

## Poster session I: Thursday 27<sup>th</sup> August 2009

**P1-01**

### **NANOSIZE Tm<sup>3+</sup>:Lu<sub>2</sub>O<sub>3</sub> @ SiO<sub>2</sub> CORE-SHELL PARTICLES: SYNTHESIS AND CHARACTERIZATION**

E. William Barrera, Concepción Cascales, M. Cinta Pujol, Joan J. Carvajal, X. Mateos, Magdalena Aguiló, and Francesc Díaz

**P1-02**

### **OPTICAL TRANSITION PROBABILITIES IN Er<sup>3+</sup>- AND Tm<sup>3+</sup>-DOPED LiLa<sub>9</sub>(SiO<sub>4</sub>)<sub>6</sub>O<sub>2</sub> CRYSTALS**

Eugenio Cantelar, Marta Quintanilla, Fernando Cussó, Enrico Cavalli, Marco Bettinelli

**P1-03**

### **MAGNETORESISTIVE BEHAVIOUR OF NANO-PARTICLE Fe<sub>1-x</sub>Mn<sub>x</sub>Fe<sub>2</sub>O<sub>4</sub>**

B.L. Choudhary, A. Krishnamurthy and B.K. Srivastava

**P1-04**

### **OPTICAL AND PHYSICAL PROPERTIES OF SODA GLASS BASED ON THAILAND QUARTZ SANDS DOPED WITH IRON OXIDE**

Pisutti Dararutana, Sirichai Yaembaen, Natthapong Monarumit, Sorapong Pongkrapan, Narin Sirikulrat, Pornsawat Wathanakul

**P1-05**

### **SYNTHESIS AND CHARACTERIZATION OF Ho<sub>x</sub>:Lu<sub>2-x</sub>O<sub>3</sub> NANOCRYSTALS TO PERFORM LASER CERAMICS**

M. Galceran, M.C. Pujol, J.J. Carvajal, X. Mateos, M. Aguiló, F. Díaz, W. Streck

**P1-06**

### **THE KERR EFFECT IN 1-D PHOTONIC CRYSTALS WITH A THIN TbFeCo MAGNETIC LAYER**

Majid Ghanaatshoar, Hossein Alisafae, Farzaneh Abolmaali, Mehrdad Moradi

**P1-07**

### **CRYSTAL GROWTH AND CHARACTERIZATION OF Ho<sup>3+</sup>:KRE(WO<sub>4</sub>)<sub>2</sub> (RE = Y, Gd, Lu)**

Venkatesan Jambunathan, Xavier Mateos, Maria Cinta Pujol, Joan Josep Carvajal, Magdalena Aguiló, Francesc Díaz

**P1-08**

### **ENERGY STORAGE AND TRANSFER IN RARE GAS SOLIDS**

Ivan.V. Khyzhniy, Sergey.A. Uytunov, Elena.V. Savchenko, Alexey N. Ponomaryov, Galina B. Gumenchuk, Vladimir E. Bondybey

**P1-09**

### **OPTICAL PROPERTIES OF CdTe/ZnTe CORE/SHELL QUANTUM DOTS SUITABLE FOR TARGETED BIOIMAGING**

Radmila Kostić, Dužanka Stojanović

**P1-10**

### **3,4,9,10-PERYLENETETRACARBOXYLICDIIMIDE/ZnO HYBRID NANOMATERIALS**

A. M. C. Ng, X. Y. Chen, F. Fang, A. B. Djurišić, W. K. Chan

**P1-11**

### **RADIATIVE TRANSITIONS IN NANOCRYSTALS**

Konstantin K. Pukhov, Tasoltan T. Basiev

**P1-12**

**LOW-COST EXPERIMENTAL APPARATUS FOR SOLID STATE PHOTOACOUSTIC MEASUREMENTS**

Mihailo D Rabasović, Marko G Nikolić, Miroslav D Dramićanin, Mladen Franko and Dragan D Markushev

