



**12<sup>th</sup> International  
Conference on Laser Ablation**

**October 6<sup>th</sup> - 11<sup>th</sup>, 2013**

**Ischia (Italy)**

***PROGRAM***

# COLA 2013

## *Institutional Sponsors and Patronages*



Consiglio Nazionale delle Ricerche



UNIVERSITA' DEGLI STUDI DI NAPOLI  
FEDERICO II



**KYUSHU**  
UNIVERSITY



**Dipartimento  
di Scienze**



## **COLA 2013**

### ***12<sup>th</sup> International Conference on Laser Ablation***

*The COLA conference brings together hundreds of scientists from all over the world providing a global, interdisciplinary forum covering topics in a wide range of scientific research areas, from basic science to applications and technology. The conference focuses on a variety of arguments having their core in laser-materials interactions.*

*This edition continues the tradition initiated at the 1991 Conference in Oak Ridge (USA) and 1993 Conference in Knoxville (USA), and strengthened at successive biannual meetings in Strasbourg (France, 1995), Monterey (USA, 1997), Göttingen (Germany, 1999), Tsukuba (Japan, 2001), Crete (Greece, 2003), Banff (Canada, 2005), Tenerife (Spain, 2007), Singapore (2009), and Playa del Carmen (Mexico, 2011).*

#### **The Conference Chairs**

*Stefano Orlando (Italy)*

*Salvatore Amoruso (Italy)*

*Craig Arnold (USA)*

*Tatsuo Okada (Japan)*

## Conference Chairs

Stefano Orlando  
(*CNR-IMIP, Italy*)  
Salvatore Amoruso  
(*Univ. Napoli Federico II & CNR-SPIN, Italy*)  
Craig B. Arnold  
(*Princeton University, USA*)  
Tatsuo Okada  
(*Kyushu University, Japan*)

## Local Organizing Committee

S. Amoruso (*Univ. di Napoli & CNR-SPIN*)  
K. K. Anoop (*Univ. di Napoli & CNR-SPIN*)  
E. Cappelli (*CNR-IMIP*)  
A. P. Caricato (*Università del Salento*)  
G. Compagnini (*Università di Catania*)  
D. Conte (*CNR-IMIP*)  
A. De Giacomo (*Univ. di Bari & CNR-IMIP*)  
P. Dolce (*CNR-IMIP*)  
E. Lucia (*CNR-IMIP*)  
P. K. O'Keeffe (*CNR-IMIP*)  
S. Orlando (*CNR-IMIP*)  
P. Ossi (*Politecnico di Milano*)  
G. P. Parisi (*CNR-IMIP*)  
A. Santagata (*CNR-IMIP*)  
A. Sambri (*Univ. di Napoli & CNR-SPIN*)  
R. Teghil (*Univ. Basilicata & CNR-IMIP*)  
F. Toschi (*CNR-IMIP*)  
D. M. Trucchi (*CNR-IMIP*)  
X. Wang (*CNR-SPIN*)

## Steering Committee

S. Amoruso (Italy)  
C. B. Arnold (USA)  
N. Bityurin (Russia)  
A.P. Caricato (Italy)  
M. Dinescu (Romania)  
E. Haro-Poniatowski (México)  
M. H. Hong (Singapore)  
W. Husinsky (Austria)  
D. Kane (Australia)  
T. Lippert (Switzerland)  
B. Luk'yanchuk (Singapore)  
J. Lunney (Ireland)  
T. Makimura (Japan)  
M. Meunier (Canada)  
Y. Nakata (Japan)

H. Niino (Japan)  
T. Okada (Japan)  
S. Orlando (Italy)  
N. Pryds (Denmark)  
T. Sakka (Japan)  
J. Schou (Denmark)  
R. Stoian (France)  
M. Takai (Japan)  
A. Vertes (USA)  
A. Vogel (Germany)  
X. Xu (USA)  
T. Yabe (Japan)  
I. Zergioti (Greece)  
L. Zhigilei (USA)

## Advisory Committee

C. N. Afonso (Spain)  
D. Bauerle (Germany)  
J. T. Dickinson (USA)  
J. J. Dubowski (Canada)  
E. Fogarassy (France)  
C. Fotakis (Greece)  
D. Geohegan (USA)  
R. F. Haglund, Jr (USA)  
P. R. Hermann (Canada)  
W. P. Hess (USA),  
H. U. Krebs (Germany)  
W. Marine (France)  
K. Murakami (Japan)  
R. E. Russo (USA)  
M. Stuke (Germany)  
K. Sugioka (Japan)

**Monday 7th**

<b>Session I</b>		<b>Laser Ablation I - Fundamentals</b>	
		<i>Chair: R. F. Haglund, Jr</i>	
9.00-9.30	I-01	S. S. Harilal	Ultrafast laser ablation plume diagnostics and applications
9.30-9.45	O-01	L. V. Zhigilei	Computational and Experimental Study of Short Pulse Laser Ablation under Conditions of Spatial Confinement
9.45-10.00	O-02	T. Donnelly	Nanoparticle Plume Dynamics in Femtosecond Laser Ablation of Metals
10.00-10.15	O-03	D.B. Geohegan	Real-time Optical Diagnostics of Graphene Growth Induced by Chemical Vapor and Pulsed Laser Deposition
10.15-10.30	O-04	F. Bourquard	Temporally Shaped Femtosecond Pulsed Laser Ablation Plume Diagnostic: Plasma and Nanoparticles in situ Characterization

**10.30-11.00****Coffee Break**

<b>Session II</b>		<b>Laser Ablation II - Fundamentals (cont.)</b>	
		<i>Chair: Michael Stuke</i>	
11.00-11.15	O-05	M. E. Garcia	Squeezed Thermal Phonons and Fractional Diffusion Laser Excited Silicon
11:15-11:30	O-06	Y. Giret	Modelling and Probing Laser-induced Ultrafast Processes in Metals
11.30-11.45	O-07	M. Halliday	Ultraviolet Laser Desorption of Br-Atoms from Crystalline CsBr Thin Films Grown on LiF, KBr and Cu(100)
11.45-12.00	O-08	N. Inogamov	Generation of Shock Waves by Ultrashort Laser Pulses
12.00-12.15	O-09	C. Focsa	Peculiar Behavior of Plasma Plumes Generated by Femtosecond Laser Ablation of Metallic Targets
12.15-12.30	O-10	Y.Y Tsui	AC Conductivity and Electron Transport of Non-equilibrium Warm Dense Gold

**12.30-13.30****Lunch**

<b>Session III</b>		<b>Laser Processing I - Printing, patterning, perforation, etc.</b>	
		<i>Chair: David B. Geohegan</i>	
15.00-15.30	I-02	A. Palla-Papavlu	Laser Induced Forward Transfer (LIFT) and application
15.30-15.45	O-11	L. Rapp	Direct Versus Beam-shaped Laser Transfer of Micrometric Structures for Passive Components Printing
15.45-16.00	O-12	P. Serra	Laser microprinting: time-resolved microscopy analysis of the liquid ejection dynamics
16.00-16.15	O-13	G. D. Tsibidis	Ripple formation dynamics on silicon surfaces after irradiation with ultrashort laser pulses in submelting or subablation conditions
16.15-16.30	O-14	M. Terakawa	Femtosecond Laser-Triggered Nanoperforation of Polymer Hollow Microsphere

