

RESEARCH CONFERENCES

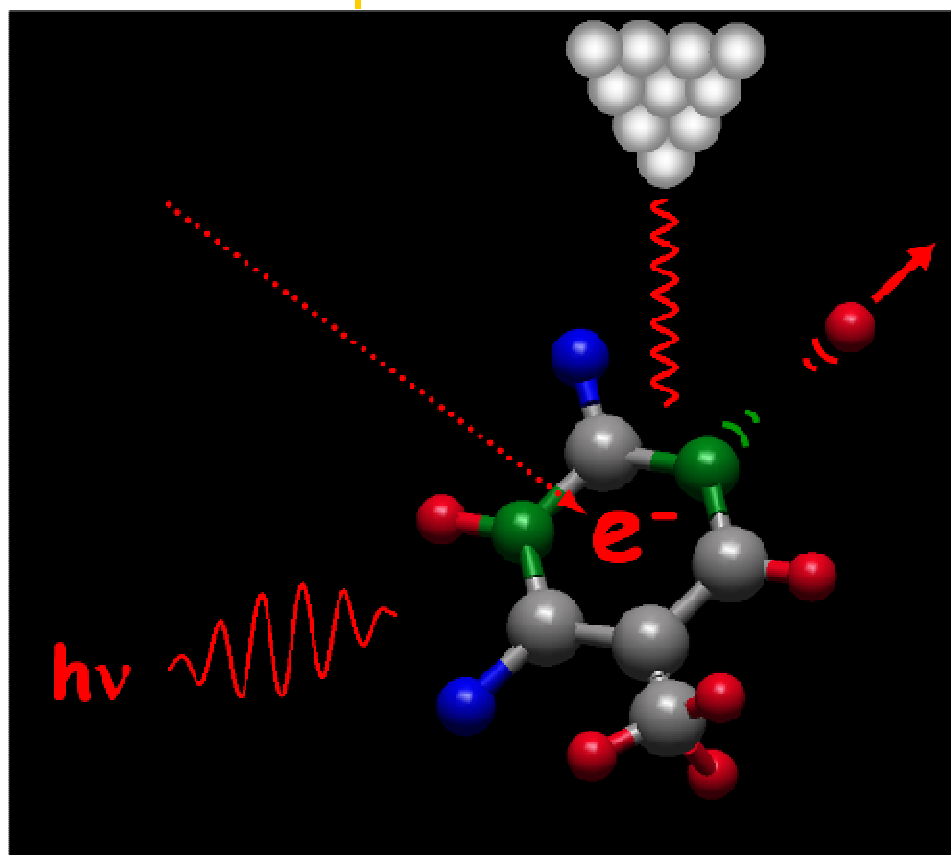
ESF-FWF Conference in Partnership with LFUI

Chemical Control with Electrons and Photons

Universitätszentrum Obergurgl
(Ötz Valley, near Innsbruck) • Austria
22-27 November 2008

Chair: **Petra Swiderek**, Universität Bremen, DE
Co-Chair: **Nigel Mason**, Open University, UK

www.esf.org/conferences/08261



Draft Final Programme

Saturday 22 November

Late afternoon / early evening	Registration at the ESF-RC desk
19.00	Welcome Drink
20.00	Supper

Sunday 23 November

08.45-09.00	Conference Opening with Petra Swiderek , Chair of the Conference, Nigel Mason , Co-Chair , And Milan Tichy on behalf of the European Science Foundation Charles University in Prague, Czech Republic
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Session 1: Chemical control with light I

Chair: **Nigel Mason**

09.00-10.00	Plenary Talk: Tobias Brixner University of Würzburg, DE <i>Coherent control from nano- to macroscales</i>
10.00-10.30	Olivier Faucher University of Dijon, FR <i>Control and optimization of postpulse molecular alignment by shaped laser pulse</i>
10.30-11.00	Coffee break
11.00-11.30	Marc. J.J. Vrakking AMOLF-Institute Amsterdam, NL <i>Controlling electron dynamics on attosecond timescales</i>
11.30-11.50	Petra Tegeder Free University Berlin, DE <i>Molecular switching at metal surfaces</i>
11.50-12.10	Vaibhav Prabhudesai Weizman Institute of Science, IL <i>Effect of linear chirp on strong field photodissociation of H₂⁺</i>
12.10-12.30	Johannes Hecker Denschlag University of Innsbruck, AT <i>Coherently controlling the bond strength in ultracold molecules</i>
13.00	Lunch

