

**International Conference on Physics of Optical Materials and Devices ICOM-2009
Conference Program**

Wednesday 26.08.2009			
17:00 – 19:00			Registration
20:30-21:15			Welcome Party
Thursday 27.08.2009			
8:00 – 8:45			Registration
9:00 – 9:15			OPENING CEREMONY
SESSION 1 – 9:15 - 10:45 “Physical Processes” Chairpersons : M. Franko, L. Bausa			
9:15 – 9:45	I1	Invited Oral	I-160 Chieu D. Tran NEAR-INFARED MULTISPECTRAL IMAGING AS TECHNIQUE IN NANOMATERIALS: SYNTHESIS AND CHARACTERIZATION OF SOL-GEL GLASS ENCAPSULATED FULLERENES
9:45 – 10:15	I2	Invited Oral	I-062 M. W. Sigrist PHOTOACOUSTIC SPECTROSCOPY IN TRACE GAS SENSING
10:15 – 10:30	1	Regular Oral	O-077 Andriy Say, Oksana Mys, Irina Martynyuk-Lototska, Alexandr Grabar, Yulian Vysochanskii and <u>Rostyslav Vlokh</u> Sn ₂ P ₂ S ₆ CRYSTALS – NEW HIGH EFFICIENT ACOUSTO- AND MAGNETOOPTIC MATERIALS
10:30 – 10:45	2	Regular Oral	O-089 <u>S. Jobic</u> X-CHROMIC MATERIALS WITH POTENTIAL APPLICATIONS AS FRIENDLY INDICATORS FOR TEMPERATURE, PRESSURE AND UV DOSE
SESSION 2 – 11:15 - 13:00 “Solar Cells and Photons management ” Chairpersons : S. Speiser, K. Homewood			
11:15 – 11:45	I3	Invited Oral	I-071 B. Moine IMPROVING SOLAR CELL EFFICIENCY: A CHALLENGE FOR THE TWENTY-FIRST CENTURY
11:45 – 12:15	I4	Invited Oral	I-203 G. Bratina ELECTRONIC PROPERTIES AND MORPHOLOGY OF INTERFACES AND LAYERS IN ORGANIC SOLAR CELLS

