

## **POSTERS – Schedule & Order**

**Tuesday, 27<sup>th</sup> August**  
**18:00 – 20:00**

### **A. Nonlinear optics**

- A1. Light localization in quasi-periodic nonlinear photonic lattices**  
A. Radosavljević, G. Gligorić, A. Maluckov and M. Stepić
- A2. Coherent propagation and energy transfer in multicore fibers**  
A. Maluckov, P. P. Belićević, J. Petrović, Lj. Hadžievski, S. Turitsin
- A3. Dark solitons formed at the defect in one-dimensional waveguide array with saturable nonlinearity**  
Petra P. Belićević, Goran Gligorić, Aleksandra Maluckov and Milutin Stepić
- A4. Nonlinear optics and dynamics of laser systems with absorbing cell and backward-wave tubes with elements of a chaos**  
A.V. Glushkov, G.P. Prepelitsa, V.B. Ternovsky and P.A. Zaichko
- A5. Spatio-temporal traveling and solitary wave solutions to the generalized nonlinear Schrödinger equation with fractional nonlinearity and double-power law nonlinearity**  
N. Petrović
- A6. Variational approach and accessible solitons approximations in nonlocal nonlinear media**  
B.N. Aleksić, N.B. Aleksić, M. Petrović, A. Strinić, and M. Belić
- A7. Finite size effects in dipole solitons in highly nonlocal nematic liquid crystals**  
A. Strinić, N. Aleksić, M. Petrović and M. Belić
- A8. Modulational instability of the complex Ginzburg Landau equation**  
B.N. Aleksić, V. Skarka and M. Belić
- A9. Defect controlled Airy beam acceleration in optically induced waveguide arrays**  
N. Lučić, B. Bokić, D. Grujić, D. Pantelić, B. Jelenković, D. Vasiljević, D. Timotijević, A. Piper, and D. Jović

## **B. Lasers, laser spectroscopy**

- B1. Heteronuclear diatomic molecules in a strong laser field with an arbitrary polarization**  
S. Odfak, A. erki , M. Busuladffi , E. Hasovi , A. Gazibegovi -Busuladffi , and D. B. Milo-evi
- B2. Atomic and molecular processes generated by linearly polarized few-cycle laser pulses**  
M. Busuladffi , A. erki , S. Odfak, A. Gazibegovi -Busuladffi , E. Hasovi , D. Habibovi , and D. B. Milo-evi
- B3. Photoluminescence study of cobalt (III) and copper (II) complexes with the Schiff base of pyridoxal and aminoguanidine (PLAG)**  
Miodrag G. Jeli , Neboj-a Z. Rom evi , Branka B. Hadffi , Mirjana M. Lalovi , Milo-P. Slankamenac, Milo-B. fiivanov
- B4. Properties of plasma induced by IR CO<sub>2</sub> pulsed laser on a copper target under different ambient conditions**  
M.Kuzmanovic, M. Momcilovic, J. Ciganovic, D. Rankovic, J. Savovic, D. Milovanovic and M. Trtica
- B5. GaInAs/AlInAs Quantum Cascade Laser design based on Optimized Second Harmonic Generation**  
A. Gaji , J. Radovanovi , V. Milanovi , D. Indjin and Z. Ikoni
- B6. Enhanced modeling of band nonparabolicity with application to mid-IR quantum cascade laser structure**  
N. Vukovi , J. Radovanovic and V. Milanovic
- B7. Multi-photon spectroscopy of the many-electron atoms and ions in a one- and two-color laser fields: Debye plasma effects**  
A.V. Glushkov, V.V. Buyadzhi and A.P. Fedchuk
- B8. Comparison of switching times in optically bistable injection-locked semiconductor lasers**  
M. Krstic, J. Crnjanski, A. Totovic and D. Gvozdic
- B9. Laser spectroscopy of autoionization resonances in spectra of lanthanides and actinides atoms**  
A.A. Svinarenko
- B10. Algebraic model and experimental verification of magnetic resonance induced either by amplitude-modulated or polarization-modulated light**  
Z. D. Gruji , E. Breschi, P. Knowles and A. Weis
- B11. THz Wave Generation From a Two Color Plasma Filament**  
O. Grigore, R. Ungureanu, G. Cojocar, R. Banici, N.Pavel, T.Dascalu

**B12. Nano-FTIR: infrared spectroscopic chemical identification of materials at the nanoscale**

S. Amarie, A. Cernescu and F. Keilmann

## **C. Laser induced material modifications**

**C1. Multipulse nanosecond laser modification of steel surface**

A.N. Chumakov, I.S. Nikonchuk, B. Gakovi , S. Petrovi , M. Trtica

**C2. Laser ablation of nickel/palladium multilayer thin films by picosecond pulses**

Suzana Petrovic, A. Stupar, D.Perusko, B.Gakovic, I. Bogdanovic-Radovic, D. Milovanovic, V. Lazovic and M. Trtica