**16.30-17.00****Coffee Break**

<b>Session IV</b>			<b>Laser Processing II - Nano-fabrication and - structuring</b>
			<i>Chair: Yoshiki Nakata</i>
17.00-17.30	I-03	T. Yatsui	Nanophotonics and nanofabrication using near field approaches
17.30-17.45	O-15	X. Xu	Massively Parallel Nanolithography using Nanoscale Antenna Array
17.45-18.00	O-16	N. Bityurin	Bi-chromatic Femtosecond Pulses for Nano-structuring
18.00-18.15	O-17	R. Stoian	Dynamic investigation and control of ultrafast laser-induced nanostructured patterns in bulk optical materials
18.15-18.30	O-18	E. Haro-Poniatowski	Nano and Micro Patterning of Different Surfaces by Laser Irradiation

Monday 7th

18.30-20.00		
<b>Poster session I - Laser Processing</b>		
<i>Chairs: A.P. Caricato, T. Okada, N. Pryds, R. Stoian</i>		
<b>#</b>	<b>Presenting author</b>	<b>Title</b>
P1-01	Leonid V. Zhigilei	Computational Study of the Generation of Crystal Defects and Microstructure Development in Short Pulse Laser Processing of Metals
P1-02	N. Götte	Generation of Functional Structures in Dielectrics on the Nanometer Scale via Shaped Femtosecond Laser Pulses
P1-03	S. Höhm	Femtosecond Time-resolved Diffraction Dynamics of Laser-induced Periodic Surface Structures on Dielectrics
P1-04	M. Girolami	Femtosecond Laser Treated 3D Diamond Detectors for Charged Particles
P1-05	V.P. Zhukov	Absorption instability upon propagation of femtosecond laser pulses in transparent solids and its correlation with formation of volumetric nanomirrors
P1-06	Yuri Chivel	Ablation and Instabilities in Selective Laser Melting Processes
P1-07	L. Gemini	Periodic Structures Self-Formed On The Surface Of Si And SiC Upon fs Laser Irradiation
P1-08	A. Palla Papavlu	Application of Laser Induced Forward Transfer For The Fabrication Of A Flexible Carbon Nanotube Sensor Array
P1-09	N. Bityurin	Laser Swelling of Polymer Surfaces
P1-10	N. Bityurin	Effect of Laser Swelling on Photo Induced Generation of Metal Nanoparticles in Polymer Matrices
P1-11	J. Teteris	Optical Field-induced Surface Patterning of Amorphous Chalcogenide and Azobenzene Containing Polymer Films
P1-12	Dong Wu	Efficient Glass Microwelding by Double-Pulse Irradiation of Ultrafast Laser - Characterization and Mechanism
P1-13	M. Pfeiffer	On femtosecond laser ripple formation in various metals and super-hard ta-C films and possibilities of applications in optics and tribology
P1-14	S. Weissmantel	Microstructuring of Fused Silica and Calcium Fluoride Using Femtosecond Laser Pulses of Various Wavelengths
P1-15	S. Weissmantel	Comparison of Pico- and Femtosecond Laser Ablation and Microstructuring of Various Steels
P1-16	M. K. Bhuyan	Single-Shot Bulk Structuring of Transparent Materials Using Ultrafast Bessel Beams
P1-17	P. Lorenz	Nanosecond Laser-induced Nanostructuring of Dielectric Surfaces
P1-18	P. Lorenz	Pattern Transfer of Submicrometer Scale Structures into Metallic Surfaces by Laser Embossing
P1-19	E. Biver	Laser Forward Transfer of Conductive Inks at Very High Speed: Shadowgraphy of Multi-Jet Regime
P1-20	P.M.Ossi	SERS activity of silver and gold nanostructured thin films deposited by pulsed laser ablation
P1-21	A. Wolak	Precipitation and Modification of Ag Nanoparticles in Soda-Lime Glass during Annealing and Laser Irradiation
P1-22	H. K. Haugen	Investigations of Ultrafast Laser-Based Modification of SiO <sub>2</sub> -Si Samples at 800 nm and 400 nm Laser Wavelengths
P1-23	K. Nakai	Dependence of Atmosphere on Heat Affected Zone of CFRP Formed by Nanosecond Laser Irradiation
P1-24	Neng Liu	Selective area in situ conversion of Si (001) hydrophobic to hydrophilic surface by excimer laser irradiation in hydrogen peroxide
P1-25	E. Stratakis	Pulsed Laser Generation of Novel Nanomaterials for Organic Electronics
P1-26	G. Savriama	Experimental and Numerical Studies of Laser Micro Cutting Wide Band-gap Materials

P1-27	C. M. Galbraith	Inline Coherent Imaging of Laser Ablation and Welding for Industrial and Surgical Applications with kW Class Fiber Lasers
P1-28	A. A. Brand	Thermally induced reduction of ablation thresholds for low damage ultrafast laser ablation of dielectric layers on crystalline silicon solar cells
P1-29	A. Žukauskas	Improvement of the laser fabrication technique for the fiber tip microoptical components
P1-30	M.E. Garcia	Atomistic-Continuum Modeling of Dielectrics Restructuring due to Tight and Localized Energy Deposition
P1-31	H. Pazokian	Ultraviolet Laser Ablation of biocompatible AISI 316L stainless steel for controlling it's wetting properties
P1-32	H. Pazokian	Laser surface modification of polyethersulfone hemodialysis membranes
P1-33	H.Pazokian	Pulsed Ultraviolet Laser induced morphology on Titanium: Micro structuring and changes in biocompatibility
P1-34	G. Galasso	Dynamics of the Nanosecond Laser Ablation Dicing of Thin Silicon Wafers
P1-35	Jiri Bulř	Preparation of silver nanoparticles on zinc phthalocyanine by means of pulsed laser irradiation
P1-36	A. Uccello	Laser Cleaning of Pulsed Laser Deposited Rhodium Films from Tokamak-like Contaminants
P1-37	F. Hendricks	High Aspect Ratio Microstructuring of Transparent Dielectrics using Femtosecond Laser Pulses: Method for Optimization of the Machining Throughput
P1-38	Ravi Bathe	Laser Surface Texturing of Steel for Improving Tribological Behavior
P1-39	T. Rublack	Mechanism of Selective Femtosecond Laser Removal of Various Thin Layers from Different Bulk Materials
P1-40	Daniel Nieto	Submicron Structuring of Glass Materials by Enhanced Laser Ablation
P1-41	H.Y. Tsai	Structural Bonding Matrix for Zerodur® Glass to Aluminium (6061-T6) Alloy by UV Laser
P1-42	W.T. Hsiao	Effect of annealing properties on aluminum doped zinc oxide (AZO) thin films using portable diode laser system
P1-43	Kuo-Cheng Huang	The Impact of Magnetic Field on the Ferromagnetism materials isolated by UV Laser Ablation
P1-44	Kuo-Cheng Huang	The Effects of Sodium and Potassium Ions Altered by 355 nm UV Laser Ablation on the Fracture Cutting of Surface Chemically Strengthened Glass Substrate
P1-45	S.F. Tseng	Effects of UV Laser Milling Parameters on the Profile Cutting of Glass Substrates for Touch Screen Cellphones
P1-46	I. Umezu	Hyperdoping of Silicon with Deep Level Impurities by Pulsed YAG Laser Melting
P1-47	C.K. Chung	Direct-write micro-patterning of gallium-doped zinc oxide films using coaxial microscope machining system
P1-48	Taira Enami	Time Evolution of Silicon Nano-processing Mediated with Plasmonic Scattering of Near-field and Far-field by Femtosecond Laser Irradiation
P1-49	K.C. Huang	Microelectrode patterning of metal films by pulsed UV laser system
P1-50	K.C. Huang	The Fabrication of Planar Spiral Inductances for the Wireless Charging Module by using 355 nm UV Laser Ablation
P1-51	Y. Nakata	Designing of meta-atoms in interfering femtosecond laser processing technique
P1-52	Y. Nakata	Plasmonic device fabricated by interfering femtosecond laser processing
P1-53	J. Bonse	Femtosecond Laser-Induced Periodic Surface Structures on Steel for Tribological Applications
P1-54	S. Panahibakhs	Nanostructure Formation on the Surface of the Nd:YAG Crystal by ArF Laser Irradiation



