



E-MRS 2005 Spring Meeting
May 31 – June 3, 2005

SYMPOSIUM J

Advances in Laser and Lamp Processing of Functional Materials

Symposium Organizers :

Valentin Craciun, University of Florida, USA
and NILPRP, Bucharest, Romania

Thomas K. M. Lippert, Paul Scherrer Institut, Switzerland

Jacques Perrière, Université Paris VI, Paris, France

Juergen Reif, Brandenburgische Technische Universität
and IHP/BTU JointLab, Cottbus, Germany

Ioanna Zergioti, National Technical University of Athens, Greece

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Applied Surface Science

E-MRS 2005 Spring Meeting

SYMPOSIUM J

Tuesday, May 31, 2005
Mardi 31 mai 2005

Morning
Matin

8:50 **OPENING REMARKS**
Symposium organizers

Session I : Nanoparticle systems

Session chair : **G. Shafeev**, General Physics Institute, Moscow, Russian Federation

J-I.01 9:00 -Invited- **NANOPHOTONIC FUNCTIONS OF HYBRID NANOPARTICLE SYSTEMS**
Jochen Feldmann, Photonics and Optoelectronics Group, Physics Department and CeNS Ludwig-Maximilians-Universität München, Germany

J-I.02 9:30 **SPECTRAL, SPATIAL AND TEMPORAL CHARACTERISTICS OF NANOPARTICLES PRODUCED BY FEMTOSECOND LASER PULSES**
D. Scuderi(a), R. Benzerga(b), C. Boulmer Leborgne(b), O. Albert(a), B. Reynier(a), J. Perrière(c) and J. Etchepare(a), (a)LOA, ENSTA, CNRS, Ecole polytechnique, 91761 Palaiseau, France, (b)GREMI, CNRS Université d'Orléans, 45067 Orléans, France; (c)GPS, CNRS, Universités Paris 6 et 7, Campus Boucicaut, 75015 Paris, France

J-I.03 9:45 **INFLUENCE OF AMBIENT GAS IONISATION ON THE DEPOSITION OF CLUSTERS FORMED IN AN ABLATION PLUME**
A. Bailini and P.M. Ossi, Dip. Ingegneria Nucleare and Centre of Excellence "Nano Engineered Materials and Surfaces (NEMAS)", Politecnico di Milano, via Ponzio 34-3, 20133 Milano, Italy

J-I.04 10:00 **MEASUREMENTS OF NANOPARTICLE SIZE DISTRIBUTION PRODUCED BY LASER ABLATION OF TUNGSTEN AND BORON-CARBIDE IN N₂ AMBIENT**
M. Bereznaï, Department of Optics and Quantum Electronics, University of Szeged, Dóm tér 9, 6720 Szeged, Hungary, P. Heszler, Department of Engineering Sciences, The Ångström Laboratory, PO Box 534, 75121 Uppsala, Sweden, Z. Toth, Research Group on Laser Physics of the Hungarian Academy of Sciences, University of Szeged, Dóm tér 9, 6720 Szeged, Hungary and M. Boman, Department of Materials Chemistry, The Ångström Laboratory, PO Box 538, 75121 Uppsala, Sweden

10:15 **BREAK**

Session II : Laser synthesis of nanoparticles and nanostructures

Session chair : **J. Feldmann**, Ludwig-Maximilians-Universität, München, Germany

J-II.01 10:45 -Invited- **LASER INDUCED SYNTHESIS OF NANOPARTICLES IN LIQUIDS**
P.V. Kazakevich, A.V. Simakin, V.V. Voronov, and **G.A. Shafeev**, Wave Research Center, General Physics Institute of the Russian Academy of Sciences, 38, Vavilov street, 117942, Moscow, Russian Federation

J-II.02 11:15 **FABRICATION OF ZINC BASED NANOCOMPOSITES AND NANOPARTICLES USING PULSED LASER ABLATION IN LIQUID**
Takeshi Sasaki, Hiroyuki Usui, Yoshiki Shimizu and Naoto Koshizaki, Nanoarchitectonics Research Center, National Institute of Advanced Industrial Science and Technology (AIST), Central 5, 1-1-1 Higashi, Tsukuba, Ibaraki 305-8565, Japan

J-II.03 11:30 **3D MICRO- AND NANOSTRUCTURING OF PHOTSENSITIVE MATERIALS BY TWO-PHOTON ILLUMINATION TECHNIQUE**
A. Ovsianikov, S. Passinger, C. Reinhardt, and B.N. Chichkov Laser Zentrum Hannover, Hollerithallee 8, 30419 Hannover, Germany P. Masset and R. Houbertz Fraunhofer-ISC, Neunerplatz 2, 97082 Würzburg, Germany

J-II.04 11:45 **MICROSTRUCTURAL INVESTIGATION AND HEAT TREATMENT OF NANOCRYSTALLINE LASER-DEPOSITED CARBON FIBERS**
Christian Fauteux, Rémi Longtin, Joseph Pegna. Freeform Fabrication Laboratories, Department of Mechanical Engineering, École Polytechnique de Montreal (J.A.B Pavillion), Box 6079, Station A, Montreal, Canada, PQ, H3C3A7. Mats Boman, Department of Materials Chemistry, The Ångström Laboratory, Box 538, 751 21 Uppsala, Sweden

12:00 **LUNCH**

Tuesday, May 31, 2005
Mardi 31 mai 2005

Afternoon
Après-midi

Session III : Laser processing of materials

Session chair : R. Sanders Philips Applied Technologies, The Netherlands

- J-III.01** 13:45 -Invited- LASER-INDUCED BACKSIDE WET ETCHING: LASER ABLATION OF DYE SOLUTIONS FOR SURFACE MICRO-STRUCTURING OF SILICA GLASSES
H. Niino, Y. Kawaguchi, T. Sato, A. Narazaki, X. Ding, T. Gumpenberger and R. Kurosaki
Photonics Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba Central 5, 1-1-1 Higashi, Tsukuba, Ibaraki 305-8565, Japan
- J-III.02** 14:15 TIME-RESOLVED REFLECTIVITY INVESTIGATIONS OF THE IRRADIATED SOLID-LIQUID INTERFACE DURING LASER INDUCED BACKSIDE ETCHING
R. Boehme, T. Otto, K. Zimmer* Leibniz-Institut fuer Oberflaechenmodifizierung e.V.
Permoserstr 15, 04318 Leipzig, Germany
- J-III.03** 14:30 ANNEALING TIME EFFECT ON BI-2223 PHASE DEVELOPMENT IN LFZ AND EALFZ GROWN SUPERCONDUCTING FIBRES
M.F. Carrasco, F.M. Costa and V.S. Amaral, Physics Department, University of Aveiro, 3810-193 Aveiro, Portugal, R.F. Silva and J.M. Vieira, Glass and Ceramic Engineering Department, CICECO, University of Aveiro, 3810-193 Aveiro, Portugal
- J-III.04** 14:45 IRON- CARBON BASED NANOPARTICLES SYNTHESIZED BY LASER PYROLYSIS OF ETHYLENE AND IRON PENTACARBONYL GAS MIXTURES
F. Dumitrache, I. Morjan, R. Alexandrescu, I. Voicu, I. Sandu, C. Fleaca, E. Popovici
National Institute for Lasers, Plasma and Radiation Physics, Laser Department, P.O. Box MG-36, 409 Atomistilor St, R-77125 Bucharest, Romania G. Prodan, V. Ciupina
c"Ovidius" University of Constanta, 124 Mamaia Bd., P.O.B. 8600, Constanta, Romania B. David, O. Schneeweiss Institute of Physics of Materials, Brno, Czech Republic
- J-III.05** 15:00 SURFACE FUNCTIONALISATION OF POLYPYRROLE FILM USING UV LIGHT RADICAL ACTIVATION
P. Lisboa, D. Gilliland, G. Ceccone, Andrea Valsesia, F. Rossi, European Commission, Institute for Health and Consumer Protection, TP-203, BMS, Via E. Fermi, 21020 Ispra (Va), Italy
- 15:15 **BREAK**

Session IV : Laser processing of materials: Industrial applications

Session chair : H. Niino, AIST, Tsukuba, Japan

- J-IV.01** 15:30 -Invited- LASER MATERIALS PROCESSING AT PHILIPS APPLIED TECHNOLOGIES
Marijn van Os, **René Sanders**, Willem Hoving, Philips Applied Technologies, Process Technology - Thermal Processing, Building SAQ-p758, PO Box 218, 5600 MD Eindhoven, The Netherlands
- J-IV.02** 16:00 EXPLOSIVE CRYSTALLIZATION OF A LONG PULSE LASER THERMAL PROCESS: OPTIMIZATION OF HIGHLY DOPED JUNCTION FORMATION OF CMOS DEVICES
J. Venturini, M. Hernandez, K. Huet SOPRA 26, rue Pierre Joigneaux 92270 Bois-Colombes France, C. Laviron CEA-G / LETI, 17, avenue des Martyrs, 38054 Grenoble Cedex 9, France, H. Akhouayri Institut Fresnel, D.U. St Jérôme, 13397 Marseille cedex 20, France, T. Sarnet, J. Boulmer IEF, Bât. 220, Université Paris-Sud, 91405 Orsay Cedex, France
- J-IV.03** 16:15 REPORT ABOUT ADVANCED EXCIMER BASED CRYSTALLIZATION SYSTEMS FOR PRODUCTION SOLUTIONS
Frank Simon, Lambda Physik
- J-IV.04** 16:30 DIODE LASER SOLDERING OF LEADFREE FILLER MATERIALS USED IN ELECTRONIC PACKAGING STRUCTURES
C. Chaminade, E. Fogarassy, D. Boisselier, IREPA LASER, Parc d'innovation, Pôle API, 67400 Illkirch, France
- J-IV.05** 16:45 SYSTEM DESIGN QUESTIONS OF PLD SYSTEMS FOR DIFFERENT APPLICATIONS
Wolfgang Stein, SURFACE, Hückelhoven, Germany
- 17:00-19:00 **POSTER SESSION I**

POSTER SESSION I
Tuesday, May 31, 2005
17:00 – 19:00

Session chairs : Juergen Reif, Petar Atanasov, Wolfgang. Stein and Eric Fogarassy

