

ICOM 2012

The 3rd International Conference on the Physics of Optical Materials and Devices
3rd - 6th September 2012, Belgrade, Serbia

TO WHOM IT MAY CONCERNED

It is our great pleasure to invite You to the 3rd International Conference on the Physics of Optical Materials and Devices (ICOM 2012) which is to be held in Belgrade, Serbia, from 3rd to 6th of September 2012, and is organized by the Vinča Institute of Nuclear Sciences, University of Belgrade (Serbia) and the Laboratoire de Chimie de la Matière Condensée de Paris (France).

The ICOM 2012 Conference brings together scientists and technology users who investigate or develop materials for optical applications. The conference presents the state of the art in preparation methods, optical characterization and usage of optical materials and devices in various photonic fields.

We are looking forward to seeing you in Belgrade.

Organizing Committee of the ICOM2012.



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INVITED SPEAKERS

(in alphabetical order)

Chantal Andraud, Ecole Normale Supérieure of Lyon, France
Chromophores and their biological compatibility for biophotonics

Marco Bettinelli, Università di Verona, Italy
Fast d-f luminescence of Pr^{3+} in new oxide materials

Stephen E Bialkowski, Utah State University, USA
Applications of Optical Novelty Filters in Photothermal Spectrometry

Georges Boulon, University Claude Bernard Lyon 1, France
Trivalent rare earth ions-doped ceramics as optical materials: TEM-EDX chemical analysis of the spatial distribution

Mikhail Brik, University of Tartu, Estonia
Crystal field effects and their influence on optical properties of transition metal ions from Sc to Zn

Daniel Jaque Garcia, Universidad Autónoma de Madrid, Spain
Quantum Dot Fluorescence Nanothermometry: Recent Advances

Malgorzata Guzik, University of Wrocław, Poland
Exploring new rare earth-doped tungstate and molybdate matrices for optical materials

Javier Piqueras, Universidad Complutense de Madrid, Spain
Cathodoluminescence of doped nano- and microwires of semiconductor oxides

Jorma Holsa, University of Turku, Finland
Persistent Luminescence: New Materials

Nigel Johnson, University of Glasgow, UK
Nanophotonic Sensors

Oscar Malta, Universidade Federal de Pernambuco, Brasil
Temperature dependent ligand to metal energy transfer rates in lanthanide complexes: Theoretical modeling and the first direct experimental observation

Lidija Mančić, Institute of Technical Sciences of the Serbian Academy of Sciences and Arts, Serbia
Hydrothermal synthesis of nanostructured rare earth oxide - based phosphors

Bernard Moine, Université Claude Bernard Lyon 1, France
Downconversion and solar cell efficiency

Fabienne Pellé, Solid State Chemistry Laboratory of Paris of the ENSCP, National Center for Scientific Research, France
Subdiffractional imaging using upconversion in rare earth doped nanoparticles

Marina Popova, Institute of Spectroscopy, Russian Academy of Sciences, Russia
Materials for Optical Memory: Resolved Hyperfine Structure in $\text{KYF}_4:\text{Ho}$

Cyrille Richard, Institut national de la santé et de la recherche médicale - INSERM, France
Small Animal Imaging

Wiesław Strek, Institute of Low Temperature and Structure Research, Polish Academy of Sciences, Poland
CT luminescence or Incandescence of IR stimulated white emission of RE doped nanocrystals

Setsuhisa Tanabe, Kyoto University, Japan
Active glass ceramics for photonic applications

Elena Turitsyna, Aston University, UK
Study of optical wave turbulence in fibre lasers

Fiorenzo Vetrone, Université du Québec, Canada
Lanthanide-Doped Nanoparticles: From their Synthesis to Applications in Biology

Jerker Widengren, Royal Institute of Technology KTH, Sweden
Ultrasensitive and ultrahigh resolution fluorescence spectroscopy and imaging for fundamental biomolecular studies and towards clinical diagnostics



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Conference Chairpersons

Bruno Viana and Miroslav Dramićanin

Scientific advisory committee

G. Boulon (France)

P. Dorenbos (The Netherlands)

M. Popova (Russia)

M. Yoshimura (Japan)

J. Holsa (Finland)

M. Brik (Estonia)

T. Allsop (UK)

Lj. Hadžijevski (Serbia)