12:15 – 12:30	3	Regular oral	O-029 <u>Atanas Tanuševski</u> PROPERTIES OF SnS THIN FILMS OBTAINED BY ELECTROCHEMICAL DEPOSITION AND THEIR APPLICATION IN SOLAR CELLS
12:30-12:45	4	Regular oral	O-049 <u>Vaidotas Kažukauskas</u> , Andrius Arlauskas, Mindaugas Pranaitis, Rudolf Lessmann, Moritz Riede, Karl Leo CHARGE CARRIER MOBILITY AND AGEING OF ZnPc/C60 SOLAR CELLS
12:45-13:00	5	Regular oral	O-162 <u>P. J. Dereń</u> , A. Watras, K. Lemański, A. Gagor, W. Stręk, M. Zawadzki Cr ³⁺ DOPED NANO-PHOSPHOR FOR SOLAR CELL CONCENTRATOR
LUNCH BREAK			
SESSION 3 – 15:30 - 17:00 “Optical Processes and Mechanisms –I” Chairpersons : R. Mahiou, M. Ferrari			
15:30 – 16:00	15	Invited Oral	I-056 S. Klimin POSSIBILITIES OFFERED BY HIGH-RESOLUTION FOURIER SPECTROSCOPY IN CHARACTERIZING OPTICAL MATERIALS: EXAMPLE OF LiYF ₄ - Tm ³⁺
16:00 – 16:15	6	Regular oral	O-028 <u>Peter A. Tanner</u> , Wang Jiwei VACUUM MULTIPHOTON UPCONVERSION FOR LANTHANIDE OXIDES
16:15 – 16:30	7	Regular oral	O-034 <u>K. N. Boldyrev</u> , M. N. Popova, L. N. Bezmaternykh, E. Cavalli, M. Bettinelli NONEQUIVALENT Yb ³⁺ CENTERS IN R _x Yb _{1-x} Al ₃ (BO ₃) ₄ , R=Y, Tm, Lu, Yb SINGLE CRYSTALS
16:30 – 16:45	8	Regular oral	O-169 <u>A. Lecointre</u> , A. Bessière, B. Viana, D. Gourier SILICATE BASED LUMINESCENT MATERIALS FOR OPTICAL IMAGING
16:45 – 17:00	9	Regular oral	O-197 <u>Arkadiusz Mandowski</u> , Jacek Orzechowski ON THE MECHANISM OF GENERATION OF VERY HIGH FREQUENCY FACTORS IN THE SLT MODEL
SESSION 4 – 17:15 - 19:00 “Bulk Materials and Ceramics” Chairpersons : Ph. Boutinaud, F. Diaz			
17:15 – 17:45	16	Invited Oral	I-158 W. Streck OPTICAL PROPERTIES OF Cr ³⁺ ION IN TRANSPARENT NANOCERAMICS
17:45 – 18:00	10	Regular oral	O-014 <u>I. Kamenskikh</u> , M. Chugunova, S.T. Fredrich-Thornton, V. Mikhailin, C. Pedrini, K. Petermann, A. Petrosyan, A. Vasilev, U. Wolters INTRINSIC EXCITATIONS IN THE PERFORMANCE OF OPTICAL FUNCTIONAL MATERIALS BASED ON YAG
18:00 – 18:15	11	Regular oral	O-047 <u>S. M. Kaczmarek</u> , H. Fuks, L. Macalik, B. Macalik, J. Hanuza EPR AND VIBRATIONAL STUDIES OF SOME TUGSTATES AND MOLYBDATES SINGLE CRYSTALS
18:15 – 18:30	12	Regular oral	O-073 R.A.P. Oliveira, L.L. Lima, <u>S.O. Souza</u> , LUMINESCENT ANALYSIS OF LILAC ALPHA SPODUMENE

18:30 – 18:45	13	Regular oral	O-076 <u>Toshimitsu Obonai</u> , Chiharu Hidaka, Shigetaka Nomura, Takeo Takizawa ESR STUDY OF Mn ²⁺ RED EMISSION IN CaGa ₂ S ₄ CODOPED WITH A REE
18:45 – 19:00	14	Regular oral	O-036 <u>M.G. Brik</u> , I. Sildos, V. Kiisk AB-INITIO CALCULATIONS OF THE OPTICAL PROPERTIES OF PURE AND Sm ³⁺ -DOPED ANATASE AND RUTILE TiO ₂

20:30– 21:30

POSTER SESSION - I

Friday 28.08.2009

SESSION 5 – 9:00 - 10:45 “Biophotonics” Chairpersons : F. Pellé, A. Bouhelier

9:00 – 9:30	I7	Invited Oral	I-156 C. Andraud NOVEL PROBES FOR BIPHOTONIC BIO-IMAGING
9:30 – 10:00	I8	Invited Oral	I-045 F. Enrichi INVESTIGATION OF RARE-EARTH-DOPED AND DYE-DOPED LUMINESCENT SILICA NANOPARTICLES FOR DNA-MICROARRAY LABELING
10:00 – 10:15	15	Regular oral	O-025 <u>Russell Kliese</u> , Yah Leng Lim, Thierry Bosch and Aleksandar D. Rakić IN VIVO MICROVASCULAR BLOOD PERFUSION MAPPING USING THE SELF-MIXING EFFECT IN A PROTON-IMPLANTED VCSEL
10:15 – 10:30	16	Regular oral	O-175 <u>Christin David</u> , Marten Richter, Andreas Knorr, Inez Weidinger, Peter Hildebrandt PLASMONIC OPTICAL ENHANCEMENT IN HYBRID DEVICES FOR BIO SENSORS
10:30 – 10:45		Special	In memoriam Olivier Guillot-Noel and Yvan Lorgeré