- J/P1.01** PULSED LASER DEPOSITION OF NANOSTRUCTURED TUNGSTEN AND TUNGSTEN OXIDE FILMS
F. Di Fonzo, A. Baserga, V. Russo, D. Cattaneo, C.S. Casari, A. Li Bassi, P.M. Ossi, C.E. Bottani, NEMAS-Center for NanoEngineered Materials and Surfaces Dipartimento di Ingegneria Nucleare, Politecnico di Milano Via Ponzio 34/3 I-20133 Milano, Italy
- J/P1.02** FABRICATION OF METALLIC COLLOIDS USING HIGH-POWER CU-VAPOUR LASER ABLATION
Milton Sergio Fernandes de Lima, Fabrício Prieto Ladário and Rudimar Riva, Institute for Advanced Studies (IEAv), Centre for Aerospace Technology (CTA), São José dos Campos (SP) - Brazil
- J/P1.03** LASER MICROENGINEERING OF ZnCdHgTe THIN FILMS FOR NANOELECTRONICS
H. Khlyap, University of Technology, Physics Department, E. Schroedinger Str. 56, 67663, Kaiserslautern, Germany, and State Pedagogical University, 24 Franko str., UA-82100, Ukraine, M. Andrukiv, State Pedagogical University, 24 Franko str., UA-82100, Ukraine, A. Andrukiv, Comatsu Silicon Corporation, Oregon, USA, P. Shkumbatiuk, State Pedagogical University, 24 Franko str., UA-82100, Ukraine, P. Sydorhuk, State Pedagogical University, 24 Franko str., UA-82100, Ukraine
- J/P1.04** MECHANISM OF THE FORMATION OF METAL NANOCLUSTERS DURING PULSED LASER DEPOSITION
M.A. Pushkin, V.V. Lebid'ko, V.N. Tronin, V.I. Troyan, Moscow Engineering Physics Institute, 31 Kashirskoe chausse, 115409 Moscow, Russia, and I. Smurov, ENISE-DIPI, 58 rue Jean Parot, 42023 St-Etienne, France
- J/P1.05** Au CLUSTER GROWTH ON ZnO THIN FILMS BY PULSED LASER DEPOSITION
E. György(a,b), J. Santiso(a), A. Giannoudakos(c), M. Kompitsas(c), I.N. Mihailescu(b), C. Ducu(d), (a)Consejo Superior de Investigaciones Científicas, Instituto de Ciencia de Materiales, Campus de la UAB, 08193 Bellaterra, Spain, (b)Institute of Atomic Physics, P.O. Box MG 36, 77125 Bucharest, Romania, (c)National Hellenic Research Foundation, Theoretical and Physical Chemistry Institute, Vasileos Konstantinou Ave. 48, 11635 Athens, Greece, (d)University of Pitesti, Targul din Vale 1, 110040 Pitesti, Romania
- J/P1.06** SYNTHESIS OF NANO-CLUSTERS BY NANOSECOND LASER: DSMC MODELLING
T. E. Itina, M. Sentis, Laboratoire Lasers, Plasmas et Procédés Photoniques (LP3 UMR 6182 CNRS), Pôle Scientifique et Technologique de Luminy, 163 av. de Luminy, Case 917, 13288 Marseille, France and W. Marine, Centre de Recherche en Matière Condensée et Nanosciences (CRMCN UPR 7251 CNRS) Pôle Scientifique et Technologique de Luminy, 163 av. de Luminy, Case 913, 13288 Marseille, France
- J/P1.07** SYNTHESIS OF NANOSIZED PARTICLES DURING LASER ABLATION OF GOLD IN WATER
N.V. Tarasenko, A.V. Butsen, E.A. Nevar, Institute of Molecular and Atomic Physics, National Academy of Sciences of Belarus, 70 Scaryna Ave., 220072 Minsk, Belarus
- J/P1.08** PREPARATION OF IRON-PRATINUM ALLOY NANO-PARTICLES BY PULSED LASER ABLATION IN LIQUID
Yoshie Ishikawa, Takeshi Sasaki, and Naoto Koshizaki, Nanoarchitectonics Research Center, National Institute of Advanced Industrial Science and Technology
- J/P1.09** OXIDATION PROPERTIES OF Si NANOPARTICLES PRODUCED BY LASER-PYROLYSIS
V.Bello (INFN, Dipartimento di Fisica, Università di Padova), G.Mattei (INFN, Dipartimento di Fisica, Università di Padova), M.Mattiazzi (INFN, Dipartimento di Fisica, Università di Padova), E.Trave (INFN, Dipartimento di Fisica, Università di Padova), E.Borsella (C.R. ENEA di Frascati), M.Carpanese (C.R. ENEA di Frascati), F. Fabbri (C.R. ENEA di Frascati), M. Falconieri (C.R. ENEA di Casaccia)
- J/P1.10** PULSED LASER DEPOSITION OF NANOSTRUCTURED METAL THIN FILMS
T. Donnelly, V.Komarala, B. Doggett, Y. P. Rakovich, J.G. Lunney, Physics Department, Trinity College Dublin, Dublin 2, Ireland
- J/P1.11** PULSED LASER DEPOSITION AND OPTICAL RESPONSE OF VOx:Al2O3 NANOCOMPOSITE THIN FILMS
S. Nuñez-Sanchez, R. Serna, M. Jiménez de Castro, Instituto de Optica, Serrano 121, 28006 Madrid, Spain, J. García López, Centro Nacional de Aceleradores, Av. Thomas A. Edison, Isla de la Cartuja, 41092 Sevilla, Spain
- J/P1.12** LASER SYNTHESIS, NANOSTRUCTURING AND MANIPULATION OF PHASE COMPOSITION OF SUPERFICIALLY-BARRIER SYSTEMS AND HETEROJUNCTIONS ON THE BASIS OF MONOCRYSTALS A2B5, A3B6
G.I. Vorobets, O.I. Vorobets, T.A. Melnychuk, V.M. Strebegev, Y.Fed'kovych Chernivtsi national university, Ukraine
- J/P1.13** LASER SYNTHESIS OF NANOSTRUCTURES BASED ON TRANSITION METAL OXIDES
S.A.Mulenko, A.V.Izvekov, Institute for Metal Physics NAS of Ukraine, 36,Academician Vernadsky Blvd., UA-03680, Kiev-142, Ukraine; V.P.Mygashko, V.S.Ovechko, Kiev Taras Shevchenko University, Radiophysics Dept., 2, Glushkov Blvd., UA-03127, Kiev-127, Ukraine

- J/P1.14** COMBINATION OF THE PULSED LASER ABLATION AND HOT FILAMENT CVD TECHNIQUES FOR THE GROWTH OF ORIENTED CARBON NANOTUBES.
F. Antoni, E. Fogarassy, Ph. Kern, Laboratoire PHASE, 23 rue du Loess BP20 CR, 67037 Strasbourg Cedex 2, France, T. Szörényi, Research Group on Laser Physics of the Hungarian Academy of Science, University of Szeged, P.O. Box 406, 6701 Szeged, Hungary, F. Le Normand, GSI - IPCMS, 23 rue du Loess - BP 43, 67034 Strasbourg Cedex, France
- J/P1.15** 3D PERIODIC STRUCTURES GROWN ON SILICON BY RADIATION OF A PULSED Nd:YAG LASER AND THEIR FIELD EMISSION PROPERTIES
G.A. Shafeev(a), N. Badi(b), A.M. Nair(c), and A. Bensaoula(b), (a)Wave Research Center of A.M. Prokhorov General Physics Institute of the Russian Academy of Sciences, 38, Vavilov street, 119991 Moscow Russian Federation, (b)Physics Department, The University of Houston, Houston, Texas 77204-5005, USA, (c)TcSAM, The University of Houston, Houston, Texas 77204-5004, USA
- J/P1.16** FORMATION OF PERIODIC STRUCTURES UNDER LASER ABLATION OF METALS IN LIQUIDS
P.V. Kazakevich, A.V. Simakin, and G.A. Shafeev, Wave Research Center of General Physics Institute of the Russian Academy of Sciences, 38, Vavilov street, 117942, Moscow, Russian Federation
- J/P1.17** ULTRAVIOLET LASER MICROSTRUCTURING OF SILICON AND THE EFFECT OF LASER PULSE DURATION ON THEIR MORPHOLOGY
M. Skantzakis(a,b), V. Zorba(a), D.G. Papazoglou(a), I. Zergioti(b), C. Fotakis(a), (a)Foundation for Research & Technology - Hellas, Institute of Electronic Structure and Laser, P. O. Box 1527, Heraklion 71110, Greece, (b)Physics Department, National Technical University of Athens, Iroon Polytehneiou 9, Zografou 15780, Athens, Greece
- J/P1.18** SURFACE CONTROL OF OPTICAL PROPERTIES IN SILICON NANOCRYSTALS PRODUCED BY LASER PYROLYSIS
E. Trave, V. Bello, G. Mattei, M. Mattiazzi, INFN, Physics Department, University of Padova, Via Marzolo 8, 35131 Padova, Italy E. Borsella, M. Carpanese, F. Fabbri C.R. ENEA Frascati, Via E. Fermi 45, I-00044, Frascati (Roma), Italy M. Falconeri C. R. ENEA Casaccia, Via Anguillarese 301, I-00060 Roma, Italy R. D'Amato Department of Chemistry, University of Roma "La Sapienza", p.le A. Moro 5, 00185 Rome, Italy N. Herlin-Boime Laboratoire Francis Perrin (CEA-CNRS URA 2453), Services des Photons, Atome et Molécules, DSM, CEA Saclay, 91191 Gif sur Yvette Cedex, France
- J/P1.19** INFLUENCE OF COMPOSITIONAL MICROSEGREGATION ON THE PITTING CORROSION BEHAVIOUR OF Al 2014 ALLOY
P.H. Chong TWI (Yorkshire) Ltd, P.O. Box 3314, Sheffield, S13 9WZ, UK Z. Liu, P. Skeldon Corrosion and Protection Centre, School of Material, The University of Manchester, P.O. Box 88, Manchester M60 1QD, UK Philip Crouse Laser Processing Research Centre, Department of Mechanical, Aerospace and Manufacturing Engineering, The University of Manchester, P.O. Box 88, Manchester M60 1QD, U.K.
- J/P1.20** HIGH-ENERGY GARPUN KRF LASER AS AN INSTRUMENT FOR MATERIALS MODIFICATION IN LARGE IRRADIATED AREAS
V.D. Zvorykin, V.G. Bakaev, A.O. Levchenko, N.N. Ustinovskii, P.N. Lebedev Physical Institute, Leninsky prospect 53, 119991 Moscow, Russia; I.G. Lebo, Technical University-MIREA, Vernadsky prospect 78, 117454 Moscow, Russia
- J/P1.21** ADVANCED THERMAL PROCESSING OF MATERIALS IN THE MSEC-RANGE
W. Skrupa, D. Panknin, M. Voelskow, W. Anwand, and R. A. Yankov, Institute of Ion Beam Physics and Materials Research, Forschungszentrum Rossendorf e.V., Dresden, Germany, T. Gebel, Nanoparc GmbH, Dresden, Germany
- J/P1.22** SURFACE TEMPERATURE EVOLUTION IN PULSED LASER ACTION OF MILLYSECOND RANGE
M. Doubenskaya and I. Smurov, DIPI Laboratory, ENISE, 58 rue Jean Parot, 42023 St-Etienne, France
- J/P1.23** CATHODOLUMINESCENCE AND EPITAXY AFTER LASER ANNEALING OF ALKALI-ION IRRADIATED α -QUARTZ
P.K. Sahoo, S. Dhar*, S. Gasiorek, K.P. Lieb and P. Schaaf, II. Physikalisches Institut, Universität Göttingen, Friedrich-Hund-Platz 1, 37077 Göttingen, Germany, *Presently at Department of Physics, Center for Superconductivity Research, University of Maryland, College Park MD 20742, USA
- J/P1.24** P-N JUNCTION FORMATION IN HgCdTe BY LASER ANNEALING METHOD
L. Dumanski(a), I. Virt(b, c), M. Kuzma(a), (a)Institute of Physics, University of Rzeszow, Rejtana 16A, 35-959 Rzeszow, Poland; (b)Section of Experimental Physics, Pedagogical University, Franco 24, 82-100 Drogobych, Ukraine; (c)Institute of Biotechnology, University of Rzeszow, Rejtana 16A, 35-959 Rzeszow, Poland
- J/P1.25** EFFECT OF LASER REMELTING OF SURFACE CRACKS ON SIZE AND VOLUME FRACTION OF NANO-PRECIPIATES AND RESIDUAL STRESSES
J. Grum and J. M. Slabe, Faculty of Mechanical Engineering, Aškeraeva 6, 1000 Ljubljana, Slovenia
- J/P1.26** FUNDAMENTAL AND APPLIED ASPECTS OF LASER INTERACTION WITH MATERIALS ON THE INTERFACE SnO₂-GAP DEVICES: COMPUTER MODELING AND EXPERIMENTAL INVESTIGATIONS
G.I. Vorobets, O.I. Vorobets, S.L. Voropaeva, Yu.G. Dobrovolsky, T.A. Melnychuk, Y.Fed'kovych Chernivtsi national university, Ukraine