**P1-13**

**THE CONTROL OF SPONTANEOUS PATTERN FORMATION ON AZO POLYMER FILM**

Sohrab Ahmadi Kandjani, J. M. Nunzi

**P1-14**

**PHOTOACOUSTIC ELASTIC BENDING METHOD: STUDY OF THE ION-IMPLANTED Au-Si SYSTEM**

Dragan M. Todorovic, Mihailo D Rabasović, Dragan D Markushev

**P1-15**

**OPTOMAGNETIC FINGERPRINT OF CONTACT LENSES: LIGHT INFLUENCE ON BRAIN ACTIVITY**

Djuro Koruga, Aleksandar Tomić, Lidija Matija, Dragomir Stamenković

**P1-16**

**EFFECTS RELATED WITH PHOTOCONDUCTIVITY AND MOBILITY IN TlBr**

Vaidotas Kažukauskas, Andžej Ziminskij

**P1-17**

**OPTIMIZING ALL OPTICAL SWITCHES IN SEMICONDUCTOR MICRORESONATORS USING CARRIER BEHAVIOR**

Hamid R. Aryan, Reza Kheradmand

**P1-18**

**DISORDERING EFFECT OF PERIODICALLY POLEDNONLINEAR CRYSTALS ON PARAMETRIC DOWN CONVERSION**

Reza Kheradmand, Mahdi Rezaei, Majid Nemati, and Afshin Razmi

**P1-19**

**MODIFICATION OF WTi/Si SYSTEM BY 1064 nm PICOSECOND Nd:YAG LASER PULSES**

Suzana M. Petrović, B. Gaković, D.Peruško, M. Čekada, M. Panjan, P. Panjan and M. Trtica

**P1-20**

**CHARACTERIZATION OF OPTICAL NONLINEARITY IN AZO DYE DOPED NOVEL NEMATIC LIQUID CRYSTAL**

H. Khoshsima and R. Asgari Sabet

**P1-21**

**TEMPERATURE DEPENDENCE OF THE THRESHOLD CURRENT DENSITY OF A GaN BASED QUANTUM DOT LASER**

A. Asgari

**P1-22**

**CHARGE TRANSPORT MODEL OF GATE SOLUTION AlGaIn/GaN HIGH ELECTRON MOBILITY TRANSISTORS**

A. Asgari, L. Rajabi Bonab

**P1-23**

**LUMINESCENT PROPERTIES OF SILVER COMPLEXES IN SOLID SOLUTIONS OF INORGANIC COMPOUNDS**

T.V. Zashivailo, V.I. Kushnirenko

**P1-24**

**SYNTHESIS OF TRANSITION METAL AND RARE EARTH DOPED MIXED OXIDE NANOPOWDERS**

J. Križan, I. Bajsić, J. Možina and V. Kaučič

**P1-25**

**CLEAVAGE MECHANOLUMINESCENCE IN POLYMERS**

R. K. Kuraria, S. R. Kuraria, Neha Chourasia and B. P. Chandra

**P1-26**

**PHOTOLUMINESCENT PROPERTIES OF NANOSTRUCTURED  $Y_2O_3:Eu^{3+}$  AND  $(Y_{1-x}Gd_x)_2O_3:Eu^{3+}$  POWDERS OBTAINED BY AEROSOL SYNTHESIS**

K. Marinkovic, L. Mancic, L.S. Gomez, M.E. Rabanal, M. Dramicanin, O. Milosevic

**P1-27**

**OPTICAL PROPERTIES OF BETANIN SENSITIZED GELATIN FILM**

Branka Murić, Dejan Pantelić, Darko Vasiljević, Bratimir Panić

**P1-28**

**OUT OF EQUILIBRIUM SYNTHESIS OF MODEL UNCAPPED ZnO NANOPARTICLES**

D. Tainoff, B. Masenelli, P. Mélinon

**P1-29**

**THERMO-OPTICAL INVESTIGATIONS OF MULTILAYER BST/PZT THIN FILMS BY SPECTROSCOPIC ELLIPSOMETRY**

Ilze Aulika, Alexandr Dejneka, Anna Lynnyk, Vismants Zauls, Karlis Kundzins

**P1-30**

**DEPENDENCE OF CRYSTAL FIELD EFFECTS ON VARIATION OF INTERIONIC DISTANCES IN  $ZnS:V^{2+}$  AND  $MgO:Cr^{3+}$**

M.G. Brik, N.M. Avram, I.V. Kityk

**P1-31**

**PHOTOLUMINESCENT PROPERTIES OF Zn-Mn-O**

Dušan Milivojević, Branka Babić-Stojić, Jovan Blanuša and Miroslav Dramićanin

**P1-32**

**OPTICAL SPECTRA OF FLUX GROWN Cr-DOPED SILICATE CRYSTALS**

M.G. Brik, E. Cavalli, M. Bettinelli

**P1-33**

**LIF SINGLE CRYSTAL FOR YAG:ND LASER Q-SWITCH**

Sorin Jinga, Cornelia Jinga

**P1-34**

**CHANGES OF PROPERTIES OF CURED AND UNCURED DISILOXANE BISBENZOCYCLOBUTENE THIN FILMS UNDER IRRADIATION**

Nenad Ivanović, Nenad Marjanović, Zlatko Rakočević, Velibor Andrić, Branka Hadžić, Ivana Vukanac, Ivana Đurđević, Milesa Srečković