O. Malta (Brazil)

M. Bettinelli (Italy)

F. Pellé (France)

Ph. Boutinaud (France)

S. Jobic (France)

T. Basiev (Russia)

B. Moine (France)

J. Nedeljković (Serbia)

A. Rakić (Australia)

M. Stepić (Serbia)

L. Carlos (Portugal)

A. Djurišić (China)

B. Jelenković (Serbia)

A. Vedda (Italy)

U. Kynast (Germany)

W. Strek (Poland)

F. Cusso (Spain)

D. Jaque Garzía (Spain)

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Ph. Goldner (France)

A. Ferrier (France)



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Conference info

The official Conference language is English.

The total times allocated for presentations are 30 min for Invited lectures and 15 min for Oral presentations.

Social program includes Welcome reception and Conference dinner. The Welcome reception will take place on Monday, September 3rd in Aeroklub restaurant, Uzun Mirkova 4. The Conference dinner will be held on Wednesday, September 5th in the restaurant Cantina de Frida, Karadjordjeva 2-4.

The Conference website is www.icomonline.org.

Contact

mailing@icomonline.org
ICOM2012 CONFERENCE
Institute of Nuclear Sciences Vinca – 030
P.O. Box 522,
11001 Belgrade
Serbia
Tel/Fax: +381 11 3408607

Organized by:



Centre national de la recherche scientifique



Institute of Nuclear Sciences "Vinča"



Chimie ParisTech (École nationale supérieure de chimie de Paris)

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Conference Topics

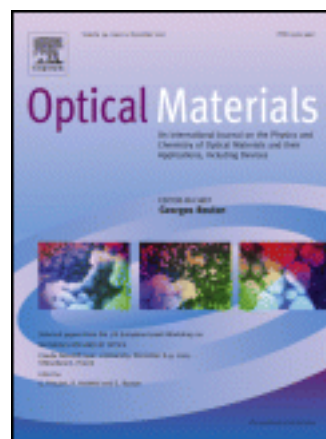
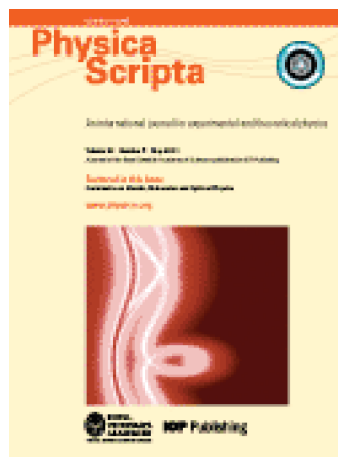
Luminescent materials and nanomaterials
Hybrid optical materials (organic/inorganic)
Characterization techniques of optical materials
Luminescence mechanisms and energy transfers
Theory and modeling of optical processes
Ultrafast-laser processing of materials
Optical sensors
Medical imaging
Advanced optical materials in photovoltaics and biophotonics
Photothermal and photoacoustic spectroscopy and phenomena

Publications & Proceedings

All accepted abstracts of registered participants will be published in the Conference proceedings.

All participants are invited to submit 5 page papers for publication in *Physica Scripta* published by *Institute of Physics*.

The Scientific Board will invite the authors of the 25 selected papers to submit the extended versions of their papers for publication in *Optical Materials* published by *Elsevier*.



