



RESEARCH CONFERENCES

ESF Conference in Partnership with LFUI

Charge Transfer in Biosystems

Universitätszentrum Obergurgl (Ötz Valley, near Innsbruck), Austria

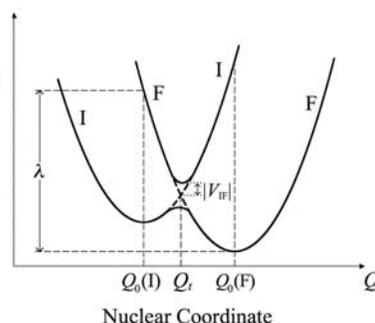
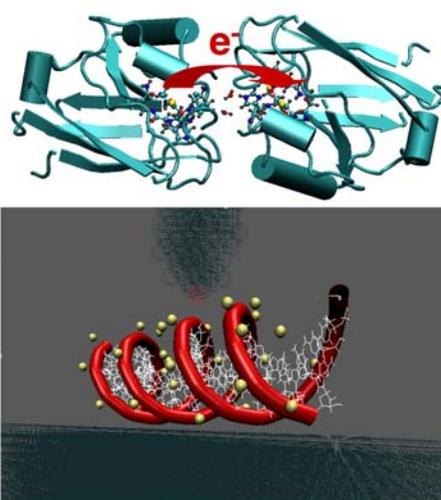
17-22 July 2011

Chairs: **Rosa Di Felice** - Center S3, CNR-NANO, Modena, IT; **Yuri Berlin** - Northwestern University, Evanston, US & **Marcus Elstner** - Karlsruhe Institute of Technology, DE

The Conference aims at bringing together scientists active world-wide in the theoretical and experimental investigation of charge transfer in biomolecules and complex systems that include a biological component (such as protein/surface and DNA/surface interfaces), to assess the state of the art in the field in terms of methods and knowledge. We also aim at training young scientists who pursue a multidisciplinary career that bridges physics, chemistry, biology and engineering. Another expected outcome is the creation of new collaborations that potentially may open new research avenues and lead to expanding knowledge in the near future.

Charge transfer in biological molecules is a crucial issue for its implications in chemical reactions in living organisms and for the potential exploitation in nanotechnology. The measurement and theoretical description of the phenomena have been traditionally developed and carried out by the chemistry community, with typical instruments and tools. In the last couple of decades, with the advent of nanotechnology and the investigation of nucleic acids and proteins in this context, different communities have also come into play, notably physics and engineering. Therefore, new investigation methods have been prepared and applied, in both experiment and theory. The field is now mature to integrate the various approaches towards a consensus that would boost a deeper investigation of charge transfer in biosystems in solution and interacting with solid materials, to gain new knowledge towards improving diagnostics and therapeutics on one hand and developing the next-generation nano scale electronic devices on the other hand.

Few events have so far occurred to bring together the various communities that can convey their expertise to improve the understanding of charge transfer phenomena. Given the latest developments in theoretical methods and experiments, the proposed conference is quite timely and the originality that can emerge from mixing experiences is outstanding.



Invited Speakers will include:

- Jacqueline Barton** - Caltech, Pasadena, US
- Jochen Blumberger** - U. Cambridge, UK
- Krzysztof Bobrowski** - IChTJ, Warsaw, PL
- Thomas Carell** - LMU, Munich, DE
- Giovanni Cuniberti** - TU Dresden, DE
- P. Leslie Dutton** - U. Pennsylvania, Philadelphia, US
- Paolo Facci** - CNR-NANO-S3, Modena, IT
- Torsten Fiebig** - ANSER, Northwestern U., US
- Francesco L. Gervasio** - CNIO, Madrid, ES
- Ferdinand Grozema** - TU Delft, NL
- Joshua Jortner** - Tel Aviv U., IL
- Rudy Marcus** - Caltech, Pasadena, US
- Dimitra Markovitsi** - URA CEA-CNRS Saclay, FR

- Nicola Marzari** - U. Oxford, UK
- Maria-Elisabeth Michel-Beyerle** - NTU Singapore, SG
- Agostino Migliore** - Tel Aviv U., IL
- Abraham Nitzan** - Tel Aviv U., IL
- Danny Porath** - HUJI Jerusalem, IL
- Mark Ratner** - Northwestern U., US
- Gary Schuster** - Gatech, Atlanta, US
- Spiros Skourtis** - UNIC, Nicosia, CY
- Alessandro Troisi** - U. Warwick, UK
- Hans-Achim Wagenknecht** - U. Regensburg, DE

Application form & programme available from

www.esf.org/conferences/11354

Closing date for applications: 14 April 2011

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