

Sunday 30 October

18:00 20:00 Welcome reception and registration

Monday 31 October

8:45 9:00 Introduction

Chirality

Chair **Ivan Powis**

9:00 9:30 **Sandra Eibenberger-Arias**
Invited *Rotational state control of chiral molecules.*

9:30 10:00 **Greta Koumarianou**
Invited *Gas-phase chirality detection in cryogenic buffer gas cells.*

10:00 10:30 **Ron Naaman**
Invited *Chirality and the Electron Spin- The answer to the mystery of oxygen based life.*

10:30 11:00 Coffee break

Chair **Wes Campbell**

11:00 11:30 **Ivan Powis**
Invited *Examination of Intermediate Rydberg States, their Alignment, and Vibronic Dynamics using Resonance Enhanced Multiphoton Photoelectron Circular Dichroism.*

11:30 12:00 **Bernard Pons**
Invited *Using time-resolved photoelectron circular dichroism to probe the dynamics of photo-excited chiral molecules.*

12:00 12:20 **Tzu Ling Chen**
Hot Topic *Cavity Enhancement of the Circular Dichroism in Non-reciprocal Organic Thin Film Embedded Microcavities.*

12:30 14:00 Lunch

Mixed Session

Chair **Helen Chadwick**

15:00 15:30 **Wes Campbell**
Invited *Prospects for optical cycling of large, gas-phase, organic molecules.*

15:30 15:50 **Dmitriy Borodin**
Hot Topic *NH₃ Oxidation on Platinum -- A new mechanism in surface chemistry?*

15:50 16:10 **Baruch Margulis**
Hot Topic *Tomography of Feshbach resonance states.*

16:10 16:40 **Laurent Bonnet**
Invited *Semiclassical analysis of classical reactive scattering results.*

16:40 17:10 Coffee break

Controlled Beams

Chair	Andriana Tsikritea
17:10 17:40 Invited	Jolijn Onvlee <i>Towards controlled reactive collisions.</i>
17:40 18:00 Hot Topic	Gil Alexandrowicz <i>Coherently manipulating the rotational projection states of ground state hydrogen molecules; from state-resolved molecule-surface scattering experiments towards gas-phase collisions.</i>
18:00 18:20 Hot Topic	Helen Chadwick <i>Stopping molecular rotation using coherent ultra-low-energy magnetic manipulations.</i>
18:30 20:00	Dinner
20:00 22:00	Poster session

Tuesday 1 November

Cold Beams

Chair	Gil Alexandrowicz
9:00 9:30 Invited	Frédéric Merkt <i>Cold ion chemistry within the orbit of a highly excited Rydberg electron.</i>
9:30 10:00 Invited	Sebastian Trippel <i>Ultrafast dynamics in microsolvated biomolecular model systems</i>
10:00 10:20 Hot Topic	Andriana Tsikritea <i>Probing ion-molecule reactions within the environment of Coulomb crystals.</i>
10:20 10:50	Coffee break
Chair	Jolijn Onvlee
10:50 11:20 Invited	Daniel Horke <i>Enhancing the chemical sensitivity of gas-phase ultrafast photochemistry.</i>
11:20 11:50 Invited	Heather Lewandowski <i>Cold Ion-Molecule Reactions Relevant to Astrochemistry.</i>
11:50 12:20 Invited	Andreas Osterwalder <i>A Travelling Wave Guide as a band-pass velocity filter for Neutral Polar Molecules.</i>
12:30 14:00	Lunch

Reaction Dynamics

Chair	Richard N. Zare
15:00 15:30 Invited	Dora Papp <i>Vibrational-, rotational- and stereo-specificity in the dynamics of atom + ethane and N/P-centered SN2 reactions.</i>
15:30 15:50 Invited	Morgane Vacher <i>Simulations of photo-induced reaction dynamics upon excitation of azobenzene and ionization of ethylene.</i>
15:50 16:10 Hot Topic	Gianmarco Vanuzzo <i>Crossed beam studies of O and N reactions with small aromatics: the effect of the attack site on the dynamics.</i>
16:10 16:30	Coffee break

Surface Dynamics

Chair	Arthur Suits
16:30 17:00 Invited	Matthew Costen <i>Stereodynamics of Scattering of OH at the Gas-Liquid Interface.</i>
17:00 17:30 Invited	Ralf Engels <i>How to produce polarized Hydrogen/Deuterium Molecules in single Hyperfine Substates.</i>
17:30 18:00 Invited	Alec Wodtke <i>Tunneling dynamics of up-side down CO on surfaces.</i>
18:30 20:00	Dinner
20:00 22:00	Poster session