SESSION 6 – 11:15 - 13:00 Workshop “Waveguides and thin films” Chairpersons P. Dorenbos, Ph. Ahrenkiel

11:15 – 11:45	I9	Invited Oral	I-182 M. Ferrari RARE-EARTH-ACTIVATED GLASS CERAMIC WAVEGUIDES
11:45 – 12:15	I10	Invited Oral	I-150 K. P. Homewood NANO-ENGINEERED SILICON LIGHT EMITTING DIODES AND OPTICALLY ACTIVE WAVEGUIDES
12:15 – 12:30	17	Regular oral	O-002 Western Bolaños, Joan J. Carvajal, Xavier Mateos, Maria Cinta Pujol, Nicky Thilmann, Valdas Pasiskevicius, Magdalena Aguiló, <u>Francesc Díaz</u> EPITAXIAL LAYERS OF KY _{1-x-y} Gd _x Lu _y (WO ₄) ₂ DOPED WITH Er ³⁺ AND Tm ³⁺ FOR PLANAR WAVEGUIDE LASERS

12:30 – 12:45	18	Regular oral	O-006 <u>J. Cugat</u> , R. Solé, M.C. Pujol, J.J. Carvajal, X. Mateos, F. Díaz and M. Aguiló WAVEGUIDING DEMONSTRATION ON Yb:Nb:RbTiOPO ₄ / RbTiOPO ₄ LAYERS GROWN BY LIQUID PHASE EPITAXY
12:45 – 13:00	19	Regular oral	O-070 <u>M. Milosavljević</u> , L. Wong, M.A. Lourenço, R. Valizadeh, J.S. Colligon, K.P. Homewood CORRELATION OF STRUCTURAL AND OPTICAL PROPERTIES OF SPUTTERED FeSi ₂ THIN FILMS
13:00 – 13:15	ICOM2009 Conference Photo		
LUNCH BREAK			
SESSION 7 – 15:30 - 17:00 “Laser applications –I” Chairpersons : F. Bretenaker, M. Sigrist			
15:30– 16:00	I11	Invited Oral	I-159 L. Bausa NON LINEAR PROCESSES IN STRUCTURED SOLID STATE LASERS
16:00 – 16:15	20	Regular oral	O-018 <u>G.Raj Kumar</u> , J.J.Carvajal , Mateos, M. Aguiló, F. Díaz, J. R. Vázquez de Aldana, C. Méndez, P. Moreno, L. Roso, J. Ferré-Borrull, J. Pallarès, L.F. Marsal, R. Macovez, J. Martorell FABRICATION AND CHARACTERIZATION OF ONE DIMENSIONAL DIFFRACTION GRATINGS ON THE NONLINEAR OPTICAL CRYSTAL RbTiOPO ₄ BY ULTRA FAST LASER ABLATION
16:15 – 16:30	21	Regular oral	O-179 V.L. Derbov, <u>N.I. Teper</u> APPLICATION OF Ti:SAPPHIRE LASER FOR EXCITATION OF LOCALIZED WAVE PACKETS
16:30 – 16:45	22	Regular oral	O-067 <u>Lyudmila E. Li</u> , Lyudmila N. Demyanets CRYSTALLOGRAPHIC ORIENTATION OF SUBSTRATE AS THE KEY POINT FOR ZnO@Si, ZnO@SiO ₂ MORPHOLOGY AND LASING CHARACTERISTICS
16:45 – 17:00	23	Regular oral	O-214 <u>M. Kildemo</u> , I. S. Nerbøl, S. Leroy, E. Søndergård CHARACTERIZATION OF NORMAL AND INCLINED GaSb NANOCONES BY MUELLER MATRIX ELLIPSOMETRY
SESSION 8 – 17:15 - 19:00 Workshop “Nanomaterials and Polymers ” Chairpersons : F. Enrichi and J. Nedeljković,			
17:15 – 17:45	I12	Invited Oral	I-059 Beatriz Julian-Lopez DESIGN OF LANTHANIDE-DOPED NANOMATERIALS FOR APPLICATION IN OPTICS AND CERAMICS
17:45 – 18:00	24	Regular oral	O-012 D. Mansuroglu, F. G. Ince, <u>H. Goktas</u> , S. Bilikmen, R. Aydin THE MORPHOLOGY AND MOLECULAR STRUCTURE OF POLYFLUORENE THIN FILMS SYNTHESIZED BY A NOVEL PLASMA POLYMERIZATION METHOD
18:00 – 18:15	25	Regular oral	O-032 Marta M. D. Ramos, <u>Hélder M. C. Barbosa</u> and Helena M. G. Correia MULTISCALE MODELLING OF EXCITON DYNAMICS IN POLYMERIC SYSTEMS CONCERNING THE EFFECT