P1-55	N. Semmar	Real Time Reflectivity Changes during Periodic Surface Structures Formation on Copper Thin Films by ps UV Laser
P1-56	B. Hopp	Production of Low-Reflecting Surface Structure on Metal Films
P1-57	B. Hopp	Laser-Induced Backside Dry Etching: Pulse-Length Dependence
P1-58	Cs. Vass	Polarizer Fabrication by Metal Evaporated Fused Silica Surface Relief Gratings
P1-59	Zhisong Xiao	Investigation on gain properties of active SiO <sub>2</sub> :Er <sup>3+</sup> doping slot waveguide resonator
P1-60	Zhisong Xiao	Mid-infrared emission and energy transfer of Er <sup>3+</sup> /Pr <sup>3+</sup> codoped fluorotellurite glass
P1-61	Seung-Jae Moon	Pulsed Laser and Continuous Wave Laser Sintering of Inkjet-Printed Silver Nanoparticle Ink
P1-62	G. Zanghellini	Facilitating the fabrication of micron scale composite polymer inlays in ceramics substrates using femtosecond pulse laser ablation technique
P1-63	C. Florian	Femtosecond laser ablation of transparent polymer materials
P1-64	E. Haro-Poniatowski	Laser-Patterning of a Silicon Wafer Through a Diffractive Mask
P1-65	E. Haro-Poniatowski	Laser Induced Patterning in Bismuth Thin Films
P1-66	E. Haro-Poniatowski	Optical Transmission in Bi Nanostructures Prepared by Laser Ablation
P1-67	T. Tamsaout	Numerical Investigation of Hydrodynamics Behaviour of Melt Layer During Laser Cutting Of Steel
P1-68	S. Siano	Laser Removal of Mold Growth from Pape
P1-69	S. Siano	Removal of Overpaintings from Easel Paintings Using LQS Nd:YAG Laser
P1-70	J. Delgado Rodrigues	Laser ablation of iron oxide films from granite
P1-71	S. Rekštytė	Laser 3D Nano-Structuring of Polymers Containing No Photo-Initiators
P1-72	C. Constantinescu	Laser-Induced Forward Transfer of Multilayered Structures With Polythiophene-Based Derivatives For Organic Electronic Applications
P1-73	H. Niino	Laser Cutting of Carbon Fiber Reinforced Plastics (CFRP) by Fiber Laser Irradiation
P1-74	G.A. Torchia	Ultrashort Laser Micromachining of Shadow Masks for Film Deposition
P1-75	S. Nakashima	Plasmonic Enhancement of Magneto-optical Effect in Metal-ion-doped Glasses using Femtosecond Laser Irradiation
P1-76	O. Krüger	UV Laser Scribing for Die Separation of GaN-based Photonic Devices on Sapphire Substrates
P1-77	Masaaki Sakakura	Modulation of transient stress distributions for controlling femtosecond laser induced cracks inside a single crystal
P1-78	A. Ahmad	Iron and derived alloys surface treatment by pulsed laser beam at 266, 355 and 1064 nm wavelengths
P1-79	V. Oliveira	Sub-micron Structuring of Silicon using a Michelson Interferometer and Femtosecond Laser Radiation
P1-80	C. Frederik Brasz	Tilting of liquid jets in laser-induced forward transfer at high repetition rates
P1-81	E. Cappelli	fs Ti:sapphire surface treatment to improve solar radiation absorbance of high-tech ceramics. - "Black ceramics" generation for new solar absorbers
P1-82	Joshua Spechler	Plasmonic Pulsed-Laser Welding of Metal Nanowire Networks for Transparent Conducting Layers
P1-83	A.Y. Vorobyev	Nanochemical Effects in Femtosecond Laser Ablation of Metals
P1-84	Carlos Rinaldi	Design and Characterization of Nozzles and Solid Propellants for IR Laser Propulsion
P1-85	O. Utéza	Laser damage and ablation in ultrashort regime: thresholds and energy balance
P1-86	S.F. Spanò	Tunable Photoluminescence of Graphene Oxide Reduced by Laser Irradiation

P1-87	A. Guarnaccio	Time-Resolved Spectroscopies and Structural Properties of Oligothiophene Monomers Combined with Ag Nanoparticles Obtained in Liquid by Ultrashort Laser Ablation
P1-88	F. Baset	Femtosecond laser induced ablation of poly-methyl methacrylate

**Tuesday 8th**

		<b>Session V</b>	<b>Pulsed Laser Ablation in Liquids I</b>
		<i>Chair:</i>	<i>S. Barcikowski</i>
9.00-9.30	I-04	T. Itina	Nanoparticle formation by laser ablation in gases and liquids: modelling and computational approaches
9.30-9.45	O-19	T. Sakka	Space-Resolved Emission Spectroscopy of the Plasma Generated by Laser Ablation in Water
9.45-10.00	O-20	E. Giorgetti	Spectroscopic Evidence of Positive Clusters in Ag Colloidal Suspensions Obtained by Laser Ablation in Aqueous Solutions
10.00-10.15	O-21	F. Mafune	Surfactant-free metal alloy nanoparticles supported on silica prepared by pulsed laser ablation in liquid
10.15-10.30	O-22	G.A. Shafeev	Laser generation of Beryllium nanoparticles in liquids and their influence on the activity of nuclides

**10.30-11.00****Coffee Break**

		<b>Session VI</b>	<b>Pulsed Laser Ablation in Liquids II (cont.)</b>
		<i>Chair:</i>	<i>Michel Meunier</i>
11.00-11.15	O-23	W. Marine	Synthesis of Nanohybrid Materials by Infra-Red Femtosecond Laser Ablation in Liquids
11.15-11.30	O-24	P. Wagener	Dynamics of Nanoparticle Formation after Pulsed Laser Ablation in Liquid Studied by Spatiotemporal-resolved SAXS
11.30-11.45	O-25	K. Sasaki	Dynamics of Plasmas and Cavitation Bubble Like Phenomena Observed in Laser Ablation in Supercritical Fluids
11.45-12.00	O-26	A. De Bonis	Ultra-short Laser Ablation of Metallic Targets in Liquid: Cavitation Bubble and Shockwave Dynamics Survey for the Formed Nanoparticles Properties
12.00-12.15	O-27	Y. Ito	Laser Ablation under Liquid Studied through Fast Laser Stroboscopic Videography: Dynamics of Cavitation Bubbles and Shock Waves
12.15-12.30	O-28	S. M. O'Malley	Formation of Organic Nanoparticles by Laser Ablations in Liquids utilizing MAPLE deposited Thin Films

