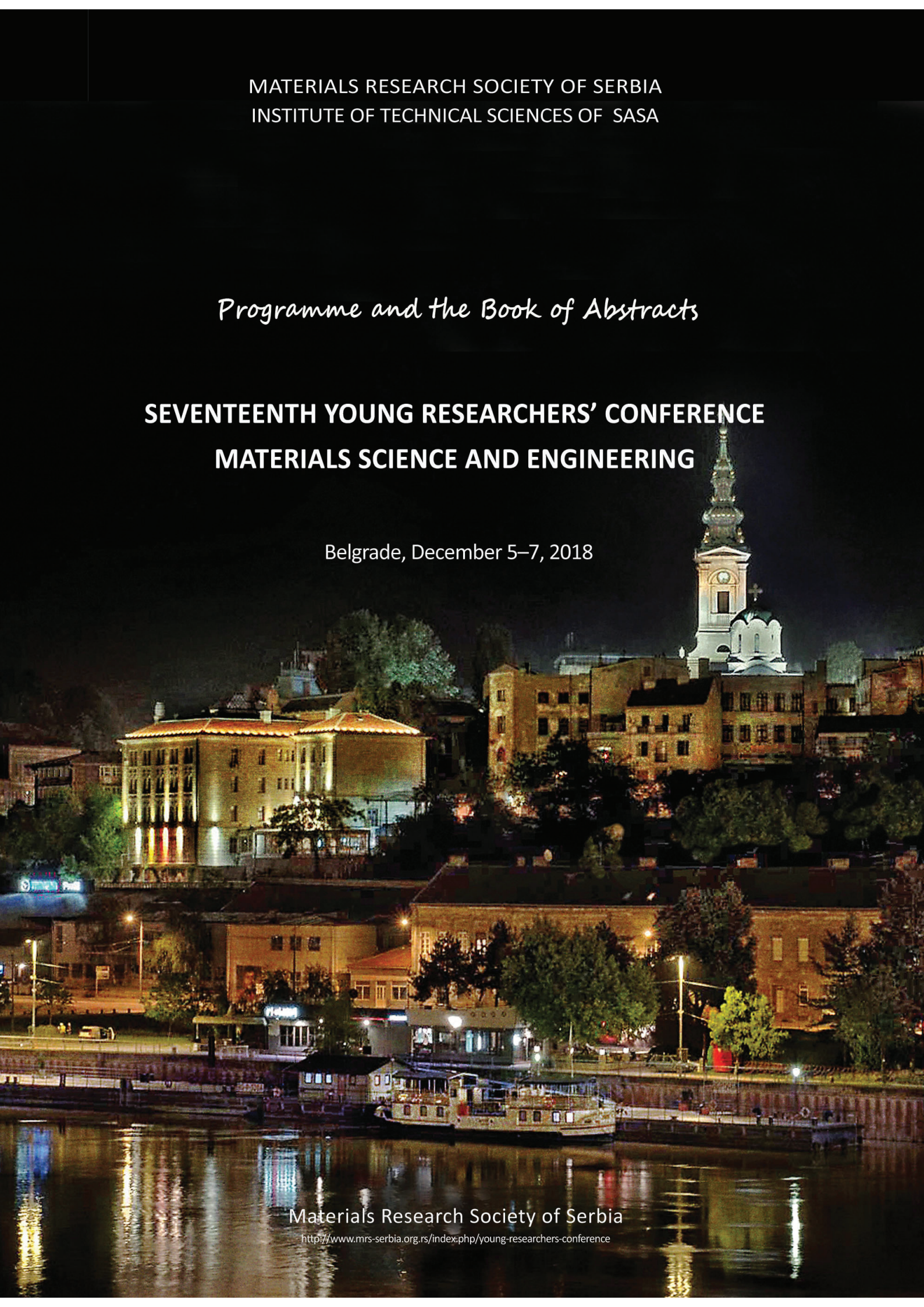
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INSTITUTE OF TECHNICAL SCIENCES OF SASA

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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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.