Serbian Ceramic Society Conference
ADVANCED CERAMICS AND APPLICATION X
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

PROGRAM AND THE BOOK OF ABSTRACTS

Serbian Academy of Sciences and Arts, Knez Mihailova 35
Serbia, Belgrade, 26-27. September 2022.

Serbian Ceramic Society Conference
ADVANCED CERAMICS AND APPLICATION X
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

PROGRAM AND THE BOOK OF ABSTRACTS

Serbian Academy of Sciences and Arts, Knez Mihailova 35
Serbia, Belgrade, 26-27th September 2022.

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

Publisher:
Serbian Ceramic Society

Editors:
Dr. Nina Obradović
Dr. Lidija Mančić

Technical Editors:
Dr. Suzana Filipović
Dr. Adriana Peleš Tadić
Dr. Jelena Živojinović

Printing:
Serbian Ceramic Society, Belgrade, 2022.

Edition:
120 copies

CIP - Каталогизација у публикацији
Народна библиотека Србије, Београд

666.3/.7(048)
66.017/.018(048)

SRPSKO keramičko društvo. Conference Advanced Ceramics and Application : New Frontiers in Multifunctional Material Science and Processing (10 ; 2022 ; Beograd)
Program ; and the Book of abstracts / Serbian Ceramic Society Conference Advanced Ceramics and Application X New Frontiers in Multifunctional Material Science and Processing, Serbia, Belgrade, 26-27. September 2022. ; [editors Nina Obradović, Lidija Mančić]. - Belgrade : Serbian Ceramic Society, 2022 (Belgrade : Serbian Ceramic Society). - 96 str. : ilustr. ; 30 cm

Tiraž 120.

ISBN 978-86-915627-9-3

а) Керамика -- Апстракти б) Наука о материјалима -- Апстракти в) Наноматеријали -- Апстракти

COBISS.SR-ID 74827529

In this contribution, the adsorption of organophosphate pesticide dimethoate on two commercially available graphene-oxides has been investigated. The materials were characterized by different physico-chemical methods. Careful structural characterization of adsorbents was combined with batch adsorption experiments. It was shown that 1 g of both graphene-oxides is capable of adsorbing 9×10^{-3} mol dm^{-3} of dimethoate at 25 °C. A satisfactory agreement of both sets of experimental results with the Langmuir isotherm model suggests the monolayer adsorption on the homogenous surface. The adsorption was also investigated at 30 and 35 °C. The results showed that the concentration of adsorbed dimethoate increases with temperature for both studied adsorbents. Investigated graphene-oxides were successfully used for the removal of dimethoate from water.

P30
Correlation of the total induced amorphization in SiC crystal with the ion implantation fluence

Marko Gloginjić[1], Marko Erich[1], Željko Mravik[1], Branislav Vrban[2], Štefan Čerba[2], Jakub Lüley[2], Vendula Filová[2], Karel Katovský[3], Ondřej Šťastný[3], Jiří Burian[3], Srdjan Petrović[1]

[1]Laboratory of Physics, "Vinča" Institute of Nuclear Sciences - National Institute of the Republic of Serbia, University of Belgrade, Belgrade, Serbia
[2]Institute of Nuclear and Physical Engineering, Slovak University of Technology in Bratislava, Bratislava, Slovakia
[3]Brno University of Technology, Faculty of Electrical Engineering and Communication, Brno, Czechia

During the ion implantation process, regardless if it was attentional or not, amorphization will be introduced into the crystal structure. Depending on the chosen ions, different quantities of the amorphization will be introduced for the same applied fluences. In order to estimate the total amorphization of the SiC crystal for different ions and fluences combination, an assessment model was proposed. For this purpose, 4 MeV carbon and silicon ions with multiple fluences were implanted in the [0001] axial direction of a 6H-SiC single crystal. The amorphization depth distributions were obtained by Elastic Backscattering Spectroscopy/channeling spectra analysis via Channeling SIMulation (CSIM) phenomenological computer code. As a result, relation of the total induced amorphization and implantation fluences for carbon and silicon ions were obtained. Based on these experimental results, a total amorphization assessment model for different ions (energy of 4 MeV) and fluences combination was established.