**12.30-13.30****Lunch**

		<b>Session VII</b>	<b>Pulsed Laser Deposition and Thin Films I</b>
		<i>Chair:</i>	<i>Thomas Lippert</i>
15.00-15.30	I-05	Y. Chen	A high-mobility two-dimensional electron gas at the spinel/perovskite interface of $\gamma$ -Al <sub>2</sub> O <sub>3</sub> /SrTiO <sub>3</sub> grown by pulsed laser deposition.
15.30-15.45	O-29	D. Pergolesi	Tuning the Strain by Thin Film Pulsed Laser Deposition
15.45-16.00	O-30	J. Gonzalo	X-Ray Absorption spectroscopy study of the Nb Local Environment in Heavy Metal Oxide Film Glasses Produced by Pulsed Laser Deposition
16.00-16.15	O-31	S. Nakao	Position-controlled and Catalyst-free ZnO nano-crystals by nanoparticle-assisted pulsed laser deposition
16.15-16.30	O-32	J. G. Lunney	Comparison of Nanosecond and Femtosecond Pulsed Laser Deposition of Metal Nanoparticle Films

**16.30-17.00****Coffee Break**

<b>Session VIII</b>		<b>Pulsed Laser Deposition and Thin Films II (cont.)</b>	
		<i>Chair: Maria Dinescu</i>	
17.00-17.30	I-06	W. Prellier	Combinatory epitaxy of oxides films made by laser ablation from single crystals to polycrystalline substrates
17.30-17.45	O-33	F. Kokai	Catalyst-Free Growth of Some One-Dimensional Nanostructures and the Proposal of a Novel Growth Mechanism
17.45-18.00	O-34	R. D. Priestley	Formation of Nanostructured Amorphous Polymer Films Via MAPLE
18.00-18.15	O-35	F. Garrelie	Synthesis of large area graphene layers by pulsed laser deposition
18.15-18.30	O-36	S. Weissmantel	Pulsed Laser Deposition of Multilayers of Nanometer Thick Metallic Films

Tuesday 8th

18.30-20.00		
<b>Poster session II - Synthesis of films, nanoparticles and nanostructures</b>		
<i>Chairs: N. Bityurin, H. Niino, P. M. Ossi, X. Xu</i>		
<b>#</b>	<b>Presenting author</b>	<b>Title</b>
P2-01	M. Povarnitsyn	Hydrodynamic simulation of laser ablation of gold into water
P2-02	I.N. Zavestovskaya	Modeling of the Metal Nanoparticles Fragmentation Processes
P2-03	Julien Lam	Plasma spectroscopy during laser ablation in liquid: as a tool to understand the growth processes
P2-04	Daniel M. Bubb	Size Control of Gold Nanoparticles Produced by Laser Ablation in Liquid
P2-05	T. Shimogaki	The Fabrication of Spherical Micro Semiconductor Crystals by the Simple Laser Ablation Method
P2-06	A.A. Samokhin	Acoustical Monitoring of Laser Ablation Processes
P2-07	P. Chewchinda	Promoting the Yield of Silicon Nanoparticles Prepared by Laser Ablation in Liquid
P2-08	N. Tarasenko	Laser Assisted Synthesis of Gadolinium Germano-Silicide Nanoparticles in Solution
P2-09	N.Tarasenko	Laser Assisted Formation of Doped ZnO Nanocrystals in Solution
P2-10	T. Smausz	Nanoparticle Generation From Nitinol Target Using Pulsed Laser Ablation
P2-11	T. Smausz	Pulsed Laser Deposition of Polytetrafluoroethylene-Gold Composite Layers
P2-12	G.C. Messina	Au/Ni Colloidal Nanoalloying Through Pulsed Laser Irradiation
P2-13	J. Bruncko	Influence of Laser Wavelength on Nanoparticles Properties Produced by Pulsed Laser Ablation in Liquid
P2-14	C.K. Chung	Er: YAG Laser Perforating System for Multiple Blood Collections
P2-15	K. Sasaki	Synthesis of Brookite-Type TiO <sub>2</sub> by Laser Irradiation onto a Titanium Plate in High-Temperature, High-Pressure Water
P2-16	P.G. Kuzmin	Laser Assisted Generation of Gold Nanoparticles and Nanostructures in Liquid and Their Luminescence Properties
P2-17	A. Santagata	Preparation of Silver Nanoparticles Confined in SBA-15 Mesoporous Silica by Ultrashort Pulsed Laser Ablation in Liquid
P2-18	G. Baraldi	Plasmonically decorated Mo substrates for enhancing light trapping
P2-19	M. A. Sahiner	Zr Induced Structural Changes in Hf <sub>1-x</sub> Zr <sub>x</sub> O <sub>2</sub> Pulsed Laser Deposited High-k Thin Films
P2-20	N. Abdellaoui	Design of plasmonic rare earth phosphor films by Pulsed Laser Deposition
P2-21	N. Abdellaoui	Growth of CaYAlO <sub>4</sub> :Pr <sup>3+</sup> Films for Photovoltaic Applications
P2-22	C. Xu	Correlation between Thin Film Stoichiometry and Surface Diffusion in Pulsed Laser Deposited SrTiO <sub>3</sub> Thin Films
P2-23	A. Sposito	Multi-beam PLD of magneto-optic garnets
P2-24	A. D. Stiff-Roberts	Blended Polymer Films by Emulsion-Based RIR-MAPLE: Deposition of an Organic, Optical Effective Medium
P2-25	V. Kekkonen	Enabling Pulsed Laser Deposition in Industrial-Scale Production with Coldab® Thin-Film Deposition Technology
P2-26	T. Heeg	A Fully Featured Pulsed Laser Deposition System for in-situ Synchrotron X-Ray Diffraction Studies
P2-27	M. Castillejo	Stoichiometric Magnetite Grown by Infrared Nanosecond Pulsed Laser Deposition on SrTiO <sub>3</sub> Substrates
P2-28	E. Rebollar	Analysis of SERS Substrates Based on Gold Coated Nanostructured Polymer Films
P2-29	A. Marcu	High Repetition Rate Laser Ablation for VLS Nanowire Grow