- J/P1.27** STRUCTURAL MODIFICATION OF LASER ANNEALED a-Si1-xCx:H FILMS
U. Coscia, G. Ambrosone, INFN-Coherentia e Dipartimento di Scienze Fisiche, Università di Napoli "Federico II", Via Cintia, 80126 Napoli, Italy, C. Minarini, ENEA Research Center - Loc. Granatello, I-80055 Portici, Napoli, Italy, V. Parisi, INFN-Dipartimento di Medicina Sperimentale e Patologia, Università di Roma "La Sapienza" Roma, Italy S. Schutzmann, INFN-Dipartimento di Scienze e Tecnologie Chimiche, Università di Roma "Tor Vergata", Roma, Italy A. Tebano, INFN-Dipartimento di Scienze e Tecnologie Fisiche ed Energetiche, Università di Roma "Tor Vergata", Roma, Italy
- J/P1.28** STRUCTURAL AND ELECTRICAL CHARACTERIZATION OF STRONTIUM BISMUTH TANTALATE (SBT) THIN FILMS
S. O'Brien(a), L. Cakare (b) ,G.M. Crean (a), and M. Kosec (b), (a)Tyndall National Institute, Lee Maltings, Cork, Ireland, (b)Jozef Stefan Institute, Jamova 39, 1000 Ljubljana, Slovenia
- J/P1.29** THE EFFECT OF KrF EXCIMER LASER ANNEALING ON THE STRUCTURAL, OPTICAL AND ELECTRICAL PROPERTIES OF ZnO THIN FILMS
M. Novotny, J. Lancok, M. Jelinek, Institute of Physics, Academy of Sciences of the Czech Republic, Na Slovance 2, 182 21 Prague, Czech Rep. J.-R. Duclere, J.-P. Mosnier National Centre for Plasma Science and Technology, School of Physical Sciences, Glasnevin, Dublin 9, Ireland
- J/P1.30** MECHANISMS AND APPLICATION OF THE EXCIMER LASER DOPING FROM SPIN-ON GLASS SOURCES FOR USJ FABRICATION
S. Coutanson(a), E. Fogarassy(a), J. Venturini(b), (a) PHASE, 23 rue du Loess BP20 CR, 67037 Strasbourg Cedex 2, France, (b) SOPRA-SA, 26 rue Pierre Joigneaux, 92270 Bois-Colombes, France
- J/P1.31** EXPLOSIVE BOILING OF TRANSPARENT LIQUID ON LASER HEATED TARGET
S.N. Andreev, A.A. Samokhin, A.M. Prokhorov General Physics Institute of RAS, 38, Vavilov st., 119991 Moscow, Russia and I. Smurov ENISE-DIPI, 58, rue Jean Parot, 42023 Saint-Etienne Cedex 2, France
- J/P1.32** MILLISECOND FLASH ANNEALING: APPLICATIONS FOR USJ FORMATION AND OPTIMIZATION OF DEVICE ELECTRICAL CHARACTERISTICS
G. John Foggiato, Woo Sik Yoo, WaferMasters, Inc., 246 East Gish Road, San Jose CA 95112, USA
- J/P1.33** MODIFICATION OF ANODIC ALUMINUM OXIDE TEMPLATE BY IR LAMP PROCESS
D.G. Lim(a), D.H. Kim(a), J.K. Kim(a), O. Kwon(a), J.H. Lee(b) and K.J. Yang(a), (a)Dept. of Electronic Engineering, Chungju National University, Chungbuk 380-702, Korea, (b)Faculty of Electronic and Information Engineering, Kunsan National University, Jeonbuk 573-701, Korea
- J/P1.34** IMPLICATIONS OF THE ONSET OF CRACKING ON THE RESPONSE OF COMPOSITE MATERIALS UNDER MID-INFRARED RADIATION: A FINITE ELEMENT MESOSCOPIC STUDY
A. Vila Verde, Marta M. D. Ramos, Departamento de Física, Universidade do Minho, Campus de Gualtar, 4710-057 Braga, Portugal
- J/P1.35** LASER TREATMENT OF WHITE CHINA SURFACES
K. Osvay, I. Képiró, M. Csatari, Department of Optics and Quantum Electronics, University of Szeged Dóm tér 9, 6720 Szeged, Hungary
- J/P1.36** WAVEGUIDE STRUCTURES WRITTEN WITH FS-LASER PULSES ABOVE THE CRITICAL SELF-FOCUSING THRESHOLD IN LEAD-OXIDE BASED GLASSES
V. Díez-Blanco, J. Solís, J. Siegel, J. M. Fernández-Navarro, Instituto de Óptica (CSIC), Madrid, Spain
- J/P1.37** INVESTIGATION OF a-Se PHOTODEPOSITED FILMS BY ArF EXCIMER LASER
A. P. Caricato(a), M. Martino (a), F. Romano (a), A. Peled(b), (a) L3 group-Department of Physics, University of Lecce, 73100 Lecce, Italy, (b) Holon Academic Institute of Technology, Electronics Department, Holon 58102, Israel.
- J/P1.38** HIGH RESOLUTION ELECTRON MICROSCOPY STUDY OF SiGeC THIN FILMS GROWN ON Si(100) BY LASER ASSISTED TECHNIQUES
Ch.B.Lioutas(a), N. Frangis(a), S. Soumelidis(a), S. Chiussi(b), E. López(b), C. Serra(b), B. León(b) , (a) Solid State Physics Section, Department of Physics, Aristotle University of Thessaloniki, GR-54124 Thessaloniki, Greece (b) Dpto. Física Aplicada, E.T.S.I. Industriales, Campus Universitario, E-36310 Vigo, Spain
- J/P1.39** TOWARD LONG LIFETIME OF PHOTOINDUCED SPATIAL DISTRIBUTION OF QUADRATIC NON LINEAR PROPERTIES IN DOPED PHOTOPOLYMERS
J.P. Bombenger, L. Mager, A. Fort, IPCMS/GONLO, Rue du Loess 23 BP43, 67034 Strasbourg Cedex 2, France and C. Carré, Département de Photochimie Générale, Rue Alfred Werner 3, 68093 Mulhouse Cedex, France
- J/P1.40** SIMULATION AND ANALYSIS OF TWO AXIS MICRO-MIRROR OPTIMIZED FOR A DECOUPLED MOTION FOR MEMS
S. Eliahou-Niv⁽¹⁾, M. Martino⁽²⁾, A.P. Caricato⁽²⁾, A. Peled⁽¹⁾, Holon Academic Institute of Technology, Electronics Department, 52 Golomb St., Holon 58102, Israel, ⁽²⁾ L³ group - Department of Physics, University of Lecce, Italy

Wednesday, June 1, 2005
Mercredi 1er juin 2005

Afternoon
Après-midi

Session V : Functional thin films

Session chair : **A. Rougier** Laboratoire de réactivité et Chimie des Solides, Amiens, France

- J-V.01** 13:45 -Invited- PULSED LASER DEPOSITION OF ACCEPTOR DOPED ZnO
D.P. Norton, Y.J. Li, Y.W. Heo, Y. Kwon, H.S. Kim, J.M. Erie, K. Ip and S.J. Pearton, Dept. of Materials Science and Engineering, University of Florida, Gainesville FL 32611, USA
- J-V.02** 14:15 SELECTIVE ABLATION OF THIN FILMS WITH SHORT AND ULTRA-SHORT LASER PULSES
J. Hermann, G. Coustillier, S. Bruneau, M. Sentis, LP3, CNRS-Faculté des Sciences de Luminy, Case 917, 13288 Marseille Cedex 9, France, M. Benfarah, J-F. Guillemoles, IRDEP, projet CISEL, EDF R&D, 6 quai Watier, 78400 Chatou, France and E. Axente, NILPRP- Laser Department, PO Box MG-36, 76900 Bucharest, Romania
- J-V.03** 14:30 NEW ASPECTS ON PULSED LASER DEPOSITION (PLD) of ALIGNED CARBON NANOTUBES
S. Tamir, Israel Institute of Metals, Technion, Israel
- J-V.04** 14:45 SURFACE STRUCTURE OF POLYEHTYLENE GLYCOL FILMS PRODUCED BY MATRIX ASSISTED PULSED LASER EVAPORATION (MAPLE)
K. Rodrigo(a,b), P. Czuba(b), B. Toftmann(a), J. Schou(a) and R. Pedrys(b), (a)Department of Optics and Plasma Research, Risø National Laboratory, 4000 Roskilde, Denmark, (b)Institute of Physics, Jagiellonian University, 30 059 Krakow, Poland.
- J-V.05** 15:00 LASER PROCESSING OF MAGNETIC OXIDES FOR APPLICATIONS IN SPINTRONICS
O. Conde(a,c), M.L. Paramês(a,c), A.J. Silvestre(b,c), N. Popovici(a,c), P.M. Sousa(a,c), (a)Dept. of Physics, Faculty of Sciences, University of Lisboa, 1749-016 Lisboa, Portugal, (b)Instituto Superior de Engenharia de Lisboa, 1950-062 Lisboa, Portugal, (c)Institute of Materials and Surface Science and Engineering, 1749-001 Lisboa, Portugal
- 15:15 **BREAK**

Session VI : Pulsed laser deposition

Session chair : **D.N. Norton** University of Florida, USA

- J-VI.01** 15:30 -Invited- PULSED LASER DEPOSITION: A POWERFUL TOOL TO TUNE MATERIALS PROPERTIES
Aline Rougier, Laboratoire de Réactivité et de Chimie des Solides, CNRS UMR-6007, Université de Picardie Jules Verne, 80039 Amiens Cedex, France
- J-VI.02** 16:00 COMPARISON BETWEEN PULSED ELECTRON BEAM DEPOSITION AND PULSED LASER DEPOSITION OF OXIDES FILMS
M.Nistor, F.Gherendi and N.Mandache, NILPRP, Bucharest, Romania
- J-VI.03** 16:15 PULSED LASER DEPOSITED KTN THIN FILMS FOR MICROWAVES APPLICATIONS
A. Rousseau, M. Guilloux-Viry, A. Perrin, Institut de Chimie de Rennes, LCSIM, UMR 6511 CNRS/Université de Rennes 1, Campus de Beaulieu, 35042 Rennes France and V. Laur, G. Tanné, P. Laurent, F. Huret, LEST, UBO/ENSTBr, UMR CNRS 6165, 6 av. Le Gorgeu, CS 93837, 29238 Brest, France
- J-VI.04** 16:30 STRUCTURAL, ELECTRICAL PROPERTIES OF POLYMERS AND METAL DOPED POLYMER THIN FILMS DEPOSITED BY MAGNETRON SPUTTERING ASSISTED PULSED LASER DEPOSITION TECHNIQUE
A.R. Phani(a), and J.E. Kraznowski(b), (a)INFM and Department of Physics, University of L'Aquila, via Vetoio, 67010 Coppito, L'Aquila, Italy, (b)Department of Mechanical Engineering, University of New Hampshire, Durham NH, USA
- J-VI.05** 16:45 FABRICATION AND CHARACTERIZATION OF EPITAXIAL SBN/LSCO HETEROSTRUCTURES
Tsun-Yu Yum, Chee-Leung Mak, and Kin-Hung Wong Department of Applied Physics and Materials Research Center, The Hong Kong Polytechnique University, Hung Hom, Hong Kong, P.R. China
- 17:00-19:00 **POSTER SESSION II**
- 19:00 **AWARD CEREMONY**
The symposium organizers and the candidates to the graduate student award are requested to attend.
- CONFERENCE RECEPTION**