Session 2: Chemical control with electrons I

Chair: **Anne Lafosse**

14.30-15.00	Michael Allan University of Fribourg, CH <i>Absolute cross sections for electron-molecule processes</i>
15.00-15.30	Eugen Illenberger Free University Berlin, DE <i>Selective bond breaking in low-energy electron-molecule collisions</i>

- 15.30-15.50 **Isabel Martin**
University Paris Sud, FR
Probing hydride groups of deuterated polycrystalline diamond films by HREELS
- 15.50-16.10 **Juraj Fedor**
University of Fribourg, CH
Absolute cross sections for the dissociative electron attachment to molecules in the gas phase
- 16.10-16.40 Coffee break

Session 3: Plasmas and Nanofabrication I

Chair: Armin Götzhäuser

- 16.40-17.10 **Andrey Kaplan**
University of Birmingham, UK
Time-resolved photoelectron and ion emission phenomena studied on the optical damage threshold of graphite
- 17.10-17.40 **Seiji Samukawa**
Tohoku University, JN
Neutral Beam Processes for Future Nano-scale Devices
- 17.40-18.10 **Toshiaki Makabe**
Keio University, JN
Predictive nm-scale plasma etching of dielectric and related issues
- 18.10-18.40 **Kurt Becker**
Polytechnic Institute of New York University, US
Interaction of a cold, non-equilibrium atmospheric-pressure plasma microjet (PMJ) with bacteria and liquid media
- 19.00 Dinner
- 20.30-22.00 Poster session

Monday 24 November

Session 4: Chemical control at the nanoscale I

Chair: Karina Morgenstern

- 09.00-09.30 **Gérald Dujardin**
University of Paris Sud, FR
Atomic-scale control of electronic and molecular processes on semiconductor surfaces
- 09.30-10.00 **Katharina Franke**
Free University Berlin, DE
Electron-phonon coupling in single molecules resolved by scanning tunnelling spectroscopy
- 10.00-10.20 **Martin Cizek**
Charles University Prague, CZ
Exciting torsional motion in molecules by electron tunneling
- 10.20-10.50 Coffee break

Session 5: Chemical control with light II

Chair: Petra Tegeder

- 10.50-11.20 **Karl-Michael Weitzel**
Philipps Universität Marburg, DE
Controlling the electrons means controlling chemistry
- 11.20-11.40 **Oksana Plekan**
Institute of Electron Physics, Uzhgorod, UA
Synchrotron light interaction with organic molecules
- 12.00-16.30 Lunch and Discussion forum
- 16.30-17.00 Coffee break

Session 6: Chemical control with electrons II

Chair: Michael Allan

- 17.00-17.30 **Anne Lafosse**
University Paris Sud, FR
Electron-induced controlled decarboxylation of condensed acids RCOOH
- 17.30-18.00 **Iwona Dabkowska**
Gdansk University, PL
Quantum chemistry calculations as a support for electron attachment experiments
- 18.00-18.20 **Ilko Bald**
University of Iceland, IS
Free electrons and electron transfer processes in UV-MALDI
- 18.20-18.40 **Janina Kopyra**
University of Podlasie, Siedlce, PL
Low energy electron induced reactions in simple organic acids and amides
- 19.00 Dinner

Session 7: Plasmas and Nanofabrication II

Chair: Petra Swiderek

- 20.30-21.30 **Plenary talk: Armin Gölzhäuser**
University of Bielefeld, DE
Fabrication of functional surfaces and membranes via electron and photon induced chemical control of molecular films

