

PHYSICAL CHEMISTRY 2016

2nd International Meeting
on

***Materials Science for
Energy Related Applications***

BOOK OF ABSTRACTS

September 29-30, 2016

University of Belgrade - Faculty of Physical Chemistry, Belgrade

KTH
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Stockholm, Sweden



UNIVERSITY OF BELGRADE
FACULTY OF PHYSICAL CHEMISTRY
Belgrade, Serbia



THE SOCIETY OF
PHYSICAL CHEMISTS OF SERBIA
Belgrade, Serbia



PHYSICAL CHEMISTRY 2016

*13th International Conference on Fundamental
and Applied Aspects of Physical Chemistry*

2nd International Meeting

MATERIALS SCIENCE FOR ENERGY RELATED APPLICATIONS

September 29-30, 2016, University of Belgrade – Faculty of Physical Chemistry,
Belgrade, Serbia

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BELGRADE, SERBIA 2016

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Materials Science for Energy Related Applications

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PHOTOCATALYTIC PROPERTIES OF BiFeO_3 PARTICLES SYNTHESIZED BY ULTRASOUND SOL-GEL ASSISTED ROUTE

Jovana Ćirković, Danijela Luković Golić, Aleksandar Radojković, Aleksandra Dapčević, Zorica Branković, Goran Branković

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BiFeO_3 precursor powder was synthesized by ultrasound assisted sol-gel route at relatively low temperature, starting from Bi-nitrate, Fe-nitrate, and ethylene glycol. Structural, optical, and photocatalytic properties of obtained powder were investigated. X-ray diffraction analysis confirmed that thermal treatment of precursor powder at 500 °C, led to formation of pure phase BiFeO_3 . The determined band gap was 2.20 eV, indicating its potential application as visible-light-response photocatalyst. The photocatalytic behaviour of BiFeO_3 powder was estimated by the degradation of Reactive Orange 16 (RO16), typical azo dye. Photocatalytic activities under different pH values were further studied. The result shows that the BiFeO_3 particles exhibit the highest photocatalytic activity in the solution with the lowest pH value.