POSTER SESSION II
Wednesday, June 1, 2005
17:00 – 19:00

Session chairs : Thomas Lippert, Maria Dinescu and E. Colin

- J/P2.01** FABRICATION OF THE HYDROGEN RESISTIVE FERROELECTRIC FILM OF THE (Pb_{0.72}La_{0.28})Ti_{0.93}O₃/Pb(Zr_{0.53}Ti_{0.47})O₃/(Pb_{0.72}La_{0.28})Ti_{0.93}O₃ HETEROSTRUCTURE BY A PULSED LASER DEPOSITION METHOD
Eun Sun Lee, Dong Hua Li, Hyun Woo Chung, and Sang Yeol Lee
Department of Electrical and Electronic Engineering, Yonsei University, 134, Shinchon-dong, Seodaemoon-ku, 120-749, Seoul, Korea
- J/P2.02** COMPARISON OF THE EFFECT OF PLT AND PZT BUFFER LAYERS ON THE PZT THIN FILMS IN FERROELECTRIC MATERIALS APPLICATIONS
Dong Hua Li, Eun Sun Lee, Hyun Woo Chung, and Sang Yeol Lee, Department of Electrical and Electronic Engineering, Yonsei University, 134, Shinchon-dong, Seodaemoon-ku, 120-749, Seoul, Korea
- J/P2.03** EFFECT OF BUFFER LAYERS ON THE PROPERTY OF Pb(Zr,Ti)O₃-Pb(Mn,W,Sb,Nb)O₃ THIN FILMS GROWN BY PULSED LASER DEPOSITION
Hyun Woo Chung, Eun Sun Lee, Dong Hua Li, and Sang Yeol Lee, Department of Electrical and Electronic Engineering, Yonsei University, 134, Shinchon-dong, Seodaemoon-ku, 120-749, Seoul, Korea
- J/P2.04** THICKNESS EFFECT IN Pb(Zr_{0.2}Ti_{0.8})O₃ FERROELECTRIC THIN FILMS GROWN BY PULSED LASER DEPOSITION
M.Lisca(a,b), L. Pintilie(a,b), M.Alexe(b), (a)National Institute of Materials Physics, Bucharest-Magurele, P.O. Box MG-7, Romania, (b) Max Planck Institute for Microstructure Physics, Weinberg 2, 06120, Halle, Germany
- J/P2.05** PULSED LASER DEPOSITION OF PEROVSKITE RELAXOR FERROELECTRIC THIN FILMS
N. Scarisoreanu(a), F. Craciun(b), M. Dinescu(a), P. Verardi(c), A. Moldovan(a), A. Purice(a), C. Galassi(d), (a)NILPRP, Bucharest, PO Box MG-16, 77125, Romania, (b)CNR-ISC, Via del Fosso del Cavaliere 100, 00133 Rome, Italy, (c)CNR-IDAC, Via del Fosso del Cavaliere 100, 00133 Rome, Italy, (d)CNR-ISTEC, Via Granarolo 64, I-48018 Faenza, Italy
- J/P2.06** THE EPITAXIAL GROWTH OF SrTiO₃ BY PULSED LASER DEPOSITION : APPLICATION TO AGILE MICROWAVE FILTERING
K. Bouzehouane, C. Carretero, J.-P. Contour, S. Guyard, E. Jacquet, Y. Lemaître, S. Lengrand, J.C. Mage, M. Poulain, B. Marcilhac, J.-L. Maurice, Unité Mixte de Physique C.N.R.S./Thales, 91404 Orsay, France, A. Khodan, Institute of Physical Chemistry, Russian Academy of Science, 117915 Moscow, Russia
- J/P2.07** CORRELATION BETWEEN STRUCTURAL AND MECHANICAL PROPERTIES OF PbTiO₃ THIN FILMS GROWN BY PULSED-LASER DEPOSITION
A. Roemer, E. Millon, LSMCL, Université de Metz, 1 bd Arago, 57078 Metz Cedex 03, France ; W. Seiler, LM3, ENSAM, 151 Bd de l'Hôpital, 75013 Paris, France ; D. Ruch, A. Riche, Centre de Recherche Public Henri Tudor, 66 rue du Luxembourg, 4002 Esch sur Alzette, Luxembourg.
- J/P2.08** CRYSTALLINITY AND MORPHOLOGY DEPENDENT LUMINESCENCE OF Li-DOPED Y_{2-x}Gd_xO₃:Eu³⁺ THIN FILM PHOSPHORS
Jung Hyun Jeong, Kyoo Sung Shim, Byung Kee Moon, Sung Boo Kim, Department of Physics, Pukyong National University, Busan 608-737, Korea Jong Seong Bae Basic Science Research Institute, Pukyong National University, Busan 608-737, Korea Soung-soo Yi Department of Photonics, Silla University, Busan 617-736, Korea Jung Hwan Kim Department of Physics, Dong Eui University, Busan 614-714, Korea, Korea
- J/P2.09** STRUCTURAL AND OPTICAL PROPERTIES OF Er, Yb CO-DOPED Y₂O₃ THIN FILMS
A. Og. Dikovska, P.A. Atanasov, I.G. Dimitrov, Institute of Electronics, Bulgarian Academy of Sciences, Tsarigradsko shose 72, Sofia 1784, Bulgaria, T. Kocourek, M. Jelinek, Institute of Physics, Academy of Sciences of the Czech Republic, Na Slovance 2, 181 21 Prague 8, Czech Republic
- J/P2.10** ELECTRICAL AND OPTICAL PROPERTIES OF THIN FILMS PREPARED BY LASER ABLATION OF ND-DOPED POTASSIUM GADOLINIUM TUNGSTATE
P.A. Atanasov, A. Og. Dikovska, I.G. Dimitrov, Institute of Electronics, Bulgarian Academy of Sciences, Tsarigradsko shose 72, Sofia 1784, Bulgaria, J. Perriere, R.M. Defourneau, Group de Physique des Solides, Universités Paris VI et Paris VII, CNRS, 140 rue de Lourmel - Campus Boucicaut, 75015 Paris, France
- J/P2.11** PROPERTIES OF PULSED LASER DEPOSITED ZrSnTiO THIN FILM
M.Nistor, NILPRP, Bucharest, Romania, A.Brunet-Bruneau, L.Siozade, B.Gallas, J.Perriere, INSP, Univ.Paris 6, France, W.Seiler, ENSAM, Paris, France, A.Ioachim, NIMP, Bucharest, Romania
- J/P2.12** COPPER OXIDE PHASES GROWN BY CONVENTIONAL AND CROSS-BEAM PULSED-LASER DEPOSITION
R. Benzerga, C. Boulmer-Leborgne, GREMI, Université d'Orléans, France ; J. Perrière, INSP, Université Paris 6, France ; R. Chety-Gimondo, E. Millon, LSMCL, Université de Metz, France.
- J/P2.13** GROWTH OF NEW OXIDE PHASES BY PLD
W. Seiler, LM3, ENSAM Paris, France, E. Millon, LSMCL, Université de Metz, France, R. Perez-Casero, Dept. Fisica Aplicada, Universidad Autonoma de Madrid, Spain, J. Perrière, INSP, Université Paris 6, France.

- J/P2.14** X-RAY ANALYSIS OF Sm₁Ba₂Cu₃O_{7-x} SUPERCONDUCTING THIN FILM PRODUCED BY PULSED LASER DEPOSITION
L. Medici(a) and A. Morone(b), (a)CNR-IMAA, Zona Industriale di Tito Scalo (PZ), Italy, (b)CNR-IMIP, Sezione di Potenza, Zona Industriale di Tito Scalo (PZ), Italy
- J/P2.15** GROWTH STRUCTURE AND PROPERTIES OF YBCO THIN FILMS OBTAINED BY IN-SITU PLD UNDER REDUCED OXYGEN PRESSURE DURING COOL-DOWN TIME.
Maria Branesco V. S. Teodorescu, National Institute for R&D of Material Physics, Str. Atomistilor, Nr. 105 bis, P. O. Box MG-7, Bucharest, Romania, G. Socol, National Institute for Lasers, Plasma and Radiations Physics, P. O. Box MG-36, Str. Atomistilor, Nr. 111, Bucharest, Romania, C. Ducu, University of Pitesti, Advanced Materials Department, Str. Targul din Vale Nr. 1, Pitesti, Romania
- J/P2.16** DOPED THIN METAL OXIDE FILMS FOR CATALYTIC GAS SENSORS
G. Socol, E. Gyorgy, E. Axente, S. Grigorescu, I. Mihailescu, National Institute for Lasers, Plasma and Radiation Physics, Lasers Department
- J/P2.17** GROWTH OF OXIDE THIN FILMS FOR OPTICAL GAS SENSOR APPLICATIONS
D. Caitanu(a), E. György(a), S. Grigorescu(a), I. N. Mihailescu(a), G. Prodan(b), (a)Lasers Department, Institute of Atomic Physics, P. O. Box MG 36, 76900 Bucharest V, Romania, (b)University "Ovidius" of Constanta, Mamaia Bd., 124, Constanta, 900527, Romania
- J/P2.18** PULSED LASER DEPOSITED IRON FLUORIDE THIN FILMS FOR LITHIUM ION BATTERIES
Yoshinari Makimura, Aline Rougier, and Jean-Marie Tarascon, Laboratoire de Réactivité et de Chimie des Solides, CNRS UMR-6007, Université de Picardie Jules Verne, 80039 Amiens Cedex, France.
- J/P2.19** COBALT AND TANTALUM ADDITIONS FOR ENHANCED ELECTROCHROMIC PERFORMANCES OF NICKEL-BASED OXIDE THIN FILMS GROWN BY PULSED LASER DEPOSITION
Yoshinari Makimura, Aline Rougier, and Jean-Marie Tarascon, Laboratoire de Réactivité et de Chimie des Solides, CNRS UMR-6007, Université de Picardie Jules Verne, 80039 Amiens Cedex, France.
- J/P2.20** STRUCTURAL CHARACTERIZATION AND MAGNETORESISTANCE IN MANGANITE THIN FILMS
S. Canulescu (a), T. Lippert (a), A. Weidenkaff (b), A. Wokaun (a), (a) Paul Scherrer Institut, 5232 Villigen, Switzerland, (b) EMPA Swiss Federal Laboratories for Materials Testing and Research, Überlandstrasse 129, 8600 Dübendorf, Switzerland
- J/P2.21** PULSED LASER DEPOSITION OF CHROMIUM OXIDES: A PARAMETRIC STUDY
D. Stanoi, G. Socol, E. Axente, G. Dorcioman, I. N. Mihailescu, National Institute for Laser, Plasma and Radiation Physics -Laser Department, P.O. Box MG-36, RO-77125 Bucharest, Romania, C. Grigorescu, National Institute of Research and Development for Optoelectronics, Bucharest, Romania, O. Monnereau, L. Tortet, Laboratoire MADIREL équipe Elaboration (UMR 6121: CNRS-Univ. de Provence), Centre de St-Jérôme, Avenue Escadrille-Normandie-Niemen, 13397 Marseille Cedex 20, France
- J/P2.22** DEPOSITION OF ZINC OXIDE THIN FILMS BY REACTIVE PULSED LASER ABLATION
B. Mitu(b), P. Bilkova(c), V. Marotta(a), S. Orlando(a), G. P. Parisi(a), A. Santagata(a), (a)CNR - Istituto di Metodologie Inorganiche e dei Plasmi - Sezione di Potenza, Zona Industriale, 85050 Tito Scalo (PZ), Italy; (b)National Institute for Lasers, Plasma and Radiation Physics, P.O. Box MG 36 Magurele, Bucharest 77125, Romania; (c)Academy of Sciences, Institute of Physics, Department of Dielectrics, Na Slovance 2, 182 21 Praha 8, Czech Republic
- J/P2.23** PLD OF FE₃O₄ THIN FILMS: INFLUENCE OF BACKGROUND GAS ON SURFACE MORPHOLOGY AND MAGNETIC PROPERTIES
M.L. Paramês(a,e), J. Mariano(b,e), Z. Viskadourakis(c,f), N. Popovici(a,e), M.S. Rogalski(d,e), J. Giapintzakis(c,f,g), O. Conde(a,e), (a)Dept. of Physics, Faculty of Sciences, University of Lisboa, 1749-016 Lisboa, Portugal, (b)Faculty of Sciences and Technology, University of Algarve, 8000-117 Faro, Portugal, (c)Institute of Electronic Structure and Laser, FORTH, 71110 Heraklion, Crete, Greece, (d)Dept. of Physics, Instituto Superior Técnico, 2780-990 Taguspark Oeiras, Portugal, (e)Institute of Materials and Surface Science and Engineering, 1749-001 Lisboa, Portugal, (f)Dept. of Materials Science and Technology, University of Crete, 71003 Heraklion, Crete, Greece, (g)Dept. of Physics, University of Cyprus, 1678 Nicosia, Cyprus
- J/P2.24** HIGHLY CRYSTALLINE LaB₆ THIN FILMS GROWN BY PULSED LASER DEPOSITION
V. Craciun(a) and D. Craciun(b), (a)Major Analytical Instrumentation Center, Materials Science and Engineering, University of Florida, Gainesville, FL 32611, USA, (b)Laser Department, National Institute for Laser, Plasma, and Radiation Physics, Bucharest, Romania
- J/P2.25** EPITAXIAL ZIRCONIUM CARBIDE THIN FILMS GROWN ON Si(100) BY PULSED LASER DEPOSITION
G. Bourne(a), J. Woo(a), V. Craciun(a), and D. Craciun(b)
(a)Major Analytical Instrumentation Center, Materials Science and Engineering, University of Florida, Gainesville, FL, USA, (b)Laser Department, NILPRP, Bucharest, Romania
- J/P2.26** TEMPERATURE DEPENDENCE OF THE OPTICAL PROPERTIES OF ZnSe FILMS DEPOSITED ON QUARTZ SUBSTRATE
G. Perna(a,b), V. Capozzi(a,b), P.F. Biagi(b,c), A. Minafra(b,c), M. Ambrico(d), (a)Dipartimento di Scienze Biomediche, Università di Foggia, Viale Pinto, 71100 Foggia, Italy, (b)Istituto Nazionale di Fisica della Materia, Sezione di Bari, Via Amendola 173, 70126 Bari, Italy, (c)Dipartimento Interateneo di Fisica dell'Università di Bari, Via Amendola 173, 70126 Bari, Italy, (d)Istituto di Metodologie Inorganiche e dei Plasmi del C.N.R., Via Orabona 4, 70126 Bari, Italy