			OF POLYMER MOLECULAR PROPERTIES AND MORFOLOGY
18:15 – 18:30	26	Regular oral	O-039 Marta M. D. Ramos, <u>Helena M. G. Correia</u> and Hélder M. C. Barbosa THEORETICAL STUDY OF THE INFLUENCE OF DEFECTS ON EXCITON FORMATION IN SEMICONDUCTING POLYMERS
18:30 – 18:45	27	Regular oral	O-068 T.E. Motaung and <u>A.S. Luyt</u> MORPHOLOGY AND PROPERTIES OF SOL-GEL PREPARED LDPE-SILICA NANOCOMPOSITES
18:45 – 19:00	28	Regular oral	O-148 <u>V. Djoković</u> , R. Krsmanović, D. K. Božanić, P. Sreekumari Nair, T. Radhakrishnan CONFINED GROWTH OF METAL AND SEMICONDUCTOR NANOPARTICLES WITHIN BIOPOLYMER MATRICES

20:30– 21:30

POSTER SESSION - II

Saturday 29.08.2009

SESSION 9 – 9:00 – 10:45 “Optical Processes and Mechanisms –II” Chairpersons : T. Basiev, E. Antic			
9:00 - 9:30	I13	Invited Oral	I-035 Ph. Boutinaud INTERVALENCE CHARGE TRANSFER IN Pr ³⁺ AND Tb ³⁺ -DOPED DOUBLE TUNGSTATE CRYSTALS KRE(WO ₄) ₂ (RE = Y, Gd, Yb, Lu)
9:30 –10:00	I14	Invited Oral	I-044 P. Dorenbos LANTHANIDE LEVEL LOCATION IN TRANSITION METAL COMPLEX COMPOUNDS
10:00 – 10:15	29	Regular oral	O-022 <u>Tomohiko Nakajima</u> , Masahiko Isobe, Tetsuo Tsuchiya, Yutaka Ueda, Toshiya Kumagai QUANTUM EFFICIENCY OF BROAD-BAND EMISSION IN VANADIUM OXIDES
10:15 - 10:30	30	Regular oral	O-033 <u>T.T. Basiev</u> , N.A. Glushkov FORSTER-LIKE NONEXPONENTIAL ENERGY TRANSFER DECAY IN DOPED NANOPARTICLES
10:30 – 10:45	31	Regular oral	O-075 <u>D. Tainoff</u> , B. Masenelli, P. Melinon, A. Belsky, G. Ledoux, D. Amans, C. Dujardin ORIGIN OF THE A BAND IN ZnO: A VUV APPROACH

SESSION 10 – 11:15 - 13:00 Workshop “Functional Materials ” Chairpersons : M. Yoshimura, C. Tran

11:15 – 11:45	I15	Invited Oral	I-008 A. B. Djurišić ZnO NANOMATERIALS: OPTICAL PROPERTIES AND DEVICE APPLICATIONS
---------------	-----	--------------	---