**C3. Damage effects on few-layer graphene from femtosecond laser interaction**

A. Beltaos, A. Kova evi , A. Matkovi , U. Ralevi , Dj. Jovanovi , B. Jelenkovi and R. Gaji

**C4. Influence of dental LED light-curing unit photoactivation mode on surface microstructure of dimethacrylate-based nanocomposite – SEM and AFM analysis**

T. Lainovi , D. Kukuruzovi , D. Kaka–, M. Viloti , T. Vukadinov, L. Blaffi

**C5. Femtosecond laser surface patterning of steel and titanium alloy**

D. S. Milovanovi , B. Gakovi , C. Radu, M. Zamfirescu, B. Radak, S. Petrovi , M. Trtica and I.N. Mihailescu

## **D. Optical materials**

**D1. Visible absorption structure of chromium doped (80-x)Sb<sub>2</sub>O<sub>3</sub>-20K<sub>2</sub>O-xPbO glasses**

P. Petkova, A. Ghamri, N. Geneva, Ismail Ismailov and M.T. Soltani

**D2. The Behavior of Ni<sup>2+</sup> cations in the aqueous and alcoholic solutions of NiCl<sub>2</sub>·6H<sub>2</sub>O**

P. Petkova, V. Nedkov, P. Vasilev and I. Ismailov

**D3. Measuring the time resolved fluorescence spectra from powder samples of YAG:Dy**

D. Trkvi , M.S. Rabasovi , M. Terzi , J. Moffina, P. Gregor i , J. Kriflan, and B.P. Marinkovi

**D4. Character Table of Graphene's Diperic Group Dg80**

V. Damljanovi , R. Gaji and R. Kosti

**D5. Far-infrared investigations of the surface modes in CdS thin films**

M. Gilic, J.Trajic, N. Romcevic, M. Romcevic, G. Stanisic, Z. Lazarevic, I.S. Yahia

**D6. Nanoparticles generation and regrouping through the interaction of femtosecond laser**

**beam with few-layer graphene**

A. G. Kovačević, A. Beltaos, A. Matković, U. Ralević, A. Krmpot, S. Savić, D. V. Pantelić, R. Gajić, B. M. Jelenković

**D7. First principle and ligand field calculations of structural, spectral and electronic properties of (Na, Li)VSi<sub>2</sub>O<sub>6</sub> synthetic clinopyroxenes**

M.G. Brik, A.S. Gruia, C.N. Avram, E.-L.Andreici and N.M. Avram

**D8. Microscopic study of crystal field effect on electron-phonon interaction in Fe<sup>2+</sup>:SrCl<sub>2</sub>**  
S.Ivaćević and N.M.Avram

**D9. Semi-empirical and *ab initio* DFT modeling of the spin-Hamiltonian parameters for Fe<sup>6+</sup>: K<sub>2</sub>MO<sub>4</sub> (M=S, Cr, Se)**

N.M. Avram, M.G. Brik and E.-L.Andreici

**D10. Theoretical calculation of energy levels and parameters for Cr<sup>2+</sup> and Fe<sup>2+</sup> free ions**  
E.-L.Andreici, S.Ivaćević, and A.M.Barb

**D11. On the optical spectra and EPR parameters for Cu<sup>2+</sup>: MgO**

A. S. Gruia, A.M. Barb and C. N. Avram

**D12. Crystal field and spin-Hamiltonian parameters for Cr<sup>5+</sup>: Li<sub>3</sub>(P,V)O<sub>4</sub>**

A.M. Barb, A. S. Gruia, C. N. Avram

**D13. Advantages of GPU technology on the DFT calculations on Intercalated Graphene**

J.Pesic and R. Gajić

**D14. Spectroscopic characterization of YAG and Nd:YAG single crystals**

Z. Lazarević, S. Kostić, V. Radojević, M. Romićević, A. Milutinović, G. Stanić and M. Gilić

**D15. Novel and scalable approach towards reduced residue liquid phase exfoliation of graphite and graphene**

M. Milićević, A. Matković and R. Gajić

**D16. Spectroscopic ellipsometry of chemical vapor deposited graphene transferred onto a dielectric substrate**

A. Matković, U. Ralević, M. Chhikara, M. M. Jakovljević, Dj. Jovanović, G. Bratina, and R. Gajić

**D17. Monolayer and multi-layer graphene films through nickel catalyzed transformation of fullerol and graphene quantum dots: a Raman spectroscopy study**

J. Prekodravac, S. Jovanović, I. Holclajtner-Antunović, D. Perusko, V. Pavlović, D. Tosić, B. Todorović-Marković and Z. Marković