Tuesday 25 November

Session 8: Chemical control at the nanoscale II

Chair: Gérald Dujardin

- 09.00-10.00 **Plenary Talk: Karina Morgenstern**
University of Hannover, DE
STM induced isomerisation reactions on single adsorbed molecules
- 10.00-10.30 **Roberto Otero**
Autonoma University Madrid, ES
Interaction between Organic Donor/Acceptor Species and Metal Electrodes Studied by STM

10.30-11.00	Coffee break
11.00-11.20	Cornelis W. Hagen Delft University of Technology, NL <i>The dissociation cross-section of the Pt-precursor MeCpPtMe3</i>
11.20-11.40	Aleksandar Milosavljevic Institute of Physics Belgrade, Serbia <i>Transmission of low-energy electrons through insulating nanocapillaries</i>
11.40-12.00	Maria Raposo Universidade Nova de Lisboa, PT <i>Control of water amount near biomolecular biomimetic layers</i>
12.00-12.20	Ivo Utke Empa, Swiss Federal Laboratories for Materials Testing and Research <i>Assessment of surface kinetics and interaction parameters governing gas-assisted focused electron beam induced deposition</i>
12.20-16:00	Lunch and Discussion forum
16.00-16:30	Coffee

Session 9: Chemical control with light III

Chair: Tobias Brixner

16.30-17.00	Henrik Stapelfeldt Aarhus University, DK <i>Controlling torsion of an axially chiral molecule with intense laser pulses</i>
17.00-17.30	Sandro de Silvestri University of Milan, IT <i>Coherent vibrational dynamics with few optical cycle light pulses</i>
17.30-18.00	Angel Gonzalez-Urena Universidad Complutense Madrid, ES <i>Laser-induced Acrylonitrile/Cu(100) low - energy electron photoemission and charge-transfer reaction</i>
18.00-18.30	Marcus Motzkus University of Marburg, DE <i>Quantum control control spectroscopy of multidimensional dynamics</i>
19.00	Dinner
20.00-21.30	Poster Session

Wednesday 26 November

Session 10: Chemical control with electrons III

Chair: Iwona Dabkowska

09.00-09.30	Ilya Fabrikant University of Nebraska, Lincoln, US <i>Resonances and threshold effects in electron attachment to polyatomic molecules</i>
09.30-10.00	Jimena Gorfinkiel Open University, UK <i>Electron interactions with small molecular clusters</i>

- 10.00-10.30 **Paul Scheier**
University of Innsbruck, AT
Low-energy electron interactions with biomolecules: from gas phase to hydrated complexes
- 10.30-11.00 Coffee break
- 11.00-11.30 **Petra Swiderek**
University of Bremen, DE
Electron-induced chemical processes in molecular solid films
- 11.30-11.50 **Linda Feketeova**
University of Melbourne, Australia
Electron-induced dissociation of multiply protonated betaine clusters
- 11.50-12.10 **David Field**
Aarhus University, DK
Scattering from Eugen: some concepts and ideas
- 12.30 Lunch
- 14.00-15.30 Discussion forum Forward looks: Break out groups
- 15.30-16.30 Discussion forum Forward looks: Presentations
- 16.30-17.00 Coffee break

Session 11: Biomolecules

Chair: Ilya Fabrikant

- 17.00-18.00 **Plenary Talk: Leon Sanche**
University of Sherbrooke, CA
Chemical control of radiobiological damage with low energy electrons
- 18.00-18.30 **Peter H. Beton**
University of Nottingham, UK
Order, disorder and chemical functionalisation of supramolecular templates
- 18.30-19.00 **Michael A. Huels**
University of Sherbrooke, CA
Physico-chemical reactions in biomolecules induced by hyperthermal ions, electrons, and synchrotron photons
- 19.00-19.30 **Oddur Ingolfsson**
University of Iceland, IS
ηλεκτρον - A journey of a particle and a progression of a wave
- 20.00 Get-together & Conference Dinner

Thursday 27 November

Breakfast & Departure