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	Sunday, September 2nd	Monday, September 3rd	Tuesday, September 4th	Wednesday, September 5th	Thursday, September 6th
8:00 - 9:00		Registration			
9:00 - 9:15		Opening ceremony			
9:15 - 9:30		I-1 (Prof. Boulon)	I-7 (Prof. Johnson)	I-14 (Prof. Widengreen)	I-21 (Prof. Bialkowski)
9:30 - 9:45		I-2 (Prof. Guzik)	I-8 (Prof. Turitsyna)	I-15 (Prof. Richard)	Characterization Techniques (Hall A)
9:45 - 10:00		I-3 (Prof. Brik)	I-9 (Prof. Piqueras)	I-16 (Prof. Holsa)	
10:00 - 10:15		I-4 (Prof. Malta)	Coffee break	Coffee break	Coffee break
10:15 - 10:30		I-5 (Prof. Strek)	I-10 (Prof. Jaque Garcia)	I-17 (Prof. Mancic)	Advanced Materials (Hall A)
10:30 - 10:45		I-6 (Prof. Bettinelli)	I-11 (Prof. Pelle)	I-18 (Prof. Tanabe)	
10:45 - 11:00		Prof. M.F. Reid	I-12 (Prof. Vetrone)	I-19 (Prof. Moine)	
11:00 - 11:30			I-13 (Prof. Andraud)	I-20 (Prof. Popova)	
11:30 - 12:00			CONFERENCE PHOTO		Closing ceremony
12:00 - 12:30		Welcome reception with buffet	Lunch break	Lunch break	
12:30 - 12:45		Lunch break	Lunch break	Lunch break	
12:45 - 13:00					
13:00 - 14:30	Registration	PARALLEL SESSIONS		PARALLEL SESSIONS	
14:30 - 15:00		Luminescence (Hall A)	Sensor, Piezoelectric and Photothermal Properties (Hall B)	LED and Lighting (Hall A)	Electronic Properties and Mechanisms (Hall B)
15:00 - 15:15		Coffee break		Coffee break	
15:15 - 15:30		Nanomaterials and Nanostructures (Hall A)	Glass and Hybrid Materials (Hall B)	Laser materials and Characterization (Hall A)	Theory and Modeling (Hall B)
15:30 - 15:45		Poster section		Poster section	
15:45 - 16:00					
16:00 - 16:15					
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18:45 - 20:00					
20:00 - 20:30					
20:30 - 21:30					
21:30 - 22:00					



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Sunday, September 2 nd 2012.		
15:00 – 20:00	Registration	
Monday, September 3 rd 2012.		
08:00 – 09:00	Registration	
09:00 – 09:15	Opening ceremony	
09:15 – 09:45	I-1 Prof. Dr. G. Boulon Trivalent rare earth ions-doped ceramics as optical materials: TEM-EDX chemical analysis of the spatial distribution	
09:45 – 10:15	I-2 Prof. Dr. M. Guzik Exploring new rare earth-doped tungstate and molybdate matrices for optical materials	
10:15 – 10:45	I-3 Prof. Dr. M. Brik Crystal field effects and their influence on optical properties of transition metal ions from Sc to Zn	
10:45 – 11:00	Coffee break	
11:00 – 11:30	I-4 Prof. Dr. O. Malta Temperature dependent ligand to metal energy transfer rates in lanthanide complexes: Theoretical modeling and the first direct experimental observation	
11:30 – 12:00	I-5 Prof. Dr. W. Strek CT luminescence or incandescence of IR stimulated white emission of RE doped nanocrystals	
12:00 – 12:30	I-6 Prof. Dr. M. Betinelli Fast d-f luminescence of Pr ³⁺ in new oxide materials	
12:30 – 12:45	O-1 Prof. Dr. M.F. Reid Title	
13:00 – 14:30	Welcome reception with buffet	
	Session I: Luminescence Hall A	Session II: Sensor, piezoelectric and photothermal properties Hall B
15:00 – 15:15	O-2	O-8
15:15 – 15:30	O-3	O-9
15:30 – 15:45	O-4	O-10
15:45 – 16:00	O-5	O-11
16:00 – 16:15	O-6	O-12