11:45 – 12:15	I16	Invited Oral	I-146 S. Ph. Ahrenkiel CRYSTALLIZATION MEASUREMENTS ON TITANIA FILMS
12:15 – 12:30	32	Regular oral	O-136 Ivana A. Janković, Zoran V. Šaponjić, Mirjana I. Čomor, <u>Jovan M. Nedeljković</u> SURFACE MODIFICATION OF COLLOIDAL TiO ₂ NANOPARTICLES WITH BIDENTATE BENZENE DERIVATIVES
12:30 – 12:45	33	Regular oral	O-200 <u>P. Psuja</u> , W. Strek SELECTED NANOMATERIALS FOR FIELD EMISSION DISPLAY APPLICATIONS
12:45 – 13:00	34	Regular oral	O-157 <u>J.V.García-Santizo</u> , P.Molina, M.O Ramírez, R.Pazik, W.Strek, P.J. Dereñ, L.E. Bausá MULTICOLOUR EMISSION PATTERNS BASED ON THE MICROMETRIC SPATIAL CONTROL OF RE ³⁺ IONS IN LiNbO ₃
LUNCH BREAK			
SESSION 11 – 15:30 - 17:30 “Laser Applications –II and functional materials- II ” Chairpersons : B. Moine, G. Bratina			
15:30 – 16:00	I17	Invited Oral	I-147 S. Speiser TOWARDS MOLECULAR SCALE PHOTOPHYSICAL LOGIC CIRCUITS
16:00 – 16:30	I18	Invited Oral	I-178 A. Bouhelier OPTICAL NANO-ANTENNAS: CHARACTERIZATION AND CONTROL
16:30 – 16:45	35	Regular oral	O-165 Aurel Diacon, Edina Rusen, Cristian Boscornea, Catalin Zaharia, Corneliu Cincu, <u>Laurentiu Fara</u> ² , Mihai Razvan Mitroi, Constantin Rosu, Dragos Comaneci NEW MATERIALS FOR HYBRID DYE SENSITIZED SOLAR CELLS
16:45 – 17:00	36	Regular oral	O-185 <u>Hristina Spasevska</u> , Cosimo Ancora, Franco Corticelli, Giampiero Ruani OPTIMIZATION OF STRUCTURAL PROPERTIES OF TiO ₂ COMPACT LAYER FOR 3D NANOSTRUCTURED TiO ₂ BASED SOLID STATE DYE SOLAR CELLS
17:00 – 17:15	37	Regular oral	O-196 S. Ivanova, C. Andriamahamanana, F. Pellé and J. F. Guillemole PHOTOCURRENT GENERATED BY UPCONVERSION EMISSION EXCITED BELOW THE c-Si ENERGY GAP OF A SOLAR CELL
17:15 – 17:30	38	Regular oral	O-198 <u>Ekaterina Kunitsyna</u> , Igor Andreev, Viktor Sherstnev, Tatiana L'vova, Maya Mikhailova, Yury Yakovlev, Muhitdin Ahmetoglu (Afrailov), Gokay Kaynak, Orhan Gurler, Kemal Akay, Ahmet Peksoz NARROW GAP III-V MATERIALS FOR IR PHOTODIODES AND TPV CELLS
20:00	CONFERENCE DINNER		

Sunday 30.08.2009

SESSION 12 – 9:00 – 10:30 Workshop “Nanomaterials preparation and Characterisation I” Chairpersons : W. Streck, P. Deren

