SIXTEENTH ANNUAL CONFERENCE

YUCOMAT 2014

Hunguest Hotel Sun Resort Herceg Novi, Montenegro,
September 1-5, 2014
http://www.mrs-serbia.org.rs

Programme
and
The Book of Abstracts

Organised by:
Materials Research Society of Serbia

Endorsed by:
Federation of European Material Societies
and
Materials Research Society

Title: THE SIXTEENTH ANNUAL CONFERENCE
YUCOMAT 2014
Programme and The Book of Abstracts

Publisher: Materials Research Society of Serbia
Knez Mihailova 35/IV, 11000 Belgrade, Serbia
Phone: +381 11 2185-437; Fax: + 381 11 2185-263
http://www.mrs-serbia.org.rs

Editors: Prof. Dr. Dragan P. Uskoković and Prof. Dr. Velimir Radmilović

Technical editor: Aleksandra Stojičić

Cover page: Aleksandra Stojičić and Milica Ševkušić
Back cover photo: Author: Rudolf Getel
Source: Flickr (www.flickr.com/photos/rudolfgetel/4280176487)
Licence: CC BY 2.0

Acknowledgments: This conference is held in honour of Prof. Dragan Uskoković's 70th birthday.

Printed in: Biro Konto
Sutorina bb, Igalo – Herceg Novi, Montenegro
Phones: +382-31-670123, 670025, E-mail: bkonto@t-com.me
Circulation: 220 copies. The end of printing: August 2014

P.S.A.20

FACILE CHEMICAL SYNTHESIS AND CHARACTERIZATION OF POLYESTER/MAGNESIUM OXIDE NANOPARTICLES FOR BIOMEDICAL APLICATION

Nenad Filipović[1], Magdalena Stevanović[1], Jelena Djurdjević[1], Jadranka Milikić[2], Ljiljana Veselinović[1], Vladimir Pavlović[1,3], Dragan Uskoković[1]

[1]Institute of Technical Sciences of SASA, Belgrade, Serbia, [2]Faculty of Physical Chemistry, University of Belgrade, Belgrade, Serbia, [3]Faculty of Agriculture, University of Belgrade, Belgrade, Serbia

Magnesium, a naturally occurring mineral, is very important for the normal functioning of the body. However, certain situations such as poor diet, alcoholism, poorly controlled diabetes, etc., cause body to lose magnesium faster than it can be replace it from diet. Magnesium also plays a role in body's detoxification processes and therefore is important for preventing damage from environmental chemicals, heavy metals and other toxins. Polyesters like polylactide (PLA), polyglycolide (PGA) or poly(lactide-co-glycolide) (PLGA) are used for the controlled delivery of several classes of medicaments like anticancer agents, immunomodulatory drugs, hormones, vitamins, antibodies, etc. Magnesium oxide nanoparticles (MgO) have been synthesized by chemical reduction method and additionally encapsulated within spherical polyester poly(lactide-co-glycolide) (PLGA) particles (PLGA/MgO). Synthesized particles were characterized by X-ray diffraction (XRD), scanning electron microscopy (SEM), energy dispersive X-ray spectroscopy (EDS) and transmission electron microscopy (TEM).