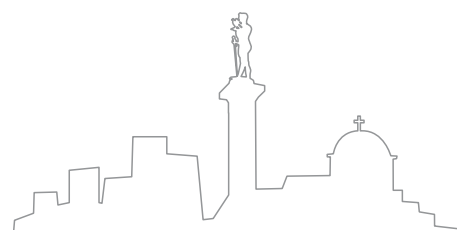


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16:15 – 16:45	O-7	O-13
16:45 – 17:00	Coffee break	
	Session III: Nanomaterials and nanostructures Hall A	Session IV: Glass and hybrid materials Hall B
17:00 – 17:15	O-14	O-19
17:15 – 17:30	O-15	O-20
17:30 – 17:45	O-16	O-21
17:45 – 18:00	O-17	O-22
18:00 – 18:15	O-18	O-23
18:15 – 20:00	Poster section	
Tuesday, September 4th 2012.		
09:00 – 09:30	I-7 Prof. Dr. N. Johnson Nanophotonic Sensors	
09:30 – 10:00	I-8 Prof. Dr. E. Turitsyna Study of optical wave turbulence in fibre lasers	
10:00 – 10:30	I-9 Prof. Dr. J. Piqueras Cathodoluminescence of doped nano- and microwires of semiconductor oxides	
10:30 – 10:45	Coffee break	
10:45 – 11:15	I-10 Prof. Dr. D. Jaque Garcia Quantum Dot Fluorescence Nanothermometry: Recent Advances	
11:15 – 11:45	I-11 Prof. Dr. F. Pelle Subdiffractive imaging using upconversion in rare earth doped nanoparticles	
11:45 – 12:15	I-12 Prof. Dr. F. Vetrone Lanthanide-Doped Nanoparticles: From their Synthesis to Applications in Biology	
12:15 – 12:45	I-13 Prof. Dr. C. Andraud Chromophores and their biological compatibility for biophotonics	
12:45 – 13:00	Conference photo	
13:00 – 15:00	Lunch break	
	Session V: LED and lighting	Session VI: Electronic properties and



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	Session V: LED and lighting Hall A	Session VI: Electronic properties and mechanisms Hall B
15:00 – 15:15	O-19	O-25
15:15 – 15:30	O-20	O-26
15:30 – 15:45	O-21	O-27
15:45 – 16:00	O-22	O-28
16:00 – 16:15	O-23	O-29
16:15 – 16:45	O-24	O-30
16:45 – 17:00	Coffee break	
	Session VII: Laser materials and characterization Hall A	Session VIII: Theory and modeling Hall B
17:00 – 17:15	O-31	O-36
17:15 – 17:30	O-32	O-37
17:30 – 17:45	O-33	O-38
17:45 – 18:00	O-34	O-39
18:00 – 18:15	O-35	O-40
18:15 – 20:00	Poster section	
Wednesday, September 5th 2012.		
09:00 – 09:30	I-14 Prof. Dr. J. Widengren Ultrasensitive and ultrahigh resolution fluorescence spectroscopy and imaging for fundamental biomolecular studies and towards clinical diagnostics	
09:30 – 10:00	I-15 Prof. Dr. C. Richard Small Animal Imaging	
10:00 – 10:30	I-16 Prof. Dr. J. Holsa Persistent Luminescence: New Materials	
10:30 – 10:45	Coffee break	



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10:45 – 11:15	I-17 Prof. Dr. L. Mančić Hydrothermal synthesis of nanostructured rare earth oxide - based phosphors
11:15 – 11:45	I-18 Prof. Dr. S. Tanabe Active glass ceramics for photonic applications
11:45 – 12:15	I-19 Prof. Dr. B. Moine Downconversion and solar cell efficiency
12:15 – 12:45	I-20 Prof. Dr. M. Popova Materials for Optical Memory: Resolved Hypefine Structure in KYF ₄ :Ho
12:45 – 15:00	Lunch break
	Session IX: Luminescent materials Hall A
15:00 – 15:15	O-41
15:15 – 15:30	O-42
15:30 – 15:45	O-43
15:45 – 16:00	O-44
16:00 – 16:15	O-45
16:15 – 16:45	O-46
20:00 – 22:00	Conference dinner
Thursday, September 6th 2012.	
09:00 – 09:30	I-21 Prof. Dr. S. E. Bialkowski Applications of Optical Novelty Filters in Photothermal Spectrometry
	Session X: Characterization techniques Hall A
9:30 – 9:45	O-47
09:45 – 10:00	O-48
10:00 – 10:15	O-49
10:15 – 10:30	O-50
10:30 – 10:45	Coffee break



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	Session XI: Advanced materials Hall A
10:45 – 11:00	O-51
11:00 – 11:15	O-52
11:15 – 11:30	O-53
11:30 – 11:45	O-54
11:45 – 12:00	O-55
12:00 – 12:15	O-56
12:15 – 12:30	O-57
12:30 – 12:45	O-58
12:45 – 13:00	Closing ceremony



Poster session I:
Monday, September 3rd 2012.