P2-30	M. K. Jayaraj	Structural, Optical and Electrical Properties Ag doped $\text{Bi}_{1.5}\text{Zn}_1\text{Nb}_{1.5}\text{O}_7$ Grown by Pulsed Laser Deposition
P2-31	M. K. Jayaraj	Magnetic and Optical Properties of Highly Oriented $\text{Zn}_{1-x}\text{Ni}_x\text{O}$ Thin films Grown by PLD
P2-32	C. Sánchez-Aké	Combinatorial Pulsed Laser Deposition Using the Time Delay Between Laser Pulses as Dopant Control for the Growth of Al and Mn-doped ZnO Films
P2-33	D. Dellasega	Permeation and Erosion Properties of Amorphous-like Metallic Films Deposited by Pulsed Laser Deposition
P2-34	Francis B. Dejene	Characterization of structural and luminescence properties of blue-green $\text{SrAl}_x\text{O}_y:\text{Eu}^{2+}, \text{Dy}^{3+}$ thin films deposited by PLD system
P2-35	M. Gupta	Nanostructured PbSe growth for photonic applications using pulsed laser deposition
P2-36	G. Vardanyan	Non-trivial Optical Properties of Pulsed Laser Deposited Amorphous Cadmium Telluride Thin Films
P2-37	T. Kocourek	Characterization of thermoelectric multilayered structures $\text{Ce}_{0.09}\text{Fe}_{0.67}\text{Co}_{0.33}\text{Sb}_{12}/\text{FeSb}_{2.1}\text{Te}$ prepared by laser ablation
P2-38	E. Thelander	Pulsed Laser Deposition of Ge-Sb-Te Based Thin Films for Phase Change Data Storage Applications
P2-39	R. Delmdahl	Excimer Lasers for Pulsed Laser Deposition
P2-40	A. Andrei	Thin films of ternary and quaternary systems: W/C/Mg/O/N obtained by pulsed laser deposition
P2-41	F. Döring	Pulsed Laser Deposition of Multilayers, Designed for Minimizing Thermal Conductivity
P2-42	S. Weissmantel	Pulsed Laser Deposition of Cubic Boron Nitride Films and of Multilayers of Hexagonal and Cubic Boron Nitride
P2-43	Tomáš Kocourek	DLC layers prepared by PLD simultaneously modified with ion bombardment
P2-44	P. Písařík	Chromium doped DLC films deposited by dual pulsed laser deposition
P2-45	A. Vlad	Optical and Electrical Properties of Ni Based LDH Thin Films Deposited via Laser Techniques
P2-46	I. Lopez-Quintas	Micrometric Hollow Square Rods fabricated by PLD of Boron Carbide
P2-47	Da-Ren Liu	Synthesis and magnetic properties of Co-doped ZnO hollow nanospheres
P2-48	Takehito Yoshida	Relationship of Photocatalytic Activity to Crystal Structure of $\text{TiO}_2$ Nanoparticles Synthesized by Reactive Pulsed Laser Ablation
P2-49	I. Umezu	Self-organized Pattern Structure of $\text{TiO}_2$ Nano-aggregates Prepared by Pulsed Laser Ablation in Background Gas
P2-50	I. D. Feraru	Structural and Morphological Properties of Nd-doped $\text{Li}_2\text{O}-\text{BaO}-\text{Al}_2\text{O}_3-\text{La}_2\text{O}_3-\text{P}_2\text{O}_5$ Thin Films Prepared by PLD Method
P2-51	Z. Szymanski	Laser-deposited $\text{Cu}/\alpha\text{-Al}_2\text{O}_3$ Nanocomposite: Experiment and Modelling
P2-52	V. Craciun	Characteristics of Transitional Metals Carbo-Nitrides Thin Films Grown by Pulsed Laser Deposition
P2-53	Valentin Craciun	Combinatorial Pulsed Laser Deposition of Doped $\text{HfO}_2$ Thin Films for Ferroelectric Applications
P2-54	A. Matei	Characterization of ferrocene-based films produced by matrix assisted pulsed laser evaporation (MAPLE)
P2-55	A. Matei	Optical properties of azoderivative/ polymer thin films deposited by MAPLE
P2-56	R. Birjega	Stearate/ layered double hydroxides (LDH) composite thin films deposited by MAPLE and PLD
P2-57	N. D. Scarisoreanu	Compositional Dependence of Structural, Optical and Electrical Properties of $(\text{Ba}_{1-x}\text{Ca}_x)(\text{Zr}_y\text{Ti}_{1-y})\text{O}_3$ Thin Films Obtained by Pulsed Laser Deposition
P2-58	A. Sambri	Pulsed Laser Ablation of $\text{LaAlO}_3$ : Spectrally resolved imaging of the plume and Thin Film Stoichiometry

P2-59	M. Dinescu	Effect of the Composition and Topography of Substrates on TiO <sub>2</sub> Thin Films Deposited via Laser Techniques
P2-60	M. Filipescu	Thin Films of Tungsten Oxide Nanoparticles Embedded in Polyaniline Matrix by MAPLE Technique for Sensors Application
P2-61	H. Namai	Growth of High Crystalline <i>p</i> -Type ZnO Film by Infrared Light Assist Pulsed Laser Deposition and its Laser Annealing
P2-62	R. Teghil	Ultrashort Pulsed Laser Deposition of Gallium Arsenide: a Comprehensive Study
P2-63	M. Sansone	Femtosecond Laser Ablation and Deposition of CaF <sub>2</sub>
P2-64	L. Escobar-Alarcón	Pulsed Laser Deposition of Nanostructured Bi Thin Films in Vacuum with a YAG:Nd Laser
P2-65	L. Escobar-Alarcón	Preparation of Bi:TiO <sub>2</sub> Thin Films by an Hybrid Deposition Configuration: Pulsed Laser Deposition and Thermal Evaporation
P2-66	F. Trier	Pulsed laser deposition of amorphous-LaAlO <sub>3</sub> /SrTiO <sub>3</sub> interfaces under the action of an external electric field
P2-67	A. Lančok	Growth and Magnetic Properties of Co <sub>2</sub> FeSi and Ni <sub>2</sub> FeGe Heusler alloys thin films prepared by Pulsed Laser Deposition
P2-68	Y. Sun	Pulsed laser deposition of low resistivity transparent conducting Al-doped ZnO films at room temperature and its transparent thin-film transistor applications
P2-69	C. Focsa	Pulsed Laser Deposition of Gallium Lanthanum Sulphide Chalcogenide Thin Films
P2-70	A. Stanculescu	Laser Prepared Organic Heterostructures Based on Star-Shaped Arylenevinylene Compounds
P2-71	K. Yahiaoui	Thin films growth from alumina target irradiated by a KrF laser
P2-72	R. F. Haglund, Jr.	RIR-MAPLE Deposition of a Polymer Nanocomposite Anti-Reflective Coating
P2-73	A.Smaali	Highly Textured Transparent and Conductive ZnO and ZnO:V Thin Films Deposited by Pulsed Laser Deposition
P2-74	F.B. Dejene	Structural and luminescence properties of violet emitting CaAl <sub>4</sub> O <sub>7</sub> :Eu;Dy, thin film phosphors prepared by Pulsed Laser Deposition
P2-75	F.B. Dejene	Crystal structures and photoluminescence properties of Sr <sub>2</sub> CeO <sub>4</sub> :Eu <sup>3+</sup> phosphor thin films prepared by Laser ablation
P2-76	A. Lorusso	Pulsed Laser Ablation Deposition for Innovative Photocathodes based on Metallic Thin Films
P2-77	K. B. Shepard	Nanostructured Polymer Glasses via Matrix Assisted Pulsed Laser Evaporation
P2-78	S. Kamada	Effect of applied electric field and off-axis method in pulsed-laser-deposition
P2-79	A. P. Caricato	Pulsed laser deposition of dense and uniform Au nanoparticle layer for surface plasmon enhanced efficiency hybrid solar cells
P2-80	L. Duta	Synthesis and Characterization of Anion Doped and Noble Metal Loaded TiO <sub>2</sub> Photocatalysts
P2-81	E. Orabona	TiO <sub>2</sub> Nanoparticles Produced by Ultrafast Laser Ablation: Structural Characterization and Optical Gas Sensing Applications
P2-82	R. Bernard	Study of SrTiO <sub>3</sub> Thin Films Grown from Sr-Ti Metallic Targets for Htc Microwave Applications
P2-83	A. Morone	Magnetic properties of ferromagnetic thin films obtained by Magneto-Optic Kerr Effect measurements
P2-84	K. Koga	Morphology-controlled composite nanoparticles composed of a noble metal and an oxide
P2-85	D. B. Geohegan	Ultrasmall Nanoparticles in Laser Vaporization: "Building Blocks" in the Synthesis of Nanostructures and Thin Films
P2-86	C.M. Rouleau	Alloy Nanoparticle Synthesis by through Thin Film Femtosecond Laser Ablation: Catalysts for Carbon Nanotube Growth

