YUCOMAT 2010

Hotel "Plaža", Herceg Novi, Montenegro, September 6–10, 2010 http://www.mrs-serbia.org.rs

Programme and The Book of Abstracts

Organised by:

Materials Research Society of Serbia,

and

Institute of Technical Sciences of the
Serbian Academy of Sciences and Arts, Belgrade

under the auspices of

Federation of European Material Societies

and

Materials Research Society

Title: THE TWELFTH ANNUAL CONFERENCE

"YUCOMAT 2010"

Programme and The Book of Abstracts

Publisher: Institute of Technical Sciences of the Serbian Academy of Sciences & Arts

Knez Mihailova 35/IV; P.O. Box 377, 11000 Belgrade, Serbia

Phone: +381 11 2185-437; Fax: +381 11 2185-263

http://www.itn.sanu.ac.rs

Editor: Prof. Dr. Dragan P. Uskoković

Technical editor: Aleksandra Stojičić

Cover page: Aleksandra Stojičić and Milica Ševkušić

Copyright © 2010 Institute of Technical Sciences of the Serbian Academy of Sciences & Arts

Acknowledgment:





Printed in: Printing office "Čigoja"

Studentski trg 15, 11000 Belgrade

Phones: +381 11 2186-725; +381 11 2625-954

Circulation: 260 copies. The end of printing: July 2010.

TWELFTH ANNUAL CONFERENCE "YUCOMAT 2010" Herceg Novi, September 6-10, 2010

O.S.C.8

INFLUENCE OF THE NANOSTRUCTURE ON THE SURFACE AND BULK PHYSICAL PROPERTIES OF MATERIALS

N.V. Kamanina^{1,2}, N.A. Shurpo¹, P.Ya. Vasilyev¹, V.I. Studeonov¹, D.P. Uskokovic³

¹Vavilov State Optical Institute, St. Petersburg, Russia, ²Electrotechical University ("LETI"), St. Petersburg, Russia, ³Institute of Technical Sciences of the SASA, Belgrade, Serbia

Fullerenes, nanotubes, quantum dots have been considered as effective sensitizers to modify both the spectral, optical, nonlinear optical features, dynamic and polarization characteristics, as well as mechanical properties of the organic and inorganic materials. Laser, spectroscopy, mass-spectroscopy, nuclear magnetic resonance methods have been apply to support the change in the physical properties of the new nanocomposites. The extending of the nanocomposites applications area has been considered.