**D18. Raman spectroscopy of graphene nanoribbons synthesized by longitudinal unzipping**

**of multi wall carbon nanotubes**

S. Jovanovi , D. To-i , J. Prekodravac, Z. Markovi , B. Todorovi Markovi

**D19. Gamma-ray assisted irradiation of few layer graphene films: a Raman spectroscopy study**

D. Kleut, Z. Markovi , I. Holclajtner Antunovi , M. Drami anin, D. Kepi and B. Todorovi Markovi

**D20. Novel method for graphene functionalization**

D.Kepi, Z. Markovi , S. Jovanovi , I. Holclajtner Antunovi , D. Kleut and B. Todorovi Markovi

**D21. Influence of multiple optical reflections on frequency photothermal response**

M. Nesic, S. Todosijevec, M. Popovic, Z. Soskic, S. Galovic

## **E. Optoelectronics and optical communications**

**E1. Fabrication of ultra-low-loss ridge waveguides in lithium niobate by diamond blade dicing and high temperature Ti in-diffusion**

C. E. Rüter, S. Suntsov and D. Kip

**E2. Nd:YAG ridge waveguide lasers formed by combined ion implantation and precise diamond blade dicing**

C. E. Rüter, D. Kip, S. Akhmadaliev, S. Zhou, Y. Jia and F. Chen

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**Thursday, 29<sup>th</sup> August**  
**18:00 – 20:00**

## **E. Optoelectronics and optical communications**

### **E3. Implementation and characterization of fibre-optic colour sensor**

Jovan S. Baji , Dragan Z. Stupar, Bojan M. Daki , Lazo M. Manojlovi , Milo– P. Slankamenac, Milo–B. fiivanov

### **E4. Application of Finite Difference – Time Domain method in Pulsed Thermography**

Lj. Tomi , J. Elazar, V. Damnjanovi and B. Milanovi

### **E5. Analysis of propagation characteristics of multimode optical fibers with valley at core cladding boundary by the WKB method**

M.S. Kova evi , A. Djordjevich and D. Nikezi

### **E6. High quality factor optical resonators**

Rémi Henriet, Patrice Salzenstein, Davor Ristic, Aurélien Coillet, Michel Mortier, Gilles Cibie, Alphonse Rasoloniaina, Khaldoun Saleh, Olivier Llopis, Maurizio Ferrari, Patrice Féron, Yanne K. Chembo

### **E7. Application of photo diodes and CCD elements in the detection of natural gamma radiation for logging boreholes**

or e Obradovi , Dragan Stupar, Jovan Baji Milo–fiivanov

### **E8. Analytical Solution for Stationary Distribution of Photon Density in Traveling–Wave and Reflective Semiconductor Optical Amplifiers**

A. R. Totovi , J. V. Crnjanski, M. M. Krsti and D. M. Gvozdi

### **E9. Optimization of the double-Gauss objective with the various evolution strategies and the damped least squares**

S. Bakic, D. Vasiljevic

### **E10. Modeling polymer solar cell based on P3HT:PCBM active layer**

fi. Jeli , J. Petrovi , P. Matavulj, J. Melancon, M. Galib and S. fiivanovi

### **E11. Interactive resources for high-performance e-learning in Optics: solving problems with graphics**

Carlos J. Zapata-Rodríguez, Pascuala García-Martínez, Carlos Ferreira, David Pastor, Isaac Fernández and Juan J. Miret

### **E12. Broadband composite waveplates and narrowband filters**

E. Dimova, Sv. Ivanov, G. Popkirov and N. V. Vitanov

### **E13. Evanescent-field optical gas sensors based on resonant absorption**

N. Raicevic, A. Maluckov and J. Petrovic

## F. Quantum optics

### F1. Contribution to the Quantum Theory of Weak Force

Nenad V. Delic, Igor J. ~~Tr~~trajcic, Stevan Armarkovic, Jovan P. ~~Tr~~trajcic

### F2. Dark-state polaritons in a degenerate two-level system

A. Maggitti, M. Radonjić and B. M. Jelenković

### F3. Effects of a repeated atom-laser interaction on temporal build-up of dark state and slow light in Rb buffer gas cell