P2-87	R.Zakaria	Nonlinear Effect of Metal Nanoparticles Synthesized by Laser Ablation
P2-88	I. Zergioti	Nanosecond and Picosecond Laser Annealing and Simulation of a-Si Thin Films for Solar Cell Applications
P2-89	I. Zergioti	Laser Printed Polymeric Semiconductor/Reduced Graphene Oxide Composite for Electronic Devices



**Wednesday 9th**

<b>Session IX</b>		<b>Bio- and analytical applications I</b>	
<i>Chair: Ioanna Zergioti</i>			
9.00-9.30	I-07	S. Freidank	Vortex-Beam Laser Focus Shaping for Ultraprecise Plasma-Mediated Eye Surgery
9.30-9.45	O-37	M. Meunier	Plasmonic Enhanced Pulsed Laser-Induced Nanocavitation and Transfection of Cells: Effects of the Nanostructure Geometry and Laser Pulse Width
9.45-10.00	O-38	A. Rode	Quasi-Bessel hollow beam as an optical injector of micro-particles
10.00-10.15	O-39	C. Altucci	Nano- and femto-second UV laser pulses to immobilize biomolecules onto surfaces with preferential orientation
10.15-10.30	O-40	E. Stratakis	Direct Laser Texturing of Biomimetic Surfaces for Neural Tissue Engineering

**10.30-11.00****Coffee Break**

<b>Session X</b>		<b>Bio- and analytical applications II (cont.)</b>	
<i>Chair: Alfred Vogel</i>			
11.00-11.15	O-41	A. Vertes	Plume Collimation for Laser Ablation Electrospray Ionization (LAESI) Mass Spectrometry
11:15-11:30	O-42	K. Dreisewerd	Desorption/Ablation Mechanisms in Matrix-Assisted Laser Desorption Ionization Mass Spectrometry
11.30-11.45	O-43	G.M. Bilmes	Laser Cleaning of Glassware by Using Back Incidence Irradiation
11.45-12.00	O-44	M. P. Mateo	Influence of Atmosphere on Ultraviolet Femtosecond Double Pulse Laser Induced Breakdown Spectra
12.00-12.15	O-45	P. Gregorčič	In-Vitro Study of Optodynamic Effects in Er:YAG-Laser Cleaning of the Root Canal
12.15-12.30	O-46	N. Cioffi	Femtosecond Laser-Ablation Synthesis of Hybrid Copper-Chitosan Nanoantimicrobials

**12.30-13.30****Lunch****Excursion****Social Dinner**

**Thursday 10th**

<b>Session XI</b>		<b>Laser Processing III - Periodic structures, ripples, etc.</b>	
		<i>Chair: Emmanuel Haro Poniatowski</i>	
9.00-9.30	I-08	C. Guo	The black and colored metals and applications
9.30-9.45	O-47	J. Reif	On the Physics of Self-Organized Nanostructure Formation upon Femtosecond Laser Ablation
9.45-10.00	O-48	M. Hashida	Formation Threshold of Self-Organized Periodic Grating Structures Formed on Metal Surfaces by Femtosecond Laser Ablation
10.00-10.15	O-49	T.J.-Y. Derrien	Numerical Analysis of LIPSS Coverage on Silicon Upon Irradiation with Multiple Double-fs-Pulse Sequences: The Impact of Carriers and Cumulative Effects
10.15-10.30	O-50	I. Zergioti	Heavy metal ions biosensor via Laser Induced Forward Transfer

**10.30-11.00**

**Coffee Break**

<b>Session XII</b>		<b>Laser Processing III - Periodic structures, ripples, etc. (cont.)</b>	
		<i>Chair: Leonid V. Zhigilei</i>	
11.00-11.15	O-51	Dong Wu	3D Multifunctional Biochips Prepared by Hybrid Femtosecond Laser Micromachining
11:15-11:30	O-52	X. Sedao	High-Resolution EBSD Study of Femtosecond Laser-Induced Phase Transformation Associated with LIPSS Formation
11.30-11.45	O-53	F. Baset	Femtosecond laser induced nano-pillar formation in bulk poly-methyl methacrylate (PMMA)
11.45-12.00	O-54	E. Rebollar	Physicochemical Modifications Induced by UV Laser Induced Periodic Surface Structures on Polymer Films
12.00-12.15	O-55	A. Ambrosio	Large scale micro- and nano- structuring of azobenzene-containing polymer films
12.15-12.30	O-56	F. Di Fonzo	Order from the disorder: hyperbranched nanostructures self-assembled from the gas phase. Applications to photovoltaic, water splitting and smart surfaces

**12.30-13.30**

**Lunch**

<b>Session XIII</b>		<b>Laser Ablation III: Dielectrics</b>	
		<i>Chair: Marta Castillejo</i>	
15.00-15.30	I-09	E. Gamaly	Ultrafast laser pulse interaction with dielectrics
15.30-15.45	O-57	T. Winkler	Real Time Observation of Transient Electron Density in High Bandgap Dielectrics Irradiated with Tailored Femtosecond Laser Pulses
15.45-16.00	O-58	N.M. Bulgakova	Some critical answers to open questions on ultrafast laser modification of transparent solids
16.00-16.15	O-59	J. Ihlemann	Silicon Suboxide (SiO <sub>x</sub> ) - Ideally Suited for Laser Ablation and Applications
16.15-16.30	O-60	P. Balling	Modeling Short-pulse Excitation of Dielectrics

**16.30-17.00**

**Coffee Break**

<b>Session XIV</b>		<b>Laser Ablation IV: Novel approaches</b>	
		<i>Chair: Akos Vertes</i>	
17.00-17.15	O-61	M. Castillejo	Harmonic Generation in Laser Ablation Plasmas of Nucleobases
17.15-17.30	O-62	J. Lančok	Ablation of Metals and Si induced by Capillary-Discharge XUV laser
17.30-17.45	O-63	J. Schou	Laser ablation of the protein lysozyme with pulses in the UV, visible and infrared regime by nanosecond and femtosecond lasers.
17.45-18.00	O-64	J. Chen	Pulsed Laser Interaction with Ultra-Low Density Macroporous Materials; the Case of 3-Dimensional Carbon Nanotube sponge
18.00-18.15	O-65	W. Husinsky	Study of ion emission from metal surfaces upon irradiation by sub-10 femtosecond laser pulses
18.15-18.30	O-66	A. Mendys	Investigation of Aluminum Laser-Induced Plasma Plume by Laser Scattering Methods