- J/P2.27** NICKEL-TITANIUM ALLOY: CYTOTOXICITY AND GENOTOXICITY EVALUATION
V.C. Dinca(a), A. Barbalat(a), V. Craciun(b), C.Z. Dinu(a), V. Ferrari DeStefano(c), A. Moldovan(a), I. Stoica(d), T. Vassu(d), S. Soare(d), M. Dinescu(a), (a)National Institute for Laser, Plasma and Radiation Physics, PO Box MG-16, 77125 Bucharest, Romania, (b)University of Florida, USA (and NILPRP, Bucharest, Romania), (c)INFM, Unit E6, University "La Sapienza", Rome, Italy, (d)UNIBUC- MICROGEN, Splaiul Independentei 91-95, 76201 Bucharest, Romania
- J/P2.28** INVESTIGATION OF PULSED LASER DEPOSITED CARBON FILMS BY SPECTROSCOPIC ELLIPSOMETRY AND ELECTRON PARAMAGNETIC RESONANCE
P.V. Tolstykh, BNTU Minsk, Skaryna Prosp. 65, 220027 Minsk, Belarus, I.I. Azarko, M.V. Puzyrev, E.I. Kozlova, V.P. Tolstykh, V.B. Odzhaev, BSU Minsk, Skaryna Prosp. 4, 220050 Minsk, Belarus, S. Shokhovets, and G. Gobsch, Institute of Physics, Ilmenau Technical University, PF 100565, 98684 Ilmenau, Germany
- J/P2.29** SUPERLATTICE CoPt/Ru/CoFe STRUCTURE FABRICATED BY PULSED LASER DEPOSITION
W. Zhang, X.X. He, Q. Liang, H.Q. Li and X.F. Hu, Center for Nanomaterial and Nanodevice, School of Physical Science, Hefei University of Technology, Hefei, Anhui 23009, PR.China
- J/P2.30** ENHANCEMENT OF COERCIVITY WITH REDUCED GRAIN SIZE IN CoPt GROWN BY PULSED LASER DEPOSITION
W. Zhang, X.X. He, Q. Liang, H.Q. Li and X.F. Hu, Center for Nanomaterial and Nanodevice, School of Physical Science, Hefei University of Technology, Hefei, Anhui 23009, PR.China
- J/P2.31** ELECTRIC PROPERTIES OF PULSE LASER DEPOSITED Ag₃SbS₃ and Tl₃SbS₃ THIN FILMS
H. Khlyap, University of Technology, Physics Department, E.-Schroedinger Str. 56, D-67657, Kaiserslautern, Germany, and State Pedagogical University, Drogobych, Ukraine, V. Bilozertseva, Kharkiv National University "KPI", Kharkov, Ukraine, L. Panchenko, Sumy State University, Ukraine
- J/P2.32** GROWTH OF DROPLETS-FREE Co₂MnSi/GaAs FERROMAGNETIC THIN FILMS BY CROSSED-BEAMS PLD TECHNIQUE
E. Valerio(a), F. Guinneton(b), A. Fabre(c), C. Grigorescu(d), W. Van Roy(e), M. Autric(a), (a)Université de la Méditerranée, IM2, Technopôle de Château-Gombert, Marseille, France; (b)Laboratoire MADIREL, Centre de St-Jérôme, Marseille, France; (c)Mecasurf, Ecole Arts et Métiers, Aix-en Provence, France; (d)National Institute of Optoelectronics- INOE 2000, Bucharest, Romania; (e)IMEC, Magneto-Electronics Group, Leuven, Belgium
- J/P2.33** INDIUM TIN OXIDE FILMS GROWN BY RF-ASSISTED PULSED LASER DEPOSITION IN THE NANO- AND FEMTO-SECOND REGIME: CHARACTERIZATION OF TRANSIENT SPECIES
A. Santagata(a), R. Teghil(b), A. Giardini(a,c), V. Marotta(a), A. Paladini(c), G. P. Parisi(a), S. Orlando(a), (a)CNR - Istituto di Metodologie Inorganiche e dei Plasmi - Sezione di Potenza, Zona Industriale, 85050 Tito Scalo (PZ), Italy, (b)Dipartimento di Chimica, Università della Basilicata, Via N. Sauro 85, 85100 Potenza, Italy, (c)Dipartimento di Chimica, Università di Roma "La Sapienza", P.le A. Moro 5, 00185 Roma, Italy
- J/P2.34** MULTILAYERED METAL OXIDE THIN FILM GAS SENSORS OBTAINED BY CONVENTIONAL AND RF PLASMA-ASSISTED LASER ABLATION
B. Mitu(b), V. Marotta(a), S. Orlando(a), (a)CNR - Istituto di Metodologie Inorganiche e dei Plasmi – Sezione di Potenza, Zona Industriale, 85050 Tito Scalo (PZ), Italy; (b)National Institute for Lasers, Plasma and Radiation Physics, P.O. Box MG 36 Magurele, Bucharest, 77125 Romania
- J/P2.35** PULSED REACTIVE CROSSED BEAM LASER ABLATION OF La_{0.6}Ca_{0.4}CoO₃ USING O₁₈. WHERE DOES THE OXYGEN COME FROM?
M.J. Montenegro(a), M. Döbeli(b), T. Lippert(a), P.R. Willmott(a), A. Wokaun(a), (a)Paul Scherrer Institut, 5232 Villigen PSI, Switzerland, (b)Paul Scherrer Institut, c/o ETH Hönggerberg, 8093 Zurich, Switzerland
- J/P2.36** MATRIX ASSISTED PULSED LASER EVAPORATION PROCESSING OF PULLULAN AND DERIVATES OF PULLULAN AND DERIVATES OF PULLULAN POLYSACCHARIDES THIN FILMS FOR DRUG DELIVERY SYSTEMS
R. Cristescu, G. Socol, G. Dorcioman, C. Ristoscu, A. Moldovan, I.N. Mihailescu, National Institute for Lasers, Plasma and Radiation Physics, 409 Atomistilor, P.O. Box MG-36, RO-077125, Bucharest-Magurele, Romania, T. Kocourek, M. Jelinek, Institute of Physics, Academy of Sciences of Czech Republic, Na Slovance 2, 182 21 Prague 8, Czech Republic, M. Albuiescu, National Institute for Chemical-
- J/P2.37** LASER DEPOSITION OF CRYOGLOBULIN BLOOD PROTEINS THIN FILMS BY MATRIX ASSISTED PULSED LASER EVAPORATION
R. Cristescu, A. Moldovan, I.N. Mihailescu, National Institute for Lasers, Plasma and Radiation Physics, 409 Atomistilor, P.O. Box MG-36, RO-077125, Bucharest-Magurele, Romania, T. Kocourek, M. Jelinek, Institute of Physics, Academy of Sciences of Czech Republic, Na Slovance 2, 182 21 Prague 8, Czech Republic, L. Stamatina, Longhin Scarlat Dermato-Venerologic Hospital, Bucharest, Romania, D. Mihaiescu, University of Agriculture Sciences and Veterinary Medicine, 59 Marasti, Bucharest, Romania, I. Stamatina, University of Bucharest, Faculty of Physics, P.O. Box MG-11, 3Nano-SAE, Bucharest-Magurele, Romania, D.B. Chrisey, US Naval Research Laboratory, Washington, D.C. 20375-5345, USA

- J/P2.38** INNOVATIVE METHOD TO DEPOSIT METAL CARBIDES BY COMBINATION OF MAGNETRON SPUTTERING AND PULSED LASER DEPOSITION TECHNIQUES FOR PROTECTIVE COATING APPLICATIONS
A. R. Phani(a), and J.E. Kraznowski(b), (a)INFM and Department of Physics - University of L'Aquila, via Vetoio, 67010 Coppito, L'Aquila, Italy, (b)Department of Mechanical Engineering, University of New Hampshire, Durham NH, USA
- J/P2.39** ON THE ORIENTATION INDEPENDENCE OF INVERSE PULSED LASER DEPOSITION
L. Égerházi and Zs. Geretovszky, Department of Optics and Quantum Electronics, University of Szeged, P.O. Box. 406, 6701 Szeged, Hungary, T. Szörényi, Research Group on Laser Physics, Hungarian Academy of Sciences, P.O. Box. 406, 6701 Szeged, Hungary
- J/P2.40** LATERAL VARIATION OF FILM PROPERTIES IN INVERSE PULSED LASER DEPOSITION
L. Égerházi and Zs. Geretovszky, Department of Optics and Quantum Electronics, University of Szeged, P.O. Box. 406, 6701 Szeged, Hungary, I. Bertóti, Chemical Research Center of the Hungarian Academy of Sciences, P.O. Box 17, 1525 Budapest, Hungary, T. Szörényi, Research Group on Laser Physics, Hungarian Academy of Sciences, P.O. Box. 406, 6701 Szeged, Hungary
- J/P2.41** ATOMIC FORCE MICROSCOPIC CHARACTERIZATION OF FILMS GROWN BY INVERSE PULSED LASER DEPOSITION
L. Égerházi, Zs. Geretovszky and T. Csákó, Department of Optics and Quantum Electronics, University of Szeged, P.O. Box. 406, 6701 Szeged, Hungary, T. Szörényi, Research Group on Laser Physics, Hungarian Academy of Sciences, P.O. Box. 406, 6701 Szeged, Hungary
- J/P2.42** DEVELOPMENT OF A REMOTE PLASMA ASSISTED PULSED LASER DEPOSITION SYSTEM FOR THE GROWTH OF OXIDE MATERIALS
M. Tabbal, T. C. Christidis, S. Isber, C. Madi and H. Itani, Dept. of Physics, American University of Beirut, Beirut, Lebanon

Session VII : Processing of functional thin films

Session chair : **D. Guenther** ETH Zuerich, Switzerland

- J-VII.01** 8:30 -Invited- ELECTRICAL, STRUCTURAL, AND OPTICAL PROPERTIES OF ITO THIN FILMS PREPARED BY PULSED LASER DEPOSITION FOR TRANSPARENT ELECTRODE
Jong Hoon Kim, Kyung Ah Jeon, Gun Hee Kim, and **Sang Yeol Lee**, Department of Electrical and Electronic Engineering, Yonsei University, 134 Shinchondong, Seodaemunku, Seoul, 120-749, Korea
- J-VII.02** 9:00 GIANT COUPLING COEFFICIENTS FROM NANOSCALE LASER-INITIATED EXOTHERMIC COMPOUNDS
C.R. Phipps and J.R. Luke, Photonic Associates, LLC, 200A Ojo de la Vaca, Santa Fe NM 87508, USA, W.D. Helgeson, NMT/IERA, 901 University Blvd SE, Albuquerque NM 87106, USA, D. Naud and M. Hiskey, Los Alamos National Laboratory, Los Alamos NM 87545, USA, L. Urech, T. Lippert and A. Wokaun, Paul Scherrer Institut, Villigen PSI, Switzerland
- J-VII.03** 9:15 INVESTIGATION OF THE TWO-PHOTON POLYMERISATION OF A CUSTOM INORGANIC ORGANIC HYBRID MATERIAL SYSTEM
B. Bhuian, R.J. Winfield, S. O'Brien and G. M. Crean, NMRC, Cork, Ireland
- J-VII.04** 9:30 LASER MICROLITHOGRAPHY OF LIQUID CRYSTAL CONDUCTING POLYMERS
P.J.S. Foot, J.W. Brown, P. Ibison, M. Almasri, A. Prevost, Materials Research Group, School of CPS, Kingston University, Penrhyn Road, Kingston, Surrey KT1 2EE, U.K.
- J-VII.05** 9:45 TRIALKYLSILANES AS REAGENTS FOR THE UV MODIFICATION OF POLYMERS: SELECTIVE MODIFICATION OF COMONOMER UNITS IN LUMINESCENT COPOLYMERS
Ch. Buchgraber, Polymer Competence Center Leoben GmbH, 8700 Leoben, Austria, J. Spanring and W. Kern, TU Graz, Institute of Chemistry and Technology of Organic Materials, 8010 Graz, Austria, A. Pogantsch and St. Rentenberger, TU Graz, Institute of Solid State Physics, 8010 Graz, Austria
- J-VII.06** 10:00 LASER PROCESSING OF NEW HYBRID ORGANIC-INORGANIC MATERIALS BASED ON TITANIUM OXIDE GELS
A.I. Kuznetsov(a,b), O. Kameneva(a,c,d), L.A. Smirnova(c), L. Rozes (d), C. Sanchez (d), N. Bityurin (b), K. Chhor (a), P. Marteau (a), and A. Kanaev (a), (a)Laboratoire d'Ingénierie des Matériaux et des Hautes Pressions, URP1311 CNRS, 93430 Villeteuse, France, (b)Institute of Applied Physics RAS, 603950, Nizhnii Novgorod, Russia, (c)Lobachevsky State University, 603950 Nizhnii Novgorod, Russia, (d)Laboratoire de Chimie de la Matière Condensée, UMR 7574 CNRS, Université Pierre et Marie Curie, 75252 Paris cedex 05, France
- 10:15 **BREAK**

Session VIII : Ultrashort laser pulses I

Session chair : **S. Tzortzakis**, Ecole Polytechnique, Palaiseau, France

- J-VIII.01** 10:45 -Invited- DIAGNOSTICS OF PICOSECOND LASER PULSE ABSORPTION IN PREFORMED PLASMA
Nadeshda Vogel, Department of Physics, Optical Spectroscopy and Molecule Physics, Chemnitz Technical University, 09107 Chemnitz, Germany
- J-VIII.02** 11:15 HIGH SPATIAL RESOLUTION IN TIME-RESOLVED EMISSION SPECTROSCOPY OF LASER-INDUCED PLASMAS
J. Siegel, G. Epurescu, J. Gonzalo, F.J. Gordillo-Vázquez and C.N. Afonso, Laser Processing Group, Instituto de Óptica, CSIC, Serrano 121, 28006 Madrid, Spain.
- J-VIII.03** 11:30 INTEREST OF ULTRASHORT LASER PULSE FOR PLD
R. Benzerga, C. Boulmer-Leborgne, GREMI, Orléans, France
- J-VIII.04** 11:45 FS PULSE SHAPING FOR PHASE CONTROL IN PLD: SYNTHESIS OF CUBIC SiC
C. Ristoscu, G. Socol, I.N. Mihailescu, National Institute for Lasers, Plasma and Radiation Physics, Lasers Department, PO Box MG-54, Bucharest V 77125, Romania, D. Gray, A. Klini, A. Manousaki, D. Anglos, C. Fotakis*, Foundation for Research and Technology – Hellas (FO.R.T.H.) – Institute of Electronic Structure and Laser (I.E.S.L.), PO Box 1527, 71110, Crete, Greece, *Also at Department of Physics, University of Crete, Greece