P1.1-01

STRUCTURAL AND OPTICAL PROPERTIES OF AgInSe₂

N. D. Abazović, M. I. Čomor and J. M. Nedeljković

P1.1-02

DISPERSIVE OPTICAL PARAMETERS OF ZrON/Si THIN FILMS FORMED BY OXIDATION/NITRIDATION OF Zr METAL

V.V. Atuchin, V.N. Kruchinin, Y. Hoong Wong, K. Yew Cheong

P1.1-03

ELECTRONIC STRUCTURE OF RbTiOPO₄ AND KTiOPO₄ AND EFFECTS OF RbK SUBSTITUTION IN KTP-FAMILY CRYSTALS

V. V. Atuchin, V. G. Kesler, Z. Lin

P1.1-04

EFFECTS OF PROCESS PARAMETERS ON THE OPTICAL CONSTANTS OF HIGHLY TEXTURED V₂O₅ THIN FILMS

V. V. Atuchin, V. A. Kochubey, V.N. Kruchinin, L. D. Pokrovsky, C.V. Ramana

P1.1-05

THE STUDY OF ELECTRON TRANSPORT THROUGH A MULTIPLE QUANTUM WELL STRUCTURE IN THE PRESENCE OF THE ELECTRIC FIELD, USING THE RELATIVISTIC TRANSFER MATRIX

D. M. Baltateanu, S. S. Satulu, V. Birau

P1.1-06

DOWNSHIFTING AND DOWNCONVERSION OF SOLAR SPECTRUM IN Tb³⁺, Yb³⁺ ACTIVATED OXIDE HOSTS FOR PHOTOVOLTAICS

B. Fetliński, Z. Boruc, M. Malinowski

P1.1-07

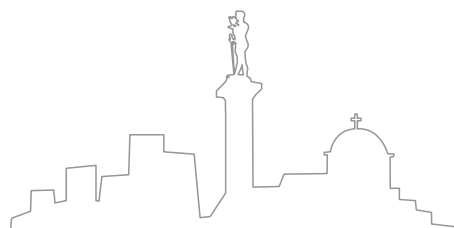
PERFORMANCE OF HIGH-EFFICIENCY BUFFER LAYER CDS/CIGS AND ZNS/CIGS SOLAR CELLS

A. M. Ferouani, A. Cheknane, B. Benyoucef, and H. S. Hilal

P1.1-08

THE OPTICAL PROPERTIES OF DOPAMINE-TiO₂ SUBMICRONIC SIZED PARTICLES

I. Dugandžić, D. Jovanović, L. Mančić, Z. Šaponjić, J. Nedeljković, O. Milošević



P1.1-09

STUDY OF THE SL21 PROTEIN STRUCTURE AND ITS INTERACTION WITH CALMODULIN

L. Lighezan, E. Adjadj, A. Neagu

P1.1-10

ATOMIC AND ELECTRONIC STRUCTURE OF GRAIN BOUNDARIES IN CRYSTALLINE ORGANIC SEMICONDUCTORS

M. Mladenović, I. Stanković, N. Vukmirović

P1.1-11

SENSITIZED GELATIN AS A VERSATILE BIOMATERIAL WITH TUNABLE MECHANICAL AND OPTICAL PROPERTIES

B. D. Murić, D. V. Pantelić, D. M. Vasiljević, B. G. Zarkov, B. M. Jelenković, M. A. Rosić, S. B. Pantović

P1.1-12

SYNTHESIS, STRUCTURAL AND VIBRATIONAL PROPERTIES OF MICROCRYSTALLINE $\text{RbSm}(\text{MoO}_4)_2$

V. V. Atuchin, S. V. Adichtchev, B. G. Bazarov, O. D. Chimitova, T. A. Gavrilova, M. S. Molokeev, N. V. Surovtsev, J. G. Bazarova