Thursday 10th

18.30-20.00		
<b>Poster session III - Laser Ablation: Fundamentals and Applications</b>		
<i>Chairs: C. B. Arnold, E. Cappelli, R. Teghil, W. Husinsky</i>		
<b>#</b>	<b>Presenting author</b>	<b>Title</b>
P3-01	N. Inogamov	Laser-induced melting, foaming and freezing of nano-structures at metal surface
P3-02	B. Y. Mueller	Relaxation dynamics in laser-excited metals under non-equilibrium conditions
P3-03	F. Garrelie	Influence of Temporal Pulse Shaping on Graphite Femtosecond Laser Ablation Plume and Diamond-like Carbon Deposition
P3-04	A. Kiselev	Molecular Dynamics Simulations of Laser Ablation in Covalent Materials
P3-05	S.V. Starinskiy	Silver and gold nanoclusters produced by pulsed laser ablation
P3-06	E. Bévillon	Ab Initio Calculations of Transient Optical Properties of Metals under Femtosecond Laser Irradiation
P3-07	C. S.R. Nathala	Ablation of Metals by sub-10 femtosecond pulses
P3-08	C. Rinaldi	Characterization of Laser Ablation Process of Metals Samples at 1064 nm by Time Resolved Electrical Signal
P3-09	Hiroki Hagihara	Effects of Shock Wave on Plume by Double Pulsed Laser Ablation
P3-10	T. Požar	Time- and radial-dependence of the normal force accompanying laser-pulse ablation
P3-11	T.E. Itina	Numerical Analysis of Ultra-Short Laser Interactions with Dielectric Materials
P3-12	Z. Szymanski	The Effect of Laser Wavelength on the Ablation Rate of Carbon
P3-13	K. F. Al-Shboul	Enhanced Carbon Clusterization in Colliding Laser Ablated Plumes
P3-14	L. Díaz	Time evolution of the Laser Ablation Plasma Plume on SiO
P3-15	J. Mauricio Paulin F.	Dipolar and Quadrupolar Electric Field Generated by a Laser Induced Plasma in Air
P3-16	N. Farid	Characteristics of Ambient Plasma Generated During Hydrodynamic Expansion of Laser-produced W Plasma
P3-17	V. Nassisi	Emittance study for ion beams provided by Laser Ablation
P3-18	L. Velardi	Proton Extraction by Laser Ablation of Transition Metals
P3-19	A.N. Starodub	About Hydrodynamic Efficiency of Interaction of Laser Radiation with Matter
P3-20	J. Schou	Laser deposition rates of thin films of selected metals and alloys
P3-21	M. Mond	On the Expansion of a Laser-Produced Plasma into Vacuum
P3-22	Xuan Wang	Ion dynamics in ultrafast laser ablation of a copper target
P3-23	K. K. Anoop	Ultrafast Laser Ablation of Copper: temporally and spectrally resolved imaging analysis of the different plume populations
P3-24	Reji Philip	Spectroscopic Analysis of Femtosecond Laser Produced Plasma from a Solid Copper Target
P3-25	Reji Philip	Time-resolved spectroscopy of CI and CII line emissions from an ultrafast laser produced solid graphite plasma
P3-26	J. Chen	Semi-quantitative analysis of laser induced $\text{La}_x\text{Ca}_{1-x}\text{MnO}_3$ plasma by mass spectrometry
P3-27	W. Wendelen	Theoretical considerations for modelling ultrashort laser induced electron emission from a DC-biased metal
P3-28	S. Ratynskaia	On the energy of prompt electrons in the nanosecond low-intensity regime
P3-29	S. Canulescu	The angular distribution of the laser ablation plume from gold-copper alloys with pulses in the UV and visible regime from nanosecond and femtosecond lasers
P3-30	V.I. Mazhukin	Continuum modeling of pulsed laser fragmentation of the metal with the homogeneous melting
P3-31	V.I. Mazhukin	Modeling of Thin Film Explosive Boiling – Surface Evaporation Effect

P3-32	S. Lafane	Laser Ablated V <sub>2</sub> O <sub>5</sub> Target Under Vacuum: Effect of the Laser Fluence
P3-33	R. Shinya	Molecular Introduction into Single Plant Cell by a Femtosecond Laser Ablation
P3-34	Umm-i-Kalsoom	Nano-Second Pulsed Laser Ablation of Al in non-reactive and reactive Environments
P3-35	Georgije Bosiger	Optodynamic characterization of Erbium laser ablation using piezoelectric detection
P3-36	José M. Vadillo	Understanding Fragmentation Processes in Laser-Induced Plasma Spectroscopy Of Organic Compounds Using Simultaneous Ion-Photon Measurements
P3-37	J. Hoffman	Expansion of Laser-Ablated Plumes with Disparate Masses
P3-38	A. Marcu	Laser Plume interaction with fusion Interest materials
P3-39	S.V. Starinskiy	A multiparametric study of pulsed laser ablation of silver and gold in the regimes of nanocluster synthesis
P3-40	M. Sigletou	Laser Induced Fluorescence of Plasmonic Organic Solar Cells
P3-41	A. Selimis	Guided Neuronal Cells Growth on 3D scaffolds Fabricated by Direct femtosecond Laser Writing
P3-42	Jens Soltwisch	Probing Ion Yields and Material Ablation in UV-MALDI-MS as a Function of Laser Wavelength and Fluence for Four Different Matrices
P3-43	R. Lachaine	Nanoplasma Formation Around Gold Nanoparticles in Plasmonic Enhanced Ultrafast Laser-Induced Nanocavitation
P3-44	Nek. M. Shaikh	Effect of Transverse Magnetic Field on Tin Plasma Produced by CO <sub>2</sub> Laser
P3-45	P. Gregorčič	Optodynamic Analysis of Nd:YAG Laser Capsulotomy
P3-46	P. Gregorčič	Optodynamic energy-conversion efficiency during laser ablation on metal surfaces measured by shadow photography
P3-47	A. Mendys	Influence of Electron Temperature on Emission Spectra in Double-Pulse Laser-Induced Plasma
P3-48	S. Grigorescu	Functional Protein Micropatterns Obtained by Nanosecond UV Laser Direct Write: a Biochemical and In-vitro Study
P3-49	V. Sathiesh Kumar	Evaluation of a LIBS Method for Remote Detection of a Salt Deposit on a Wind Turbine Blade
P3-50	Daniel J. O. Orzi	LIBS and Laser Cleaning in the Treatment of Periodontal Disease
P3-51	G.M. Bilmes	Determination of quality and composition of tobacco by LIBS.
P3-52	Aparna N	Feasibility Study for Detecting Copper Contaminants in Transformer Insulation Using Laser Induced Breakdown Spectroscopy
P3-53	M. Jelinek	Biocompatible Properties of Laser Prepared Cr Doped DLC
P3-54	R. Delmdahl	193 nm LA-ICP-MS Solid Sample Analysis
P3-55	J. Mikšovský	Mechanical and Antibacterial Behavior of TiO <sub>2</sub> Thin Films Prepared by PLD
P3-56	A. Palla Papavlu	Transdermal Patches Prepared By Matrix Assisted Pulsed Laser Evaporation
P3-57	S. S. Harilal	Quantitative comparisons of single-pulse and double-pulse LIBS using Nd:YAG-CO <sub>2</sub> laser combination
P3-58	D. C. Dumitras	Investigation of Surgical Smoke Produced in vitro by CO <sub>2</sub> Laser Ablation of Animal Tissues
P3-59	M. Wiegmann	Adjustment of the Laser Wavelength to Match the Absorption Properties of Matrices Increases the Ion Yield in UV-MALDI Mass Spectrometry
P3-60	M. Dinescu	MAPLE Graphene-Based Hybrid Interfaces for the Electrochemical Quantification of the Nitro-Oxidative Species of Clinical Significance
P3-61	L. Rusen	LIFT and MAPLE Methods for Obtaining Multicomponent Protein-Polymer Patterns with Controlled Cell Binding Properties
P3-62	J. Heitz	Detection of Phosphorus in Industrial Oxide Materials by Laser-induced Breakdown Spectroscopy in the UV spectral range
P3-63	E.V. Barmina	Laser- assisted nanostructuring of Silicon and Tungsten in liquid environment
P3-64	M. Dinescu	Electrically Stimulated Scaffolds for Tissue Engineering Applications