12:00 **LUNCH**

Thursday, June 2, 2005
Jeudi 2 juin 2005

Afternoon
Après-midi

Session IX : Ultrashort laser pulses II

Session chair : **N. Vogel**, Chemnitz Technical University, Germany

- J-IX.01** 13:45 -Invited- SELF-GUIDED PROPAGATION OF ULTRASHORT LASER PULSES IN TRANSPARENT NONLINEAR MEDIA AND APPLICATIONS IN MATERIAL SCIENCE AND PHOTONICS
Stelios Tzortzakis, Laboratoire d'Utilisation des Lasers Intenses, Ecole Polytechnique, CNRS UMR 7605, 91128 Palaiseau, France
- J-IX.02** 14:15 MOLECULAR DYNAMICS SIMULATION STUDY OF DEEP HOLE DRILLING IN IRON BY ULTRASHORT LASER PULSES
N.N. Nedialkov, P.A. Atanasov, Institute of Electronics, Bulgarian Academy of Sciences 72, Tsarigradsko Shose Blvd., Sofia 1784, Bulgaria
- J-IX.03** 14:30 FORMATION PROCESSES OF IRON OXIDE NANOPARTICLE BY LASER ABLATION
A. Péreira, A. Cros, Ph. Delaporte, M. Sentis, LP3, CNRS/Université de la Méditerranée, Case 917, 13288 Marseille, France, W. Marine, CRMC-N, CNRS, Faculté des Science de Luminy, 13288 Marseille, France, A.L. Thomann, C. Boulmer-Leborgne, GREMI, CNRS/Université d'Orléans, 14 rue d'Issoudun, 45067 Orléans, France
- J-IX.04** 14:45 DYNAMICS OF LASER-INDUCED DESORPTION FROM DIELECTRIC SURFACES ON A SUB-PICOSECOND TIMESCALE
Florenta Costache, Sebastian Eckert, and Juergen Reif Brandenburg. Techn. Univ. Cottbus and IHP/BTU JointLab Cottbus Konrad-Wachsmann-Allee 1, 03046 Cottbus, Germany
- 15:00 **BREAK**

Session X : Diagnostic, analytical methods

Session chair : **C. Leborgne**, GREMI, Université d'Orléans, France

- J-X.01** 15:30 -Invited- QUANTITATIVE ANALYSIS OF SOLID MATERIALS USING LA-ICP-MS
Detlef Günther ETH Zurich, Laboratorium für Anorganische Chemie, HCI Hönggerberg, G113, 8093 Zurich, Switzerland
- J-X.02** 16:00 INDIRECT INVESTIGATIONS OF SPECIES EXPELLED BY LASER ABLATION OF GdCOB
R. Chety-Gimondo, S. Kilburger, F. Aubriet, E. Millon, LSMCL, Université Paul Verlaine, Metz, France ; A. Delcorte, PCPM, Université catholique de Louvain, Belgium
- J-X.03** 16:15 PLASMA PLUME INVESTIGATION DURING FEMTOSECOND PULSED LASER DEPOSITION OF PURE DIAMOND LIKE CARBON FILMS AND NANOSTRUCTURED DIAMOND-LIKE CARBON FILMS CONTAINING METALS
F. Garrelie, J.L. Subtil, N. Benchikh, C. Donnet, A.S. Loir, C. Pareige, F. Rogemond, E. Audouard, Laboratoire TSI, UMR CNRS 5516, Université Jean Monnet, Saint Etienne, France
- J-X.04** 16:30 COMPLEX SURFACES ANALYSIS BY LASER-INDUCED BREAKDOWN SPECTROSCOPY
N. Leone, P. Adam, CEB, BP n°3, 91710 Vert le Petit, France, and A. Soric, J. Amouroux, LGPPTS, ENSCP, 11 rue P. & M. Curie, 75005 Paris, France
- J-X.05** 16:45 EVALUATION OF MOLTEN POOL GEOMETRY WITH INDUCED PLASMA PLUME ABSORPTION IN LASER-MATERIAL INTERACTION ZONE
G. Tani, L. Tomesani, G. Campana, A. De Amicis, A. Fortunato, DIEM Department, Faculty of Engineering, Alma Mater University of Bologna, Italy
- 17:00-19:00 **POSTER SESSION III**

POSTER SESSION III
Thursday, June 2, 2005
17:00 – 19:00

Session chairs : Ioanna Zergioti, Salvatore Amoruso, and Valentin Craciun

- J/P3.01** IRRADIATION OF LASER INDUCED NANO PARTICLES PRODUCED BY FEMTOSECOND PULSES
D. Scuderi, O. Albert and J. Etchepare, ENSTA, CNRS, Ecole Polytechnique, 91761 Palaiseau, France
- J/P3.02** FEMTOSECOND PULSED LASER DEPOSITION OF a-C FILMS: THE EFFECT OF DOUBLE LASER PULSES
N. Jegenyés, J. Klebniczki, Z. Bor, Department of Optics and Quantum Electronics, University of Szeged, Dóm tér 9, 6720 Szeged, Hungary, Z. Tóth, B. Hopp, Research Group on Laser Physics of HAS, University of Szeged, Dóm tér 9, 6720 Szeged, Hungary, D. Anglos, C. Fotakis, Institute of Electronic Structure and Laser (I.E.S.L.), Foundation for Research and Technology-Hellas (F.O.R.T.H.), P.O. Box 1527, Vassilika Vouton, 711 10 Heraklion, Crete, Greece
- J/P3.03** ZIRCONIUM DIBORIDE ULTRASHORT PULSED LASER DEPOSITION
L. D'Alessio(a), A. De Bonis(a), A. Galasso(a), A. Santagata(b), R. Teghil(a), P. Villani(a), (a)Dipartimento di Chimica, Università della Basilicata, Potenza, Italy, (b)CNR - IMIP, Sez. Potenza, Tito Scalo (PZ), Italy
- J/P3.04** GROWTH AND CHARACTERIZATION OF BETA-SiC FILMS OBTAINED BY MULTIPULSE FS LASER ABLATION
C. Ghica(a), C. Ristoscu(b), G. Socol(b), D. Brodoceanu(b), L.C. Nistor(a), I.N. Mihailescu(b), A. Klini(c), C. Fotakis(c), (a)National Institute for Materials Physics, PO Box MG-7, Bucharest-Magurele 77125, Romania, (b)National Institute for Lasers, Plasma and Radiation Physics, Lasers Department, PO Box MG-54, Bucharest-Magurele 77125, Romania, (c)Foundation for Research and Technology - Hellas (F.O.R.T.H.) - Institute of Electronic Structure and Laser (I.E.S.L.), PO Box 1527, 71110 Crete, Greece
- J/P3.05** PRODUCTION OF NANOPARTICLES OF DIFFERENT MATERIALS BY MEANS OF ULTRASHORT LASER PULSES
S. Amoruso, G. Ausanio, A. C. Barone, R. Bruzzese, V. Iannotti, L. Lanotte and M. Vitiello, Coherentia - INFN and Dipartimento di Scienze Fisiche, Università degli Studi di Napoli, Piazzale Tecchio 80, 80125 Napoli, Italy
- J/P3.06** NS-LASER-PULSE REHEATING OF TITANIUM PLASMA PLUME INDUCED IN AIR BY AN ULTRASHORT LASER BEAM
A. Santagata, G.P. Parisi, S. Orlando, CNR-IMIP-PZ, Zona Industriale, 85050 Tito Scalo (PZ), Italy, R. Teghil, Dip. Chimica, Università degli Studi della Basilicata, Via N. Sauro 85, 85100 Potenza, Italy, A. De Giacomo, Dip. Chimica, Università degli studi di Bari, Via Orabona 4, 70126 Bari, Italy, M. Dell'Aglio, CNR-IMIP-BA, Via Amendola 122/D, 70126 Bari, Italy
- J/P3.07** INTER-PULSE DELAY TEMPORAL DEPENDENCE OF FS/NS-DUAL-PULSE ORTHOGONAL GEOMETRY PLASMA PLUME REHEATING FOR COPPER-BASED-ALLOYS COMPOSITIONAL ANALYSIS APPLICATIONS
A. Santagata, G.P. Parisi, CNR-IMIP-PZ, Zona Industriale, 85050 Tito Scalo (PZ), Italy, R. Teghil, Dip. Chimica, Università degli Studi della Basilicata, Via N. Sauro 85, 85100 Potenza, Italy, F. Colao, V. Latic, ENEA, FIS-LAS, V. E. Fermi 45, Frascati (RM), Italy, A. Giardini, Dip. Chimica, Università La Sapienza, P. le Aldo Moro 5, 00185 Roma, Italy
- J/P3.08** STRUCTURAL MODIFICATIONS INDUCED BY FEMTOSECOND LASER MARKING OF ALUMINUM SINGLE CRYSTALS
S. Valette, R. Le Harzic, N. Huot, E. Audouard, Laboratoire de Traitement du Signal et Instrumentation, Université Jean Monnet UMR CNRS 5516, 23 rue du docteur Paul Michelon, 42023 Saint-Etienne Cedex 2, France and R. Fillit and R. Fortunier, Ecole Nationale Supérieure des Mines, 158 Cours Fauriel, 42023 Saint-Etienne Cedex 2, France
- J/P3.09** INFLUENCE OF FEMTOSECOND LASER MARKING ON THE CORROSION RESISTANCE OF STAINLESS STEELS
S. Valette, C. Donnet, E. Audouard, Laboratoire Traitement du Signal et Instrumentation, Université Jean Monnet UMR CNRS 5516, 10 rue Barrouin, 42000 Saint-Etienne, France, P. Steyer, J-P. Meillet, INSA de Lyon, LPCI, 20 av. A. Einstein, 69621 Villeurbanne Cedex, France, L. Richard, B. Forest, Ecole des Mines de St Etienne, Centre SMS, 158 cours Fauriel, 42000 St Etienne, France
- J/P3.10** XPS STUDIES OF SHORT PULSE LASER INTERACTION WITH COPPER
P. Stefanov(a), N. Minkovski(b), I. Balchev(b), I. Avramova(a), N. Sabotinov(b), Ts. Marinova(a), (a)Institute of General and Inorganic Chemistry Bulgarian Academy of Sciences, Acad. G. Bonchev Str. bl.11, Sofia 1113, Bulgaria, (b)Institute of Solid State Physics, Bulgarian Academy of Sciences, 72 Tzarigradsko Chousse Boul., Sofia 1784, Bulgaria
- J/P3.11** SELF-ORGANIZED PATTERN FORMATION UPON FEMTOSECOND LASER ABLATION BY CIRCULARLY POLARIZED LIGHT
Olga Varlamova(a,b), Florenta Costache(a,b), Michael Bestehorn(a), Juergen Reif(a,b), (a)Brandenburg. Tech. Univ. Cottbus, (b)IHP/BTU JointLab Cottbus, Konrad-Wachsmann-Allee 1; 03046 Cottbus Germany