P1.1-13

GROWTH AND MICROSTRUCTURE OF CENTAUR CRYSTAL GaSe:InS

V. V. Atuchin, N. F. Beisel, K. A. Kokh, V. N. Kruchinin, I. V. Korolkov, L. D. Pokrovsky, A. R. Tsygankova

P1.1-14

MICROMORPHOLOGY AND OPTICAL CONSTANTS OF AMORPHOUS CHROMIUM METAL FILMS FORMED BY SUBLIMATION

V. V. Atuchin, A. S. Kozhukhov, V. N. Kruchinin, I. S. Soldatenkov, I. B. Troitskaia

P1.1-15

OPTICAL PROPERTIES OF CUBIC OXYFLUORIDE $\text{Rb}_2\text{KTiOF}_5$

V. V. Atuchin, L. I. Isaenko, M. S. Molokeev, A. P. Yelissejev, S. A. Zhurkov

P1.1-16

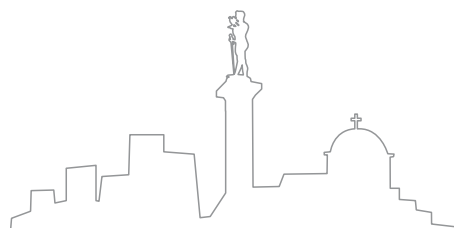
GROWTH AND CHROMIUM SEGREGATION IN GaSe:Cr SINGLE CRYSTALS

V. V. Atuchin, S. A. Bereznaya, N. F. Beisel, Z. V. Korotchenko, L. D. Pokrovsky, A. I. Saprykin, S. Yu. Sarkisov

P1.1-17

OPTICAL SIZE EFFECTS IN NICKEL FILMS IN VISIBLE SPECTRAL RANGE

V. V. Atuchin, A. E. Gayduk, T. Kh. Khasanov



P1.1-18

IMPROVING SCINTILLATING MATERIALS FOR MEDICAL IMAGING APPLICATIONS

S. Blahuta, B. Viana, A. Bessiere, V. Ouspenski

P1.1-19

SYNTHESIS AND OPTICAL BEHAVIOR OF COPPER NANOPARTICLES IN DIFFERENT MEDIA

U. Bogdanović, V. Vodnik, I. Vukoje, J. Džunuzović, J. Nedeljković

P1.1-20

OPTICAL AND STRUCTURAL CHARACTERIZATION OF POLYANILINE-GOLD NANOCOMPOSITE

U. Bogdanović, V. Vodnik, I. Vukoje, J. Džunuzović, J. Nedeljković

P1.1-21

NONLINEAR REFRACTIVE INDEX MEASUREMENT OF NEW TELLURITE MULTICOMPONENT GLASSY MATRIX POSSESSING NONLINEAR SUSCEPTIBILITY BY USING Z-SCAN

G. Yankov, I. Stefanov I., K. Dimitrov, B. L. Shivachev, H. Yoneda, T. Petrov

P1.1-22

HYDROTHERMAL SYNTHESIS AND OPTICAL CHARACTERIZATION OF Ni-DOPED CuCrO_2 NANOCRYSTALS

D.H.Ursu, M. Miclău, R. Bănica, I. Grozescu

P1.1-23

PROTON CONDUCTING POLYMER ELECTROLYTE BASED ON PLASTICIZED CHITOSAN-PEO BLEND AND APPLICATION IN ELECTROCHEMICAL DEVICES

M. F. Z. Kadir, M. F. Shukur, W. R. R. Roslan, H. A. Illias

P1.1-24

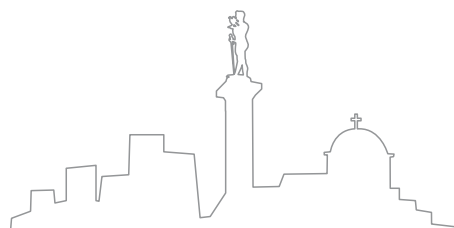
INVESTIGATION OF THE OPTICAL PROPERTIES OF NANOCOMPOSITE ZNO-MNO_2 THIN FILMS PREPARED BY SOL-GEL METHOD