Wednesday 2 November

Dissociation Dynamics

Chair	Theo Kitsopoulos
9:00 9:30 Invited	Arthur Suits <i>How Far Can a Radical Roam? Quantum Aspects of Roaming Radical Reactions.</i>
9:30 9:50 Hot Topic	Chow-Shing Lam <i>Probing ultrafast structural dynamics through covariance imaging of laser-induced Coulomb explosions.</i>
9:50 10:20 Invited	Oleg Vasyutinskii <i>Mechanisms of orbital orientation and alignment in photolysis of polyatomic molecules: the role of geometric phase.</i>
10:20 10:50	Coffee break

Ultrafast processes

Chair	Sebastian Trippel
10:50 11:10 Invited	Nektarios Papadogiannis <i>Ultrafast and coherent multispectral diffraction imaging in the Extreme Ultraviolet.</i>
11:10 11:40 Invited	Markus Büscher <i>Spin physics in relativistic plasmas: tools and prospects.</i>
11:40 12:00 Hot Topic	Francoise Remacle <i>Exploiting electronic entanglement for steering stereoselective bond forming in molecules pumped by ultrashort optical pulses.</i>
12:00 13:00	Lunch
13:00 22:00	Excursion and Conference dinner

Thursday 3 November

Exotic Stereodynamics

Chair	Markus Büscher
9:00 9:30 Invited	Benoît Darquié <i>High-resolution spectroscopy of cold molecules for precision measurements and tests of fundamental physics.</i>
9:30 10:00 Invited	Anastasia Borschevsky <i>Testing the Standard Model with Molecules.</i>
10:00 10:20 Hot Topic	Boy Lankhaar <i>Stereodynamics in the Interstellar Medium.</i>
10:20 10:50	Coffee break

Cold/Controlled Stereodynamics

Chair	Andreas Osterwalder
10:50 11:20 Invited	Javier Aoiz <i>Stereodynamical effects in cold energy collisions.</i>
11:20 11:40 Hot Topic	Junwen Zou <i>Probing van der Waals interactions between Rydberg atoms and polar molecules by FRET at temperatures below 100 mK.</i>
11:40 12:10 Invited	Richard N. Zare <i>Cold Collision Stereodynamics.</i>
12:30 14:00	Lunch + Stereodynamics board meeting

Mixed Session

Chair	Sebastian Trippel
15:00 15:20 Hot Topic	Niloufar Shafizadeh <i>Small ligand binding to heme from first principles.</i>
15:20 15:40 Hot Topic	Dominik Stemer <i>Liquid-Phase Photoelectron Circular Dichroism.</i>
15:40 16:00 Invited	Ioannis Kominis <i>Quantum Sensing with Atoms and Living Systems.</i>
16:00 16:40	Coffee Break

Ions

Chair	Niloufar Shafizadeh
16:40 17:00 Hot Topic	Tobias Sixt <i>Mechanistic insights into the chemi-ionization of lithium atoms by highly excited helium atoms.</i>
17:00 17:20 Hot Topic	Sang Kyu Kim <i>Chemical Dynamics of Nonvalence-Bound State of the Molecule Anions.</i>
17:20 17:40 Hot Topic	Jannik Lübke <i>Electric-field control of biological macromolecules and the recording of "molecular movies".</i>

17:40 18:20 Break

Chair **Raphy Levine**

18:20 19:20 **Bernstein Award Winner Presentation**

Tanya Zelevinsky
Photodissociation and high-precision spectroscopy of trapped ultracold molecules.

19:20 21:30 Dinner

Friday 4 November

Quantum Chemistry/Dynamics

Chair **David Chandler**

8:30 8:50

Hot Topic

Foudhil Bouakline

On the role of nuclear permutation symmetry in quantum molecular dynamics.

8:50 9:10

Hot Topic

Pei-Ling Luo

Microsecond time-resolved dual-comb spectroscopy for kinetic and product studies of gas-phase reactions.

9:10 9:40

Hot Topic

Martin Fournier

NO(A)-He and NO(A)-Ne steric scattering experiments.

9:40 10:00

Coffee break

Dynamics

Chair

Heather Lewandowski

10:00 10:20

Hot Topic

Mengxu Jiang

Multiphoton breakdown of acetylene; Formation of organic building block fragments.

10:20 10:40

Invited

David Chandler

New Applications of Velocity-Mapped Ion and Electron Imaging.

10:40

Closing remarks