- J/P3.12** POINT DEFECT PRODUCTION BY ULTRAFAST LASER IRRADIATION OF ALKALI HALIDE SINGLE CRYSTALS
S. Orlando(b), S.M. Avanesyan(a), S.C. Langford(a), and J.T. Dickinson(a), (a)Physics Department, Washington State University, Pullman WA 99164-2814, USA; (b)CNR-IMIP/PZ, Zona Industriale, 85050 Tito Scalco (PZ), Italy
- J/P3.13** NANOSECOND AND SUB-PICOSECOND LASER ABLATION OF BORON CARBIDE, B₄C
T. Szörényi, Research Group on Laser Physics of the Hungarian Academy of Sciences, University of Szeged, P.O. Box 406, 6701 Szeged, Hungary, A.L. Tóth, Research Institute for Technical Physics and Materials Science, P.O. Box 49, 1525 Budapest, Hungary, J. Faerber, IPCMS-GSI, UMR 7504 CNRS, BP 20, 67037 Strasbourg Cedex 2, France, F. Antoni and E. Fogarassy, CNRS-PHASE, BP 20, 67037 Strasbourg Cedex 2, France
- J/P3.14** PROPERTY IMPROVEMENT OF PULSED LASER DEPOSITED BORON CARBIDE FILMS BY PULSE SHORTENING
T. Csákó and J. Budai, Department of Optics and Quantum Electronics, University of Szeged, P.O. Box 406, 6701 Szeged, Hungary, T. Szörényi, Research Group on Laser Physics of the Hungarian Academy of Sciences, University of Szeged, P.O. Box 406, 6701 Szeged, Hungary
- J/P3.15** PROPAGATION OF LAMNO₃ LASER ABLATION PLUME IN OXYGEN GAS
S. Amoruso, R. Bruzzese, A. Sambri, N. Spinelli, M. Vitiello, X. Wang, Coherentia-INFM and Dipartimento di Scienze Fisiche, Università degli Studi di Napoli Federico II, Complesso Universitario di Monte S. Angelo, Via Cintia, 80126 Napoli, Italy
- J/P3.16** RECOGNITION OF BIOLOGICAL SYSTEMS BY MASS-RESOLVED LASER SPECTROSCOPY
A.Paladini(a), S. Piccirillo(b), F. Rondino(a), M. Tacconi(a), M. Satta(c), D. Catone(a), M. Speranza(a), A. Giardini(c), (a)Dipartimento di Chimica, Università di Roma "La Sapienza", P.le A. Moro 5, 00185 Roma, Italy; (b)Dipartimento di Scienze e Tecnologie Chimiche, Università di Roma "Tor Vergata", Via della Ricerca Scientifica, 00133 Roma, Italy; (c)CNR-IMIP/PZ, 85050 Tito Scalco (PZ), Italy
- J/P3.17** EXCIMER LASER ABLATION OF THIN TITANIUM OXIDE FILMS ON GLASS
O. Van Overschelde and M. Wautelet, Condensed Matter Physics Group, University of Mons-Hainaut, 7000 Mons, Belgium
- J/P3.18** ON DETERMINING THE SPOT SIZE FOR LASER FLUENCE MEASUREMENTS
B. Farkas, Zs. Geretovszky, Department of Optics and Quantum Electronics, University of Szeged, P.O. Box 406., 6701 Szeged, Hungary
- J/P3.19** EXAMINATION BY MASS SPECTROMETRY OF INORGANIC SPECIES PRODUCED BY LASER ABLATION
Frédéric Aubriet, Gilles Frache, Eric Millon, Jean-François Muller, Laboratoire de Spectrométrie de Masse et de Chimie Laser, Université Paul Verlaine de Metz, 1 boulevard Arago, 57078 Metz Cedex 03, France
- J/P3.20** DROPLETS MOVEMENT AND SURFACE QUALITY IN PLD SYSTEMS
A. Marcu¹, C. Grigoriu, National Institute of Laser, Plasma and Radiation Physics, Laser Department, P.O. Box MG-36, St. Atomistilor 409, Bucharest-Magurele, Romania, K. Yatsui, Extreme Energy Density research Institute, Nagaoka University of Tehnology, Nagaoka 940-2188, Niigata, Japan
- J/P3.21** PULSED LASER SURFACE INTERACTION INVESTIGATED BY COUPLED TIME RESOLVED REFLECTIVITY AND PULSE PHOTO-THERMAL METHODS
N. Semmar(a), O. Cibulka(b), J. Martan(b), E. Le Menn(a), C. Leborgne(a), (a)GREMI, UMR 6606, University of Orleans, 45067 Orléans Cedex 2, France, (b)New Technology Center, University of West Bohemia, Plzen, Czech republic
- J/P3.22** STUDY ON METAL MICRODROPLET CONTENT OF THE MATERIAL TRANSFERRED WITH ABSORBING FILM ASSISTED LASER INDUCED FORWARD TRANSFER METHOD WHEN USING SILVER ABSORBING LAYER
T. Smausz, B. Hopp, Hungarian Academy of Sciences and University of Szeged, Research Group on Laser Physics, 6720 Szeged, Dóm tér 9, Hungary, and N. Barna, N. Kresz, Zs. Bor, Department of Optics and Quantum Electronics, University of Szeged, 6720 Szeged, Dóm tér 9, Hungary
- J/P3.23** CHARACTERIZATION OF THE SPATIAL DISTRIBUTION OF EXCIMER LASER FORWARD TRANSFER OF FLUORESCENT MICROSPHERES USING A TRIAZENE ABSORBING LAYER
Maria Dinescu(a), T. Lippert(b), L. Urech(b), A. Wokaun(b), M. Nagel(c), B. Hopp(d), R. Modi(e), R.C.Y. Auyeung(e), and D.B. Chrisey(e), (a)National Institute for Laser, Plasma and Radiation Physics, PO Box MG-16 Magurele, 077125 Bucharest, Romania, (b)Paul Scherrer Institut, 5232 Villigen PSI, Switzerland, (c)Laboratory for Functional Polymers EMPA Swiss Federal Laboratories for Materials Testing and Research, (d)Hungarian Academy of Sciences and University of Szeged, 6720 Szeged, Dom ter 9, Hungary, (e)US Naval Research Laboratory, Washington DC 20375-5345, USA

- J/P3.24** EXCIMER LASER FORWARD TRANSFER OF MAMMALIAN CELLS USING A NOVEL TRIAZENE ABSORBING LAYER
A. Doraiswamy(a), R.J. Narayan(a), T. Lippert(b), L. Urech(b), A. Wokaun(b), M. Nagel(c), B. Hopp(d), M. Dinescu(e), R. Modi(f), R.C.Y. Auyeung(f) and D.B. Chrisey(f), (a)Georgia Institute of Technology, School of Material Science and Engineering, Atlanta Georgia 30332, USA, (b)Paul Scherrer Institut, 5232 Villigen PSI, Switzerland, (c)Laboratory for Functional Polymers EMPA Swiss Federal Laboratories for Materials Testing and Research, Überlandstrasse 129, 8600 Dübendorf, Switzerland, (d)Hungarian Academy of Sciences and University of Szeged, 6720 Szeged, Dom ter 9, Hungary (e)National Institute for Laser, Plasma and Radiation Physics, PO Box MG-16 Magurele, 077125 Bucharest, Romania, (f)US Naval Research Laboratory, Washington DC 20375-5345, USA
- J/P3.25** TWO-DIMENSIONAL DIFFERENTIAL ADHERENCE AND NEUROBLAST ALIGNMENT DRIVEN EXCIMER LASER FABRICATION OF ENGINEERED N35 NERVE BUNDLES
T. Patz(a), A. Doraiswamy(a), R.J. Narayan(a), M. Dinescu(b), R. Modi(c), R.C.Y. Auyeung(c) and D.B. Chrisey(c), (a)Georgia Institute of Technology, School of Material Science and Engineering, Atlanta Georgia 30332, USA (b)National Institute for Laser, Plasma and Radiation Physics, PO Box MG-16 Magurele, 077125 Bucharest, Romania, (c)US Naval Research Laboratory, Washington DC 20375-5345, USA
- J/P3.26** REMOVAL OF DOPED POLY(METHYLMETACRYLATE) FROM TUNGSTEN AND TITANIUM SUBSTRATES BY FEMTO- AND NANOSECOND LASER CLEANING
L. Urech(a), T. Lippert(a), A. Wokaun(a), S. Martin(b,c), H. Mädebach(b,d), J. Krüger(b), (a)Department of General Energy, Paul Scherrer Institut, 5232 Villigen PSI, Switzerland, (b)Working Group for Pulse Laser Technology, Federal Institute for Materials Research and Testing, Unter den Eichen 87, 12205 Berlin, Germany, (c)Present Address: JenLab GmbH, c/o Fraunhofer IBMT, Ensheimer Str. 50, 66386 St. Ingbert, Germany, (d)Present Address: Laser Zentrum Hannover, Laser Components Department, Characterization Group, Hollerithallee 8, 30419 Hannover, Germany
- J/P3.27** LASER ABLATION LITHOGRAPHY ON THERMOELECTRIC SEMICONDUCTORS Cu₂Se, Bi₂Se₃
O.Yu. Semchuk, R.V. Bila, L.G. Grechko, M.S. Lun'ova, Institute of Surface Chemistry NAS of Ukraine, 17 General Naumov Street, 03164, Kyiv, Ukraine and M. Willander, M.Karlsteen, Chalmers University of Technology and Goteborg University, S-41296, Goteborg, Sweden
- J/P3.28** MASK-FREE PHOTOLITHOGRAPHY USING MATRIX-ADDRESSABLE MICRO-PIXELLATED ULTRAVIOLET LEDS WITH INTEGRATED MICRO-LENSES
E. Gu, C.W. Jeon, and M.D. Dawson, Institute of Photonics, University of Strathclyde, Glasgow G4 0NW, U.K.
- J/P3.29** LASER ETCHING OF TRANSPARENT MATERIALS AT A BACKSIDE SURFACE ADSORBED LAYER
R. Böhme, K. Zimmer* Leibniz-Institut für Oberflächenmodifizierung e.V., Leipzig, Germany
- J/P3.30** COMPARING STUDY OF SUB-PICOSECOND AND NANOSECOND WET ETCHING OF FUSED SILICA
Cs. Vass, D. Sebok, Department of Optics and Quantum Electronics, University of Szeged, Dóm tér 9, 6720 Szeged, Hungary, and B. Hopp, Research Group on Laser Physics of the Hungarian Academy of Sciences, 6720 Szeged, Dóm tér 9, Hungary
- J/P3.31** FORMATION OF TANTALUM OXYNITRIDE THIN FILMS USING EXCIMER LAMPS
I.I. Liaw, J.J. Yu and I.W. Boyd, Department of Electronic & Electrical Engineering, University College London, Torrington Place, London WC1E 7JE, U.K.
- J/P3.32** SURFACE PLASMON RESONANCE SPECTROSCOPY ON ROTATED SUB-MICROMETER POLYMER GRATINGS GENERATED BY UV LASER BASED TWO-BEAM INTERFERENCE
M. Csete, G. Szekeres, Cs. Vass, K. Osvay, Zs. Bor, Department of Optics and Quantum Electronics, University of Szeged, Dóm tér 9, Szeged, Hungary, N. Maghelli, M. Pietralla and O. Marti, Department of Experimental Physics, University of Ulm, Albert Einstein Allee 11, 89069 Ulm, Germany
- J/P3.33** APPLICATION OF A DE-MIXING SOLVENT AS A NANO-STRUCTURED REACTION FIELD FOR THE CONTROL OF PHOTO-POLYMERIZATION
M. Kasuya, S. Kajimoto, J. Hogley, K. Hatanaka and H. Fukumura, Department of Chemistry, Graduate School of Science, Tohoku University, Aramaki-Aza-Aoba, Aoba-ku, Sendai, Japan
- J/P3.34** GENERATION OF DEFECTS WITHIN POLY(DIMETHYLSILOXANE)SURFACES BY IRRADIATION WITH 248 NM AND 266 NM
V.-M. Graubner, O. Nuyken, Technische Universität München, Lehrstuhl für Makromolekulare Stoffe, Lichtenbergstr. 4, 85747 München, Germany, T. Lippert, A. Wokaun, Paul Scherrer Institut, General Energy Department, 5232 Villigen PSI, Switzerland, S. Lazare, L. Servant, Université de Bordeaux I, Laboratoire de Physico-Chimie Moléculaire, 33405 Talence cedex, France
- J/P3.35** PHOTOCHEMICAL MODIFICATION OF POLYMER SURFACES USING TRIALKYL SILANES AS REACTIVE COMPOUNDS
J. Spanring, TU Graz, Institute of Chemistry and Technology of Organic Materials, 8010 Graz, Austria, Ch. Buchgraber, Polymer Competence Center Leoben GmbH, 8700 Leoben, Austria, W. Kern, TU Graz, Institute of Chemistry and Technology of Organic Materials, M.F. Ebel and R. Svagera, TU Vienna, Institute of Solid State Physics, Austria

