



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

**Serbian Ceramic Society
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, 21-23. September 2015**

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Book title: Serbian Ceramic Society Conference - ADVANCED CERAMICS AND APPLICATION IV: Program and the Book of Abstracts

Publisher:

Serbian Ceramic Society

Editors:

Prof.dr Vojislav Mitić

Prof.dr.Olivera Milošević

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Technical Editors:

Dr Lidija Mančić

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Printing:

Serbian Academy of Sciences and Arts,
Knez Mihailova 35, Belgrade

Edition:

140 copies

Photos : Jewelry - Zvonko Petković

Sculptures - Dragan Radenović

Ceramics - Ruža Nikolić

CIP

two components of active power. Numerical fitting of this functionality on frequency were performed and analysed. The results obtained were compared with the literature data for new nanocrystalline FeCoV alloys prepared with different advanced technologies.

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Influence of Synthesis Parameters on Structure of 1-D TiO₂ nanostructures

**J. Vujancevic¹, A. Bjelajac², N. Obradovic¹, V. P. Pavlovic³, M. Mitric⁴, Dj. Janackovic⁵,
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The influence of electrochemical conditions and the heat treatment on the crystal structure and the microstructure evolution of TiO₂ based nanotubes synthesized by the self-ordering anodization process is investigated in this work. The electrochemical anodization was performed at room temperature, for 30 minutes under 15, 20 and 25 V, with stirring. The as-anodized Ti foils were annealed in air at 450, 600, 650 and 700 °C for 30 minutes. The structure and the lattice dynamics of the samples has been studied by using XRD and Raman spectroscopy methods. The microstructure development of the 1-D TiO₂ nanostructures has been analyzed by FESEM.

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Synthesis of novel multiferroic Fe₃O₄-nanocellulose-PVDF-BaTiO₃ nanocomposites

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It is well known that the properties of polymer/ceramic nanocomposites depend not only on the properties of their individual components but also on morphological and interfacial characteristics arising from the combination of used materials. The use of