**P1-35**

**CZOCHELSKI GROWTH OF  $\beta-Na_xV_2O_5$  SINGLE CRYSTALS**

L.I. Ivleva, I.S. Voronina, V.V. Osiko, V.S. Petrov, B.A. Loginov

**P1-36**

**STUDIES ON Al DOPPED ZnO FILMS SPUTTERED AT VERY LOW PRESSURE FOR PHOTOVOLTAIC APPLICATION**

Pyungwoo Jang, Chi-Sup Jung, Kyu Seomoon and Kwang-Ho Kim

**P1-37**

**DATA RECORDING BY FLUORESCENT PHOTOSENSITIVE NANOCRYSTALS**

Sorin Jinga, Ecaterina Andronescu, Cornelia Jinga, Eugen. Pavel

**P1-38**

**SYNTHESIS AND CHARACTERIZATION OF BISMUTH SULPHIDE NANOSTRUCTURES IN W/O MICROEMULSIONS**

Dragana J. Jovanović, Ivana Lj. Validžić and Jovan M. Nedeljković

**P1-39**

**DYNAMICAL ANDERSON LOCALIZATION OF COUNTERPROPAGATING BEAMS IN OPTICALLY INDUCED PHOTONIC LATTICES**

D. Jović, M. Belić

**P1-40**

**STRUCTURAL CHARACTERIZATION OF ULTRA-THIN P(VDF-TrFE) FILMS**

Chi-Sup Jung

**P1-41**

**NONLINEAR OPTICAL PROPERTIES OF P(VDF-TrFE) COPOLYMER FILMS**

C.S.Jung, P.W.Jang, K.Seomoon, K.H.Kim

**P1-42**

**NEW CADMIUM AND RARE-EARTH METAL MOLYBDATES WITH SCHEELITE TYPE STRUCTURE**

E.Tomaszewicz, S.M.Kaczmarek, H.Fuks

**P1-43**

**STUDYING THE DIFFRACTION EFFICIENCY VARIATIONS OF HOLOGRAPHIC GRATINGS DUE TO SUCCESSIVE WRITE-ERASE PROCESSES IN AZO-DYE-DOPED POLYMER FILMS**

H. Khoshima and A. Mohammadpour

**P1-44**

**FABRICATION OF LOW-TEMPERATURE PASSIVATION OF SI WITH AL<sub>2</sub>O<sub>3</sub> FILMS AND ITS APPLICATION TO MIS SOLAR CELLS**

Kwang-Ho Kim, Pyungwoo Jang, Chisup Jung and Kyu Seomoon

**P1-45**

**OPTICAL STUDY OF NANOCOMPOSITES BASED ON CHALCOGENIDE IMPREGNATED WITH ORGANIC DYE**

Georgii K. Kirilov, Vjacheslav Gerbreder, Elena M. Kirilova

**P1-46**

**LOCALIZED VIBRATIONS OF SILICON DEFECTS IN QUARTZ**

Alexey N. Kislov

**P1-47**

**SPECTROSCOPIC INVESTIGATION OF Er-Yb CODOPED MATERIALS FOR 1.6 MICRONS LASER APPLICATIONS**

Sergei A. Klimin, Pascal Loiseau, Daniel Caurant, Gérard Aka, Akio Ikesue, Kirill. N. Boldyrev, Marina N. Popova

**P1-48**

**OPTICAL PROPERTIES OF LANGASITE FAMILY CRYSTALS AND THEIR CONNECTION WITH GROWTH CONDITIONS**

O.A. Buzanov, N.S. Kozlova, E.V. Zabelina

**P1-49**

**TEMPERATURE DEPENDENCE OF SPECTRAL POSITIONS AND WIDTHS OF  $5D_J \rightarrow 7F_J$  FLUORESCENCE LINES ORIGINATING FROM  $\text{Sm}^{2+}$  IONS IN  $\text{SrFCl}$  CRYSTAL**

