

# **FIFTEENTH YOUNG RESEARCHERS' CONFERENCE MATERIALS SCIENCE AND ENGINEERING**

**December 7-9, 2016, Belgrade, Serbia  
Serbian Academy of Sciences and Arts, Knez Mihailova 36**

## **Program and the Book of Abstracts**

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

**December 2016, Belgrade, Serbia**

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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 materials  
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 journals “Tehnika – Novi Materijali” and “Processing and Application of Ceramics“. The best presented papers, suggested by Session Chairpersons and selected by Awards Committee, will be proclaimed at the Closing Ceremony.

### Sponsors



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LABORATORY EQUIPMENT

Туристичка  
организација  
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of Belgrade

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**Fabrication, characterization and photoelectrochemical behavior  
of Fe<sub>2</sub>TiO<sub>5</sub> screen printed thick films**

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Pseudobrookite paste was composed of a mixture of starting nanopowders of hematite ( $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>) and anatase (TiO<sub>2</sub>) in the molar ratio 1:1.5, organic vehicle and glass frit. The paste was screen printed on fluorine-doped tin oxide (FTO) glass substrate using screen printing technology. Structural, morphological and optical studies have been carried out using X-ray diffraction (XRD), scanning electron microscopy (SEM), energy dispersive spectroscopy (EDS) and transmission electron microscopy (TEM). The photo-electrochemical performance of Fe<sub>2</sub>TiO<sub>5</sub> screen printed thick film was examined under xenon lamp illumination in 1 M NaOH electrolyte.