



**Serbian Ceramic Society Conference
ADVANCED CERAMICS AND APPLICATION V
New Frontiers in Multifunctional Material Science and Processing**

**Serbian Ceramic Society
Institute of Technical Sciences of SASA
Institute for Testing of Materials
Institute of Chemistry Technology and Metallurgy
Institute for Technology of Nuclear and Other Raw Mineral Materials
School of Electrical Engineering and Computer Science of Applied Studies**

PROGRAM AND THE BOOK OF ABSTRACTS

**Serbian Academy of Sciences and Arts, Knez Mihailova 35
Serbia, Belgrade, 21st-23rd September 2016.**

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toring model organic dye concentration changes under the UV-Vis irradiation (UV-Vis absorption spectroscopy). Antifungal efficiency assessment was performed by monitoring the fungal growth in artificial ageing conditions by quantification of its development in afungi growth media. Band gap values of the samples were determined based on UV-Vis absorption measurements confirming the visible light driven photocatalysis activation. The results of photocatalytic activity and antifungal efficiency of the developed molybdenum doped nanocomposites were compared to the pure TiO_2 . It is evident that the obtained material can be used in order to enhance photocatalytic, and consequently, antifungal activity of the pure TiO_2 photocatalyst.

OR9

Characterisation of $\text{Mn}_{0.63}\text{Zn}_{0.37}\text{Fe}_2\text{O}_4$ powders after intensive milling and subsequent thermal treatment

Nebojša Labus¹, Zorka Vasiljević¹, Obrad Aleksić¹, Miloljub Luković¹, Smilja Marković¹,
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Commercial Mn-Zn powder ($\text{Mn}_{0.63}\text{Zn}_{0.37}\text{Fe}_2\text{O}_4$, 93 wt. % and Fe_2O_3 , 7 wt. %) was milled 0.5, 1, 2 and 4 hours in a planetary ball mill. Powders were characterized with XRD, SEM and particle seizer. Subsequent heating was monitored on TGA/DTA in air atmosphere. After compaction of the milled powders, sintering was also performed in a dilatometric device. Sintered specimens were characterized microstructurally with SEM on a fresh breakage. Ferrite powders changed with milling as well as with second run heating are characterised to approach the possible best ratio of the milling and heating that should be used to obtain desired micrstructure.

OR10

Radical Ions Scattering in n-Butanol

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n-Butanol ($\text{C}_4\text{H}_9\text{OH}$) is a primary alcohol with a 4-carbon structure. n-Butanol occurs naturally as a minor product of the fermentation of sugars and other carbohydrates and is present in many foods and beverages as well as in a wide range of consumer products. Although most volatile organic compounds can be detected by fast methods such as ion mobility spectroscopy, precise determination is possible only if reaction of specific ions with targeted compound is well known.