Anatoli Kuznetsov, Arlentin Laisaar, Jaak Kikas

**P1-50**

**FIRST-PRINCIPLES STUDY OF THE ELECTRONIC STRUCTURE AND OPTICAL PROPERTIES OF THE PURE  $\text{BaY}_2\text{F}_8$**

J. M. Dantas, M. V. Lalic

**P1-51**

**RAMAN AND INFRARED SPECTROSCOPY INVESTIGATE OF La AND Sb DOPED  $\text{BaTiO}_3$**

Zorica Ž. Lazarević, Nebojša Ž. Romčević, Mirjana M. Vijatović, Maja J. Romčević, Biljana D. Stojanović

**P1-52**

**EFFECT OF TEMPERATURE ON OPTICAL SPECTRA AND EXCITED STATE RELAXATION DYNAMICS OF  $\text{Er}^{3+}$  IN  $\text{YVO}_4$**

R. Lisiecki, P. Solarz, W. Ryba-Romanowski

**P1-53**

**THULIUM DOPED SILICON LIGHT EMITTING DIODES**

M. A. Lourenço, K. P. Homewood

**P1-54**

**SHIFT AND BROADENING OF SAPPHIRE SURFACE POLARITON BY QUASICRYSTALLINE FILM**

Nadezhda N. Novikova, Vladimir A. Yakovlev, Evgeny A. Vinogradov, Aleksei A. Teplov, Dmitry S. Shaitura, Evgeny D. Ol'shanskii

**P1-55**

**HIGH-RESOLUTION SPECTROSCOPY OF  $\text{LiLuF}_4:\text{Pr}^{3+}$  CRYSTALS**

Dmitry S. Pytalev, Sergey N. Klimin, Marina N. Popova

**P1-56**

**MICRO-RAMAN CHARACTERIZATION OF Zn-DIFFUSED  $\text{LiNbO}_3$  CHANNEL WAVEGUIDES**

Marta Quintanilla, Eugenio Cantelar, Fernando Cussó, Concepción Domingo

**P1-57**

**SPECTRAL AND LUMINESCENCE PROPERTIES OF  $\text{Pr}^{3+}$ ,  $\text{Er}^{3+}$  AND  $\text{Eu}^{3+}$  IONS IN OXYFLUORIDE GLASS CERAMICS CONTAINING  $\text{LaF}_3$  NANOCRYSTALS**

M. Rozanski, Cz. Koepke, K. Wisniewski, M. Środa

**P1-58**

**COPRECIPITATION STUDY OF GOLD AND HYDROXYAPATITE NANOPARTICLES**

C.Santos, M.M. Almeida, M.E.V. Costa

**P1-59**

**OPTICAL PROPERTIES OF ONE-DIMENSIONAL PHOTONIC CRYSTALS IN DICHROMATED PULLULAN**

Svetlana Savić Šević, Dejan Pantelić, Branisav Jelenković

**P1-60**

**MANUFACTURING OF SOLID-STATE WHITE LIGHT EMISSION MATRIX USING YAG:Ce PHOSPHOR**

Vasilica Schiopu, Ileana Cernica, Alina Matei, Mihai Danila, Adrian Dinescu, Raluca Gavrilă, Sorin Mircea Axinte

**P1-61**

**PE-MOCVD GROWTH AND CHARACTERIZATION OF ZnO AND ZnO:Al THIN FILMS**

Kyu SeoMoon, Jeong Hun Choi, Kwang Ho Kim, Chi Sup Jung, Pyung Woo Jang

**P1-62**

**APPLICATION OF FOURIER-PADE APPROXIMATION IN ANALYSIS OF MATERIALS FOR OPTICAL APPLICATIONS**

Dragutin Šević, Svetlana Savić Šević, Dejan Pantelić, Bratislav Marinković

**P1-63**

**INVESTIGATING THE INSERTION LOSS DUE TO FRESNEL REFLECTION AT THE LITHIUM NIOBATE-AIR INTERFACES**

Morteza A. Sharif, Amin Soltanian

**P1-64**

**INTRINSIC LUMINESCENCE OF ZrO<sub>2</sub> NANOPOWDER AND ITS POSSIBLE APPLICATIONS**

Ilmo Sildos, Pavel Kanarjov, Sven Lange, Mikhail G. Brik and Valter Kiisk

**P1-65**

**SELECTIVE IC ABSORPTION IN MOLECULAR NANOFILMS**

Blanka Škipina, Dragoljub Mirjanić, Siniša Vučenović, Svetlana Pelemiš, Jovan Šetrajčić and Branko Markoski