S.S. Falahatger, F.E.Ghods

P1.1-25

RAMAN SPECTROSCOPY OF BISMUTH SILICON OXIDE SINGLE CRYSTALS GROWTH BY CZOCHRALSKI TECHNIQUE

Z. Lazarević, S. Kostić, V. Radivojević, M. Romčević,
M. Gilić, M. Petrović-Damjanović, N. Romčević



P1.1-25

RAMAN SPECTROSCOPY OF BISMUTH SILICON OXIDE SINGLE CRYSTALS GROWN BY CZOCHRALSKI TECHNIQUE

Z. Lazarević, S. Kostić, V. Radivojević, M. Romčević, M. Gilić, M. Petrović-Damjanović, N. Romčević

P1.1-26

OPTICAL STUDIES IN BRAGG REFLECTORS BUILT FROM ZnO/MgO MULTILAYER FILMS

Y-C. Lee, F-J. Cheng, Y-S. Huang, C-C. Chang, J-W. Lee

P1.1-27

INFLUENCE OF HOLE SIZE AND SHAPE ON ANGULAR DEPENDENCE OF THE FISHNET STRUCTURE'S OPTICAL RESPONSE

M. M. Jakovljević, G. Isić, B. Vasić, R. Gajić

P1.1-28

RAMAN SPECTROSCOPY OF CARBON DOPED RECORCINOL FORMALDEHYDE THIN FILMS

D. Kleut, Z. Marković, B. Babić, I. Holclajtner Antunović, M. Milosavljević, M. Dramićanin, B. Todorović Marković

P1.1-29

SURFACE MODIFICATION OF SINGLE WALL CARBON NANOTUBE THIN FILMS BY MICROWAVES: A RAMAN SPECTROSCOPY STUDY

D. Kepić, Z. Marković, D. Tošić, I. Holclajtner Antunović, B. Adnadjević, J. Prekodravac, D. Kleut, M. Dramićanin, B. Todorović Marković

P1.1-30

OPTICAL ANISOTROPY OF THE DOPED SBN CRYSTALS

L. I. Ivleva, N. V. Bogodaev, P. A. Lykov, E. E. Dunaeva

P1.1-31

CONDUCTIVITY STUDIES OF BIOPOLYMER ELECTROLYTES BASED ON CHITOSAN INCORPORATED WITH NH_4Br

M. F. Shukur, M. F. Z. Kadir, S. M. Zawawi, N. A. Majid, H. A. Illias

P1.1-32

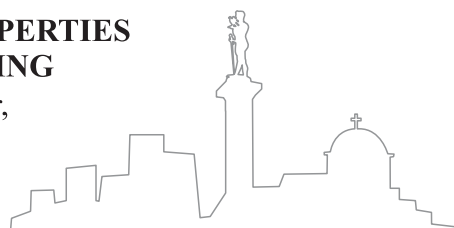
CONDUCTIVITY AND TRANSPORT OF STUDIES PLASTICIZED CHITOSAN BASED PROTON CONDUCTING BIOPOLYMER ELECTROLYTES