- J/P3.36** INFLUENCE OF LASER PULSE SHAPE ON DRY LASER CLEANING
D. Grojo, A. Cros, Ph. Delaporte, LP3 - CNRS - Université de la Méditerranée, Case 917, 13288 Marseille Cedex 9, France and M. Boyono-Onana, Ecole Nationale Supérieure Polytechnique, BP 8390 Yaoundé, Cameroon
- J/P3.37** GLASS PARTICLES ON GLASS SURFACES - LASER CLEANING STUDIES SHOW "NON-STANDARD" ADHESION & ABSORPTION
S. Pleasants and D.M. Kane, Department of Physics, Macquarie University ~ Sydney, NSW 2109, Australia
- J/P3.38** A COMPARISON OF THE CLEANING CAPABILITY OF A CO₂ AND ND:YAG LASER FOR THE REMOVAL OF ORGANIC CONTAMINANTS FROM TITANIUM ALLOY MATERIAL FOR GAS TURBINE COMPONENT MANUFACTURE
M.W. Turner(a), M.J.J. Schmidt(b) , L. Li(b), (a)Rolls-Royce Compression Systems, Rolls Royce plc, PO Box 3, Skipton Road, Barnoldswick, Lancsh. BB18 5RU, U.K., (b)Laser Processing Research Centre, Department of Mechanical, Aerospace and Manufacturing Engineering, University of Manchester, Sackville Street, Manchester M60 1QD, U.K.
- J/P3.39** INVESTIGATION INTO CW CO₂ LASER CLEANING OF ORGANIC CONTAMINANTS FROM TITANIUM ALLOY MATERIAL FOR GAS TURBINE COMPONENT MANUFACTURE
M.W. Turner(a), M.J.J. Schmidt(b) , L. Li(b), (a)Rolls-Royce Compression Systems, Rolls Royce plc, PO Box 3, Skipton Road, Barnoldswick, Lancsh. BB18 5RU, U.K., (b)Laser Processing Research Centre, Department of Mechanical, Aerospace and Manufacturing Engineering, University of Manchester, Sackville Street, Manchester M60 1QD, U.K.
- J/P3.40** LASER ABLATION PROCESS CONTROLLED BY EMISSION SPECTROSCOPY: APPLICATION TO THE PAINTINGS REMOVAL
G. Nicolás, V. Piñón, M. Mateo & A. Yáñez, Laboratorio de Aplicaciones Industriales del Láser, Universidad de A Coruña, C/ Mendizábal s/n, 15403 Ferrol, Spain
- J/P3.41** LASER IMPULSE COUPLING AT 130FS
Claude R. Phipps and James R. Luke, Photonic Associates, USA, David J. Funk, David S. Moore and James Glowina, Los Alamos National Laboratory, USA, Thomas Lippert, Paul Scherrer Institut, Switzerland
- J/P3.42** EFFECT OF DRILLING ANGLE AND THERMAL BARRIER COATING (TBC) ON THE RECAST FORMATION DURING LASER DRILLING AEROSPACE COMPONENTS
H.K .Sezer and Lin Li, Laser Processing Research Centre, School of Mechanical, Aerospace and Civil Engineering, The University of Manchester, PO Box 88, Manchester M60 1QD, U.K.
- J/P3.43** COMBINING WIRE AND COAXIAL POWDER FEEDING IN LASER DIRECT METAL DEPOSITION FOR RAPID PROTOTYPING
Waheed Ul Haq Syed, Andrew J. Pinkerton and Lin Li, Laser Processing Research Centre, School of Mechanical, Aerospace and Civil Engineering, The University of Manchester, Sackville Street, Manchester M60 1QD, U.K.
- J/P3.44** SOLID FREEFORM FABRICATION OF ALUMINA USING LASER ASSISTED ELECTROSPRAY DEPOSITION
Yiquan Wu, Department of Materials, Imperial College London, London SW7 2AZ, U.K. and Kwang-Leong Choy, School of Mechanical, Materials and Manufacturing Engineering, University of Nottingham NG7 2RD, U.K.
- J/P3.45** LASER-STIMULATING DISPERSION OF SOLID STATES
N. Turaeva, B.L. Oksengenler, I.N. Ruban, S.S. Rashidova, Institute of Polymer Chemistry and Physics, Uzbekistan

Friday, June 3, 2005
Vendredi 3 juin 2005

Morning
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Session XI : Pulsed laser deposition / Processing of thin films

Session chair : **H. Muto**, AIST, Nagoya, Japan

- J-XI.01** 8:30 -Invited- LASER ABLATION OF SOLID TARGETS WITH PS AND FS LASER PULSES
S. Amoroso, G. Ausanio, R. Bruzzese, L. Lanotte, M. Vitiello, X. Wang, Coherencia-INFM and Dipartimento di Scienze Fisiche, Università degli Studi di Napoli Federico II, Complesso Universitario di Monte S. Angelo, Via Cintia, 80126 Napoli, Italy
- J-XI.02** 9:00 PROGRAMABLE BEAM SHAPING FOR ULTRAFAST PROCESSING
E. Audouard, S. Valette, N. Sanner, A. Mermillod-Blondin, N. Huot and R. Stoian, Laboratoire Traitement du Signal et Instrumentation, Université Jean Monnet UMR CNRS 5516, 10 rue Barrouin, 42000 Saint-Etienne, France
- J-XI.03** 9:15 FUNCTIONALIZED POLYSILOXANE THIN FILMS DEPOSITED BY MATRIX ASSISTED PULSED LASER EVAPORATION FOR ADVANCED CHEMICAL SENSOR APPLICATIONS
E.J. Houser(a) and D.B. Chrisey(a), N.D. Scarisoreanu(b), A. Purice(b), D. Colceag(b), C. Constantinescu(b), *M. Dinescu(b), (a)US Naval Research Laboratory, Washington DC 20375-5345, USA, (b)National Institute for Laser, Plasma and Radiation Physics, PO Box MG 16 Magurele, 077125 Bucharest, Romania
- J-XI.04** 9:30 INFLUENCE OF SUBSTRATE TEMPERATURE AND ATMOSPHERE ON NANO-GRAPHENE FORMATION AND TEXTURING OF PULSED Nd:YAG LASER DEPOSITED CARBON FILMS
E. Cappelli(a), M. Servidori(c), S. Orlando(b), C. Scilletta(a), L. Barba(d) and P. Ascarelli(a), (a)CNR-ISC sez. Montelibretti, P.O.B.10, 00016 Monterotondo, Rome, Italy, (b)CNR-IMIP sez. Potenza, P.O.B.27, 85050 Tito Scalo, Potenza, Italy, (c)CNR-IMM sez. Bologna, via P.Gobetti 101, 40129 Bologna, Italy, (d)CNR-IC, sez. Montelibretti, P.O.B.10, 00016 Monterotondo, Rome, Italy
- J-XI.05** 9:45 THICKNESS DETERMINATION OF LARGE-AREA FILMS OF YTTRIA-STABILIZED ZIRCONIA PRODUCED BY PULSED LASER ABLATION
N. Pryds(a), B. Toftmann(b), J. B. Bilde-Sørensen(a), J. Schou(b) and S. Linderth(a), (a)Materials Research Department, (b)Department of Optics and Plasma Research, Risø National Laboratory, 4000 Roskilde, Denmark
- 10:00 **BREAK**

Session XII : Pulsed laser deposition / Processing of thin films

Session chair : **E. Millon**, Université de Metz, France

- J-XII.01** 10:15 -Invited- NEW PLAD APPARATUS AND FABRICATION OF EPITAXIAL FILMS AND JUNCTIONS OF FUNCTIONAL MATERIALS: SiC, GaN, ZnO AND DIAMOND
Hachizo Muto, T. Kusumori, T. Nakamura, T. Asano, T. Hori, Materials Research Institute for Sustainable Development, AIST Chubu, 2266-98 Shimo-Shidami, Moriyama-ku, Nagoya 463-8560, Japan
- J-XII.02** 10:45 STABLE TANTALUM PENTOXIDE THIN FILMS GROWN ON SI SURFACES NITRIDED AT ROOM TEMPERATURE IN NITROGEN-CONTAINING AMBIENTS BY EXCIMER PHOTONS
I.I. Liaw, J.J. Yu and I.W. Boyd, Department of Electronic & Electrical Engineering, University College London, Torrington Place, London WC1E 7JE, U.K.
- J-XII.03** 11:00 MICROFABRICATION OF FREE-STANDING GALLIUM NITRIDE USING UV LASER MICROMACHINING
E. Gu and M.D. Dawson, Institute of Photonics, University of Strathclyde, 106 Rottenrow, Glasgow G4 0NW, U.K., H. Howard, A. Conneely, and G.M. O'Connor National Centre for Laser Applications, National University of Ireland, Galway, Ireland, P. Edwards and R. Martin, Department of Physics, University of Strathclyde, Glasgow G4 0NW, U.K.
- J-XII.04** 11:15 INFLUENCE OF EXPERIMENTAL PARAMETER ON THE Li-CONTENT OF LiMn₂O₄ ELECTRODES PRODUCED BY PULSED LASER DEPOSITION
Th. Dumont, T. Lippert, M. Döbeli, H. Grimmer, P. Novak, A. Würsig, A. Wokaun, Paul Scherrer Institut, 5232 Villigen, Switzerland
- J-XII.05** 11:30 LASER SURFACE TREATMENTS ON TI/TIN COMPOSITES
Milton Sergio Fernandes de Lima, Institute for Advanced Studies (IEAv), Centre for Aerospace Technology (CTA), São José dos Campos (SP), Brazil. Frédéric Folio, Alstom Switzerland Ltd., Birr, Switzerland.
- J-XII.06** 11:45 LASER-GLAZING OF PLASMA-SPRAYED THERMAL BARRIER COATINGS USING CO₂ AND YAG LASERS
C. Batista(a), A. Portinha(a), R.M. Ribeiro(a), V. Teixeira(a) and C.R. Oliveira(b), (a)University of Minho, Physics Department, Campus de Gualtar, 4710-057 Braga, Portugal, (b)IDIT - Instituto de Desenvolvimento e Inovação Tecnológica, 4520-102 Santa Maria da Feira, Portugal and University Lusíada, 4760-108 Vila Nova de Famalicão, Portugal
- 12:00 **LUNCH**

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Afternoon
Après-midi

Session XIII : Pulsed laser deposition

Session chair : **T. Szörenyi**, University of Szeged, Hungary

- J-XIII.01** 13:30 -Invited- MAGNETIC DAMPING IN Fe-BASED FILMS DEPOSITED BY LASER ABLATION IN MAGNETIC FIELD
A.P. Caricato, M. Fernandez, **A. Luches**, University of Lecce, 73100 Lecce, Italy; S. Luby, E. Majkova, L. Chitu, P. Svec, Institute of Physics SAS, Bratislava 84511, Slovak Republic; Z. Frait, D. Fraitova, R. Malych, Institute of Physics, AS CR, Prague 18221, Czech Republic; P. Mengucci, University of Ancona, 60131 Ancona, Italy
- J-XIII.02** 14:00 ADVANCED PULSED LASER DEPOSITION AND HIGHLY ANISOTROPIC MAGNETIC FePt LAYERS
P. Schaaf, Universität Göttingen, II. Physikalisches Institut, Friedrich-Hund-Platz 1, 37077 Göttingen, Germany, M. Weisheit, IFW Dresden, Helmholtzstraße 20, 01069 Dresden, Germany
- J-XIII.03** 14:15 NONLINEAR OPTICAL PROPERTIES OF METASTABLE HEAVY METAL OXIDE GLASS THIN FILMS PRODUCED BY PULSED LASER DEPOSITION
H. Fernández, O. Sanz, J.M. Fernández-Navarro, J. Gonzalo, J. Solís, C.N. Afonso, Instituto de Optica, CSIC, Serrano 121, 28006 Madrid, Spain
- J-XIII.04** 14:30 NANOCRYSTALLINE DIAMOND FILMS WITH HEXAGONAL AND CUBIC PHASES PREPARED BY RADIO-FREQUENCY PLASMA ENHANCED PULSED-LASER DEPOSITION
G. Ouyang(a,b), J. Gao(b), S.W. Li(a), X. Zhou(a) and G.W. Yang(a), (a)State key laboratory of optoelectronic materials and technologies, School of Physics Science & Engineering, Zhongshan University, Guangzhou 510275, China, (b)Department of Physics & Institute of Modern Physics, Xiangtan University, Xiangtan 411105 Hunan, China
- 14:45 **BREAK**

Session XIV : Materials modification

Session chair : **P. Schaaf**, Universität Goettingen, Germany

- J-XIV.01** 15:00 -Invited- USE OF CHEMICAL COATING OF SURFACES COMBINED WITH LASER CLEANING FOR STORAGE AND RECOVERY OF CLEAN SUBSTRATES
D.M. Kane and S. Pleasants, Department of Physics, Macquarie University ~ Sydney, NSW 2109, Australia
- J-XIV.02** 15:30 LASER MICROMACHINING OF SPUTTERED DLC FILMS
Y.Q. Fu(a), J.K. Luo(a), A.W. Flewitt(a), W.I. Milne(a), S.E. Ong(b), S. Zhang(b), (a)Department of Engineering, University of Cambridge, Trumpington Street, Cambridge CB2 1PZ, U.K., (b)School of Mechanical and Production Engineering, Nanyang Technological University, Nanyang Avenue, 639798 Singapore
- J-XIV.03** 15:45 LASER HEATING AND ABLATION AT HIGH REPETITION RATE IN THERMAL CONFINEMENT REGIME
F. Brygo(a), A. Semerok(a), R. Oltra(b), J.-M. Weulersse(a), (a)CEA Saclay, DEN/DPC/SCP/LILM, Gif-sur-Yvette, France, (b)LRRS - UMR 5613 CNRS, Université de Bourgogne, Dijon, France
- J-XIV.04** 16:00 OPTICAL COMPONENTS BASED ON TWO-PHOTON ABSORPTION PROCESS IN FUNCTIONALIZED POLYMERS
S. Klein, A. Barsella, G. Taupier, V. Stortz, A. Fort and K.D. Dorkenoo, IPCMS/GONLO, 23 rue du Loess, BP 43, 67034 Strasbourg Cedex 2, France
- 16:15 **CONCLUSIONS**
Symposium organizers