



INO
ISTITUTO NAZIONALE
DI OTTICA

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LASERLAB USER MEETING

**"UPDATING OPTICAL AND LASER METHODS FOR
ENERGETICS, MATERIALS, CHEMISTRY AND
BIOMEDICINE "**

28-29 March 2011

Istituto Nazionale di Ottica

CNR Campus

Pisa, Italy

Chairs

Marta Castillejo, Instituto de Química Física Rocasolano, CSIC,
Madrid, Spain

Antonio Giulietti, Istituto Nazionale di Ottica, CNR
Unit "Adriano Gozzini", Pisa, Italy

MONDAY, MARCH 28th

08:30-12:00 **Registration**

08:45-09:00 **Opening address by INO Director and Meeting Chairs**

09:00-09:20 **Presentation of the transnational Access Program of LASERLAB-Europe II, Pascal d' Oliveira, SLIC, Paris, France**

Session 1. Interactions at Extreme Energy Density Chair: Antonio Giulietti, INO, Pisa, Italy

09:20-09:50 **Keynote presentation: The collaboration of European FEL facilities, Josef Feldhaus, Deutsches Elektronen-Synchrotron, DESY, Hamburg, Germany**

09:50-10:10 **Optical field ionized XUV laser using the guiding of the pump beam in a plasma performed channel, Jaroslav Neidl, Czech Technical University in Prague, Prague, Czech Republic**

10:10-10:30 **Electron beams and X-ray radiation generated by laser wakefield in capillary tubes, Brigitte Cros, Université Paris Sud, Orsay France**

10:30-10:50 **Measurement of harmonics produced in gas-puff laser plasmas by synthetic single-crystal diamond detectors, Claudio Verona, Rome University Tor Vergata, Rome, Italy**

10:50-11:20 **COFFEE BREAK**

11:20-11:40 **Proton acceleration and x-ray emission in fast electron transport studies, Leonida Antonio Gizzi, INO, Pisa, Italy**

11:40-12:00 **Radiative Shocks at PALS, Chantal Stehle, Observatoire de Paris, Meudon, France**

12:00-12:20 **~2.1 μm laser based on Ho:KLu(WO₄)₂ crystal in-band pumped by a Tm:KLu(WO₄)₂ laser and a diode laser, Xavier Mateos, Universitat Rovira i Virgili, Tarragona, Spain**

12:20-12:40 **Three-dimensional photonic quasicrystals, Georg von Freyman, Institute of Nanotechnology, Karlsruhe and Department of Physics, Kaiserslautern, Germany**

MONDAY, MARCH 28th

12:40-15:00

LUNCH AND POSTER SESSION

Poster 1

Influence of Laser-Plasma Parametric Instabilities in Shock Ignition Relevant Regime, Carlo A. Cecchetti, INO-CNR, Pisa, Italy

Poster 2

The Laserlab ACCESS program at PHELIX, Bernhard Zielbauer, GSI Helmholtzzentrum für Schwerionenforschung, Darmstadt, Germany

Session 2. Ultrafast Laser Probing of Matter Chair: Marta Castillejo, CSIC, Madrid, Spain

15:00-15:30

Keynote presentation: Probing primary photoinduced processes in organic molecules with tunable few-optical-cycle light pulses, Giulio Cerullo, Politecnico di Milano, Italy

15:30-15:50

Femtosecond time resolved spectroscopy of 9-fluorenone and cyclopropylidene, Juliane Köhler, University of Wuerzburg, Germany

16:10-16:30

Time resolved studies of catastrophic optical mirror damage in red/NIR laser diodes, Stella N. Elliott, Cardiff University, Cardiff, United Kingdom

15:50-16:10

Momentum-dependent snapshots of a melting charge density wave in TaS₂, Stefan Kaiser, CFEL, Hamburg, Germany

16:30-16:50

COFFEE BREAK

16:50-17:10

Coherent optical phonons in different phases of Ge₂Sb₂Te₅ upon strong laser excitation, Javier Solís, Instituto de Óptica, CSIC, Madrid, Spain

17:10-17:30

Femto to nanosecond laser-induced damage in hafnia coatings, Laurent Gallais-During, Institut Fresnel, CNRS, Marseille, France

17:30-17:50

Attosecond Stark Spectroscopy on molecular systems, Franck Lépine, Université de Lyon, France

17:50-18:10

Thin-film-metallic-photocathodes grown by pulsed laser ablation, Antonella Lorusso, University of Salento, Lecce, Italy

20:00

GALA DINNER

TUESDAY, MARCH 29th**Session 3. Advanced Laser Technologies for the Progress of
Chemical and Life Sciences****Chair: Oldrich Renner, PALS, Prague, Czech Republic**

- 09:00-09:30 **Keynote presentation, Advanced inspection of matter using laser spectroscopy. From laboratory to extreme scenarios, Javier Laserna, Universidad de Málaga, Málaga, Spain**
- 09:30-09:50 **Characterization and Control of Nanostructures on Polymers and Biopolymers by Laser Irradiation, Esther Rebollar, Instituto de Química Física Rocasolano, CSIC, Madrid, Spain**
- 09:50-10:10 **Conical intersection dynamics in Rhodopsin and Isorhodopsin, Philipp Kukura, Oxford University, Oxford, United Kingdom**
- 10:10-10:30 **Binding of anthracyclines to a G-quadruplex structure of telomeric DNA and excited state deactivation processes in the complexes, Ilse Manet, ISOF-CNR, Bologna, Italy**
- 10:30-10:50 **COFFEE BREAK**
- 10:50-11:10 **Electronic Relaxation and Vibrational Wavepacket Motion in Poly(3-hexylthiophene) Films Studied by 2D Electronic Spectroscopy, Arvydas Ruseckas, University of St Andrews, United Kingdom**
- 11:10-11:30 **Proton coupled electron versus hydrogen atom transfer in BLUF photoreceptors, Tilo Mathes, Humboldt University, Berlin, Germany**
- 11:30-11:50 **Noninvasive observation of skeletal muscle contraction using near-infrared time-resolved reflectance and diffusing-wave spectroscopy, Thomas Gisler, Universität Konstanz, Konstanz, Germany**
- 11:50-13:30 **ROUND TABLE chaired by Annie Klisnick (Université Paris-Sud, Orsay, France) and Rosa Weigand (Universidad Complutense, Madrid, Spain)**
- 13:30 **CLOSING REMARKS, END OF MEETING**
- LUNCH AND OPTIONAL VISITS TO INO LABS IN PISA AND INO AND LENS IN FLORENCE**