P3-65	S. Kurumi	Measurement of Ablation Plumes Spectra from Earthworms for the Soil Assessment by Pulsed Laser Irradiation
P3-66	R. Hergenröder	Distribution Mapping of Hydrogen in Steel Products with fs-LIBS
P3-67	M. Verrastro	Laccase Thin Films Obtained By Pulsed Laser Deposition And Matrix Assisted Pulsed Laser Evaporation: A Comparative Study
P3-68	D. Conti Sampol	Acoustic Characterization of Pulse Shielding in Laser-Induced Breakdown of Saline Water
P3-69	F. Cappelli	Subkilohertz-narrowed frequency/phase-locked mid-IR quantum cascade lasers for high-precision molecular spectroscopy
P3-70	D. Delle Side	Antibacterial UHMWPE Surfaces by Pulsed Laser Ablation of Titanium
P3-71	J. Agresti	Depth-dependent calibration for quantitative elemental depth profiling of copper alloys using Laser Induced Plasma Spectroscopy
P3-72	M. Chatzipetrou	An enzyme biosensor for food quality monitoring fabricated by Laser Induced Forward Transfer
P3-73	Y. Hosokawa	Statistic Analysis of Cell-Cell Adhesion between Neurite and Mast Cell by Femtosecond Laser-Induced Impulsive Force
P3-74	Yoichiroh Hosokawa	Nanoscale Bending Movement of Biological Micro-Object Induced by Femtosecond Laser Impulse and Its Detection by AFM
P3-75	Y. Carpentier	Comparative Study of the Soot Surface Composition by Laser Desorption and Secondary Ion Mass Spectrometry
P3-76	Y. Carpentier	Control of the ionic/neutral species produced during the laser desorption of pure polycyclic aromatic hydrocarbon (PAH) samples
P3-77	Hayato Kubo	Functional Connectivity of Living Neuronal Network Modulated by Femtosecond Laser Cutting of Neurites
P3-78	K. A. Maximova	Femtosecond laser fragmentation for synthesis of ultrapure nanomaterials for biological applications
P3-79	F. Toschi	Stratigraphic analysis by mean of Laser Induced Breakdown Spectroscopy for the characterization of Roman fresco
P3-80	Paola Di Giacomo	An experimental study of some optical properties of biological tissues using a low level GaAs diode laser
P3-81	F. Baset	Femtosecond laser - PDMS interaction towards medical application
P3-82	D. Pietrangeli	Synthesis, Coordination Chemistry, and Photophysical Properties of the 2-Chloroethoxy-Iron(III)(Ethylthio) Porphyrine
P3-83	B.N. Masina	A Study of a Plume Expansion Dynamics of an Ablated VO <sub>2</sub> Oxide and V Metal Targets Under Oxygen Background

**Friday 11<sup>th</sup>**

<b>Session XV</b>		<b>Pulsed Laser Deposition and Thin Films III</b>	
		<i>Chair: James Lunney</i>	
9.00-9.15	O-67	R. F. Haglund, Jr.	Plasmonic Nanomodulators Switched by an Insulator-to-Metal Transition
9.15-9.30	O-68	E. Cappelli	Fs Ti:Sapphire pulsed laser deposition of nano-structured PbTe thermoelectric thin films
9.30-9.45	O-69	V. Craciun	Combinatorial Pulsed Laser Deposition of Amorphous, Transparent, and Conductive Indium Zinc Oxide
9.45-10.00	O-70	C. Eberl	Fabrication of High-quality Multilayer Zone Plates by Pulsed Laser Deposition and Focused ion beam
10.00-10.15	O-71	T. L. Parsonage	Doped Sesquioxide Growth by Pulsed Laser Deposition for Planar Waveguide Lasing Applications
10.15-10.30	O-72	S. Trusso	Dependence on the ablated mass per pulse of morphology and optical properties of silver thin films

**10.30-11.00****Coffee Break**

<b>SessionXVI</b>		<b>Laser Matter Interaction</b>	
		<i>Chair: Joergen Schou</i>	
11.00-11.15	O-73	N. Liu	Enhanced photoluminescence from UV laser quantum well intermixed InGaAs/InGaAsP/InP laser microstructures
11:15-11:30	O-74	P. Calvani	Optical and Electronic Properties of Femtosecond Laser Treated Diamond
11.30-11.45	O-75	J. Heitz	Applications of Laser-Induced Periodic Surface Structures (LIPSS): Formation of Gold Nano- Wires and Activation of Biological Cells, Cultivated on Polymer Substrates
11.45-12.00	O-76	S. Guizard	Experimental investigation of elementary processes involved in laser induced breakdown of wide band gap dielectrics
12.00-12.15	O-77	P. Loukakos	Ultrafast mechanisms in surface structuring by double femtosecond laser pulses
12.15-12.30	O-78	M. Martín	Influence of the Laser-Target Interaction Dynamics on the Characteristics of Co/Zn/S Nanostructures Obtained by Two-Pulse Femtosecond Laser Ablation and Deposition

**Concluding  
Remarks****13.00****Lunch**

# COLA 2013 - Commercial Sponsors

# SURFACE

UHV+PLD technology - always one step ahead



**LASERoptronic**  
FORNITURE DI DISPOSITIVI ELETTRONICI ED OTTICI



**Newport**  
Experience | Solutions

**Spectra-Physics**  
A Division of Newport Corporation

**acal** | bfi

**PFEIFFER**  **VACUUM**

 **ANDOR**

 **Quantel**  
Pulsed Laser Solutions

 **GIGAPHOTON**

 **isee**  
Information Science and Electrical Engineering  
Kyushu University

 **COHERENT**

 **IMRA**

 **Massimo Bonfante**  
Rappresentanze per l'elettro-ottica

 **Bright Solutions**  
SOLUZIONI LASER INNOVATIVE

**COLA 2013**  
*Official Carrier*



**Lufthansa**  
Official Airline