

**13th CONFERENCE for
YOUNG SCIENTISTS in CERAMICS**

**PROGRAMME
and
BOOK OF ABSTRACTS**

**October 16-19, 2019
Novi Sad, Serbia**

Programme and Book of Abstracts of The 13th Conference for Young Scientists in Ceramics (CYSC-2019) publishes abstracts from the field of ceramics, which are presented at traditional international Conference for Young Scientists in Ceramics.

Editors-in-Chief

Prof. Dr. Vladimir V. Srdić

Publisher

Faculty of Technology, University of Novi Sad
Bul. cara Lazara 1, 21000 Novi Sad, Serbia

For Publisher

Prof. Dr. Biljana Pajin

Printing layout

Vladimir V. Srdić, Marija Milanović, Ivan Stijepović

Press

SLUŽBENI GLASNIK, Beograd

CIP – Каталогизација у публикацији
Библиотека Матице српске, Нови Сад

666.3/.7(048.3)

CONFERENCE for Young Scientists in Ceramics (13 ; 2019 ; Novi Sad)

Programme and book of abstracts / 13th Conference for Young Scientists in Ceramics (CYSC-2019), October 16-19, 2019, Novi Sad ; [editor-in-chief Vladimir V. Srdić]. - Novi Sad : Faculty of Technology, 2019 (Beograd : Službeni glasnik). - XX, 152 str. : ilustr. ; 24 cm

Tiraž 180. - Registar.

ISBN 978-86-6253-104-9

a) Керамика - Технологија - Апстракти
COBISS.SR-ID 331006727



The Book of Abstracts of the 13th Conference for Young Scientists in Ceramics
is licensed under a
[Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/)

OA-115

**VISIBLE LIGHT PHOTOCATALYTIC ACTIVITY OF
NANOCRYSTALLINE $\text{Co}_x\text{Mg}_{1-x}\text{Fe}_2\text{O}_4$ ($x = 0-1$)**

Milena Dojcinovic¹, Zorka Z. Vasiljevic², Jelena Vujancevic², Vera P. Pavlovic³,
Smilja Markovic², Nenad B. Tadic⁴, Maria V. Nikolic¹

¹*Institute for Multidisciplinary Research, University of Belgrade, Serbia*

²*Institute of Technical Sciences, Serbian Academy of Sciences and Arts, Belgrade, Serbia*

³*University of Belgrade, Faculty of Mechanical Engineering, Belgrade, Serbia*

⁴*Faculty of Physics, University of Belgrade, Belgrade, Serbia*

e-mail: milena.dojcinovic@imsi.rs

The sol-gel combustion method was applied for synthesis of spinel magnesium cobalt ferrites $\text{Co}_x\text{Mg}_{1-x}\text{Fe}_2\text{O}_4$, with varying cobalt and magnesium content, $x = 0.0, 0.1, 0.3, 0.5, 0.7, 0.9$. Magnesium nitrate, cobalt nitrate and iron nitrate were used as oxidizers and citric acid was used as a reducing agent. Structural and morphological properties of the obtained ferrite powders were investigated and characterized by X-ray diffraction (XRD), Raman spectroscopy, Field emission scanning electron microscope (FESEM) and Fourier transform infrared (FT-IR) spectroscopy. Optical properties were investigated by UV-VIS spectrophotometry. A cubic spinel structure with multigrain agglomerates formed. Visible light photocatalytic activity of the spinel ferrite powder samples was evaluated by measuring the rate of photodegradation reaction of methylene blue (MB). After 240 min $\text{Co}_{0.1}\text{Mg}_{0.9}\text{Fe}_2\text{O}_4$ showed the best rate of photodecomposition of MB resulting in 90% of its initial concentration in an alkaline environment.

OC-116

**HUMIC ACID REMOVAL FROM WATER USING $\alpha\text{-Fe}_2\text{O}_3$
NANOMATERIAL BY SORPTION AND PHOTOCATALYTIC
UNDER VIS IRRADIATION**

Sorina Ilies¹, Catalin Ianasi¹, Florica Manea², Anamaria Baciuc²,
Claudia Delcioiu²

¹*“Coriolan Drăgulescu” Institute of Chemistry, Bv. Mihai Viteazul, No.24, RO-300223, Timisoara, Romania*

²*“Politehnica” University of Timișoara, Faculty of Industrial Chemistry and Environmental Engineering, VasilePârvan Bd., No. 6, 300223, Timișoara, România*

e-mail: sorinailies@acad-icht.tm.edu.ro

In recent years, nanomaterial-based technologies have emerged as promising alternatives to current water treatment techniques at lower costs and high efficiencies