**P1-66**

**HYBRID MATRICES FOR EMBEDDING OF OXIDE NANOPARTICLES WITH MAGNETO-OPTICAL PROPERTIES**

Oana Ștefănescu, Mircea Ștefănescu, Marcela Stoia, Gabriela Vlase

**P1-67**

**ON THE CRYSTALLIZATION KINETICS OF THE Fe<sub>70</sub>Cr<sub>10</sub>B<sub>20</sub> AMORPHOUS ALLOYS**

Ioan ZAHARIE

**P1-68**

**OPTICAL PROPERTIES AND PHOTOCATALYTIC ACTIVITY OF RUTILE NANOPOWDERS DOPED WITH Fe IONS**

Nadica D. Abazović, Luciana Mirengi, Ivana A. Janković, Nataša Bibić, Daniela V. Šojić, Biljana F. Abramović, Mirjana I. Čomor

**P1-69**

**THERMAL PROPERTIES OF TiO<sub>2</sub>/PVA NANOCOMPOSITES**

M. Radoičić, Z. Šaponjić, M. Marinović-Cincović and J. Nedeljković

**P1-70**

**THERMAL PROPERTIES OF NANOCOMPOSITE FILM CONSISTING OF PVA AND SHAPED Ag NANOPARTICLES**

Vesna V. Vodnik, Zoran V. Šaponjić, Jovan M. Nedeljković

**P1-71**

**TRYPTOPHAN-FUNCTIONALIZED GLOWING SILVER NANOPARTICLES EMBEDDED IN BIOPOLYMER MATRIX**

Dušan K. Božanić, Lidija V. Trandafilović, Ivana Zeković, and Vladimir Djoković

**P1-72**

**TEMPLATING LUMINESCENT ZnO NANOPARTICLES USING ALGINATE BIOPOLYMER**

Lidija V. Trandafilović, Dušan K. Božanić, Nataša Bibić, Jovan Blanuša and Vladimir Djoković

**P1-73**

**RECONSTRUCTION OF THE OPTICAL DEPTH STRUCTURE FROM PHOTOTHERMAL RESPONSES**

S. Galović, M. Popović, Z. Stojanović, D. Čevizović

**P1-74**

**LUMINESCENCE AND ENERGY TRANSFER FROM ACAI OIL IN POLYSTYRENE MATRIX**

N. S. Pereira, A. F. G. do Monte, A. F. Reis, P. C. Morais, M. J. A. Sales

**P1-75**

**STRUCTURAL AND MAGNETIC PROPERTIES OF MECHANOCHEMICALLY SYNTHESIZED NANOCRYSTALLINE TITANIUM MONOXIDE**

Tanja Barudzija, Marija Perovic, Vojislav Spasojevic, Miroslav Dramicanin, Ceda Jovalekic, Miodrag Mitric

**P1-76**

**Gd<sub>2</sub>O<sub>3</sub>:Eu<sup>3+</sup> NANOPARTICLES PREPARED USING COMBUSTION SYNTHESIS: INFLUENCE OF DIFFERENT FUEL TYPES AND ACTIVATOR CONCENTRATIONS ON PARTICLE MORPHOLOGY AND LUMINESCENCE PROPERTIES**

Radenka KRSMANOVIĆ, Željka ANTIĆ, Barbora BÁRTOVÁ, Miodrag MITRIĆ and Miroslav D. DRAMIĆANIN

**P1-77**

**THE STRUCTURING OF SEALING COMPOSITE MATERIALS BASED ON ETHYLENE DIENE TERPOLYMER**

Jelena M. Milić, Ayse Aroguz , Milena Marinović-Cincović, Jaroslava Budinski-Simendić, Vera Lazić, Jasna Gvozdenović

**P1-78**

**EFFECT OF NB AND CR ON IRON AND NICKEL BASED SUPERALLOYS MICROSTRUCTURAL CHANGES**

Andjelka Milosavljevic, Sanja Petronic, Zoran Radakovic, Kata Kovacevic and Zeljko Radovanovic

**P1-79**

**NANO-SCALE PHOTONIC STRUCTURES**

C. Armellini, A. Chiappini, A. Chiasera, M. Ferrari, F. Prudenzano, C. Duverger Arfuso, P. Feron, G. Speranza, G. Nunzi Conti, S. Pelli, G.C. Righini