M. F. Shukur, M. F. Z. Kadir, S. M. Zawawi, D. Y. Soon Chye

P1.1-33

A STUDY ON STRUCTURAL AND OPTICAL PROPERTIES OF THIN TiO_2 FILMS UPON THERMAL ANNEALING

D. Pjević, M. Obradović, M. Milosavljević, R. Grieseler, M. Hopfeld, P. Schaaf



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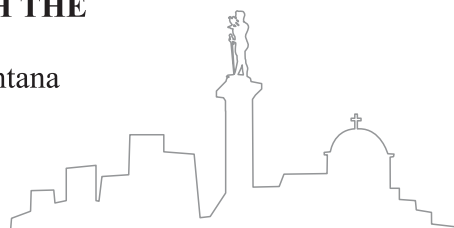
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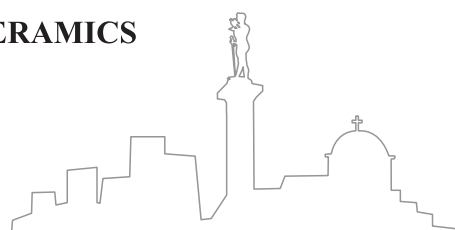
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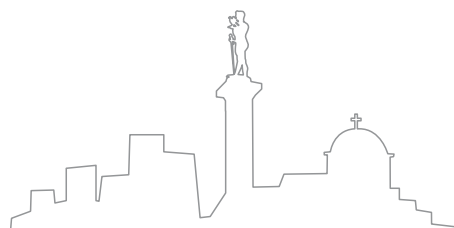
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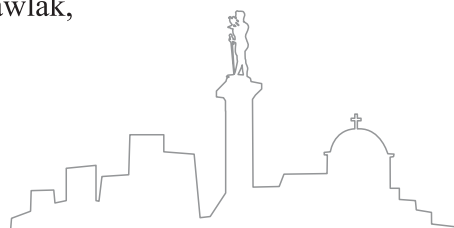
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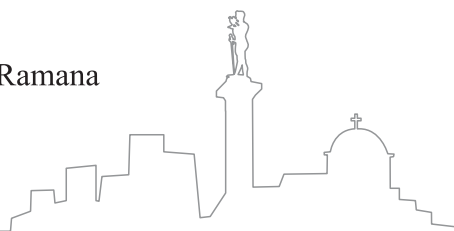
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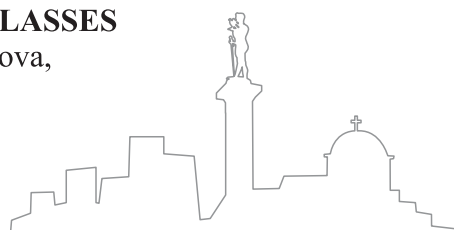
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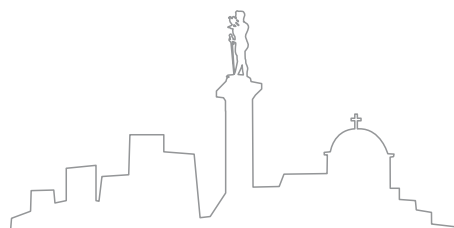
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S. Khiari, M. Diaf

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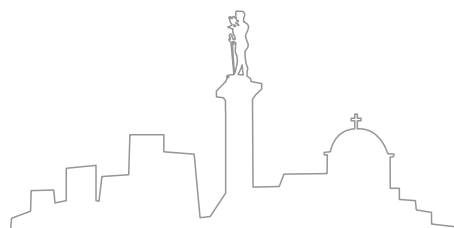
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K. M. _Bagińska, A. Watras, R. Pązik, P. J. Dereń

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L. Žur, J. Janek, J. Pisarska, W. A. Pisarski

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M. Guzik, E. Tomaszewicz, Y. Guyot, J. Legendziewicz, G. Boulon

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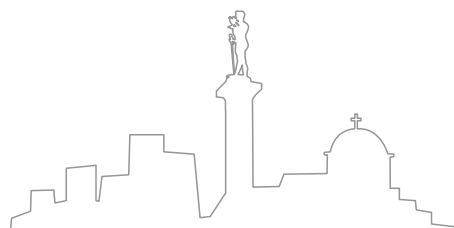
NANOPARTICLES OF PHB AND PMMA POLYMERS DOPED WITH $Eu(TTA)_3(TOPO)_2$ AND $Gd(TTA)_3(TOPO)_2$

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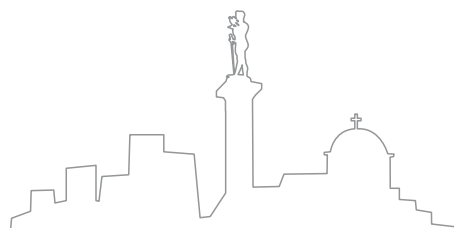
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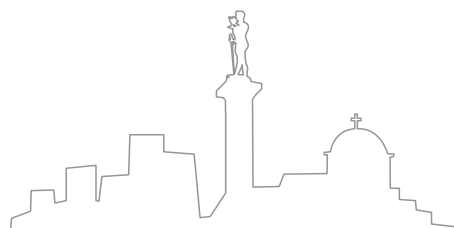
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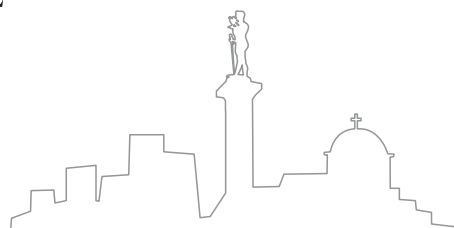
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