S. N. Nikolić, M. Radonjić, N. M. Lukić, A. J. Krmpot, B. V. Zlatković, and B. M. Jelenković

### F4. Ramsey effect on linewidth of coherent resonances in vacuum Rb cell

I. S. Radojić, M. M. Radonjić, Z. D. Grujić, M. M. Lekić, D. V. Lukić, B. M. Jelenković

### F5. Photon field and energy flow lines behind a circular disc

D. Arsenović, D. Dimić and M. Boffi

### F6. Binding energies of $D^0$ impurity in CdTe/ZnTe spherical quantum dot

Radmila Kostić, Dužanka Stojanović

### F7. The influence of photon polarization on the average photon trajectories behind two slits

M. Davidović, A.S. Sanz, M. Boffi

### F8. The properties of stretched states and their possible applications to tunneling process enhancement

V.A. Andreev, D.M. Davidović, Lj.D. Davidović, M.D Davidović

### F9. Cooperative photonics: Laser-electron- $\gamma$ -nuclear “shake-up” and NEET/NEEC effects in atomic/nuclear systems and multicharged ions

O.Yu. Khetselius

### F10. Nuclear Photonics: Atomic/nuclear systems in super strong laser field

A.V. Glushkov

### F11. Hydrogenic impurity ground state in the opened spherical core-shell quantum dot

Dužanka Stojanović, Radmila Kostić

## G. Ultracold systems

### G1. Breakdown of Kohn Theorem Near the Feshbach Resonance

H. Al-Jibbouri and A. Pelster

### G2. Dipolar Bose-Einstein Condensates With Periodically Modulated Contact Interaction

B. Nikolic, A. Balaz and A. Pelster

### G3. Dipolar Bose-Einstein Condensates in Weak Anisotropic Disorder

B. Nikolic, A. Balaz and A. Pelster

### G4. Bose-Einstein Condensates with Strong Disorder

B. Nikolic, A. Balaz and A. Pelster

### G5. Crossover from Adiabatic to Sudden Quench Dynamics for Time-of-Flight Imaging Measurements in Bose-Einstein Condensates

Bo Xiong, Axel Pelster and Antun Balaf

### G6. Anisotropic Superfluidity of Bosons in Optical Kagome Superlattice 23

T. Wang, X.-F. Zhang, A. Pelster, and S. Eggert

## H. Biophotonics

### H1. Pointwise implementation of dynamic laser speckle technique

E. Stoykova, T. Nikova, B. Ivanov

### H2. Numerical modeling of thermal effects on biological tissue during laser – material interaction

Z. Latinovic, M. Sreckovic, M. Janicijevic, J. Ilic, and J. Radovanovic

### H3. Microlens formation as a protective mechanism against direct laser radiation

B. Muri, D. Panteli, D. Vasiljevi and B. Jelenkovi

### H4. Authentication of the Botanical Origin of Unifloral Honey by Infrared Spectroscopy Coupled with Support Vector Machine Algorithm

Lea Lenhardt, Ivana Zekovi, Tatjana Drami anin, fivoslav Te-i, Du-anka Milojkovi - Opsenica, Miroslav D. Drami anin

### H5. Nonlinear laser scanning microscopy in studies of neural tissue - amyotrophic lateral sclerotic changes in rat brainstem and cerebellum

Svetlana Jovani, Milena Milo-evi, Mihailo Rabasovi, Dejan Panteli, Pavle Andjus, Branislav M. Jelenkovi, and Aleksandar J. Krmpot

### H6. Optically Tunable Impedance Nanostructure Arrays as Biological Cell Impedance



## **Spectroscopy Electrode; A Theoretical Investigation**

R. Mohammadpour and P.Sasanpour

### **I. Metamaterials**

#### **I1. Adsorption-induced fluctuations and noise in plasmonic metamaterial devices**

O. Jak-i , I. Joki and Z. Jak-i

#### **I2. A low-loss double fishnet metamaterial based on transparent conductive oxide**

D. Tanaskovi , Z. Jak-i , O. Jak-i

### **J. Plasmonics**

#### **J1. Diffraction design in plasmonic nanolayered metamaterial: From birefringence to trirefringence**

S. Vukovi , G. Isi and R. Gaji

#### **J2. Influence of hole size on angular dependence of rectangular fishnet structure's optical response**

M. M. Jakovljevic, G. Isic and R. Gajic

### **K. Holography**

#### **K1. Fourier optical cryptosystem using complex spatial modulation**

T. Sarkadi and P. Koppa

#### **K2. Resolution Limit of the White-Light Interferometric Sensor for Absolute Position Measurement Based on Central Fringe Maximum Identification**

L. Manojlovic, M. Zivanov, M. Slankamenac, D. Stupar, and J. Bajic

#### **K3. Design of a photoelastic measurement of principal stresses by a phase-shifting method**

T. Nikova, E. Stoykova

#### **K4. Nanostructures fabricated by combining holographic method and self-assembly**

S. Savic-Sevic, D. Pantelic and B. Jelenkovic

### **L. Optical methods in nanoparticle research**

#### **L1. Survey of approaches for morphological, optical, and transport characterization of Fe<sub>3</sub>O<sub>4</sub> and $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> nanoparticles**

Danica Mamula Tartalja , Milesa Sre kovi