9:00 – 9:15	39	Regular oral	O-043 <u>Fernando Cussó</u> , Marta Quintanilla, Eugenio Cantelar, Juan A. Sanz-García, Marina Villegas, Amador C. Caballero UPCONVERTING $\text{LiNbO}_3:\text{Er/Yb}$ NANOPARTICLES
9:15 – 9:30	40	Regular oral	O-019 <u>Andreia G. Macedo</u> , Rute A. S. Ferreira, João Rocha, Luís Dias Carlos Yb/Er CO-DOPED GADOLINIUM OXIDE UPCONVERSION MULTI WAVELENGTH FLUORESCENT NANOCRYSTALS
9:30 – 9:45	41	Regular oral	O-207 <u>Željka Antić</u> , Radenka Krsmanović, Miodrag Mitrić, Barbora Bártoová and Miroslav D. Dramićanin POLYMER COMPLEX SOLUTION SYNTHESIS OF $(\text{Y}_x\text{Lu}_{1-x})_2\text{O}_3:\text{Eu}^{3+}$ NANOPOWDERS
9:45 – 10:00	42	Regular oral	O-066 F. Lima, <u>M. V. Lalic</u> STRUCTURAL, ELECTRONIC AND OPTICAL ASPECTS OF THE CHROMIUM DOPING OF THE BGO: AB-INITIO STUDY
10:00 – 10:15	43	Regular oral	O-161 You-Lee Lee, Youn-Shil Kim, Jung-Hyun Choi, <u>Ki-Soo Lim</u> , Ik-Bu Sohn NANOPARTICLE FORMATION AND ENRGY TRANSFER IN CODOPED GLASS
10:15 – 10:30	44	Regular oral	O-037 M. Méndez, M. Aguiló, F. Díaz, <u>J.J. Carvajal</u> , A. Guiguere, D. Drouin, E. Martínez-Ferrero, P. Salagre, Y. Cesteros, R. Palacios, J. Pallarès, L.F. Marsal NEW APPROACHES FOR THE SYNTHESIS OF $\text{Eu}^{3+}:\text{La}_2\text{O}_3$ NANOPARTICLES AND THEIR SPECTROSCOPIC CHARACTERIZATION

SESSION 13 – 11:00 – 12:45 Workshop “Nanomaterials preparation and Characterisation II” Chairpersons : C. Andraud, S. Klimin

11:00 – 11:30	I19	Invited Oral	I-020 M. Yoshimura SOFT PROCESSING FOR CERAMICS: SINGLE-STEP FABRICATION OF NANO-STRUCTURED OXIDE CERAMICS (PARTICLES, FILMS, INTEGRATED LAYERS AND PATTERNS) FROM SOLUTION WITHOUT FIRING
11:30 – 11:45	45	Regular oral	O-005 <u>M. M. Chugunova</u> , I.A. Kamenskikh, O.A. Shalygina, <u>V.Yu. Timoshenko</u> , A.N. Vasil'ev, D.M. Zhigunov OPTICAL AND LUMINESCENCE PROPERTIES OF Si NANOCRYSTALS ENSEMBLES IN SILICON DIOXIDE STUDIED IN EXTENDED SPECTRAL RANGE
11:45 – 12:00	46	Regular oral	O-009 <u>S. Fernandez de Avila</u> , J. C. Ferrer, J.L. Alonso, A. Salinas-Castillo, R. Mallavia TAILORING OPTICAL PROPERTIES OF HYBRID MATERIALS FOR OPTOELECTRONIC APPLICATIONS
12:00 – 12:15	47	Regular oral	O-040 Sabina Ramović, <u>Jelena Radovanović</u> , Vitomir Milanović METAMATERIALS BASED ON QUANTUM CASCADE LASER STRUCTURES IN STRONG MAGNETIC FIELD

12:15 – 12:30	48	Regular oral	O-131 <u>Oana Ștefănescu</u> , Corneliu Davidescu, Paul Barvinschi THE EFFECT OF TEMPERATURE AND Fe ³⁺ CONCENTRATION OF γ -Fe ₂ O ₃ NANOPARTICLES EMBEDDED IN SILICA MATRIX
12:30 – 12:45	49	Regular oral	O-031 <u>Yermolayeva Yu.V.</u> , Korshikova T.I., Vovk O.M., Tolmachev A.V. PREPARATION OF THE NEW SPHERICAL NANO-SIZED X-RAY PHOSPHORS ON THE BASIS OF Lu ₂ O ₃ :Eu ³⁺
13:00		End	ICOM 2009 AWARD and CLOSING CEREMONY