

# **Photon Tools for Physical Chemistry 2014**

**Sunday, 28 September 2014 - Wednesday, 1 October 2014**

## **Scientific Programme**

**PTPC2014** aims at fostering international cooperation at the forefront of energy conversion research using synchrotron radiation and other light sources. It focuses on the combustion of emerging fuels and the production and storage of liquid energy carriers from renewable sources. The scope of the workshop reaches from molecular dynamics over chemical kinetics to spray propagation and particle formation studies. PTPC2014 intends to bring together experts from these fields to promote synergies and work towards a sustainable energy concept.

The workshop will comprise spoken contributions organised in 6 sessions.

### **Flames and reactors**

Reactors amenable to experiments with large photon tools. Elementary reactions in flames giving insights into unimolecular and bimolecular chemistry of common fuels as well as next-generation bio fuels.

### **Chemical kinetics**

Fundamental reaction mechanisms in combustion and atmospheric chemistry. Identification of experiments at user facilities.

### **Sprays, aerosols and particulate matter**

Interactions of high frequency light (VUV – X-ray) with nanoparticles, clusters and fuel sprays elucidating ionization- and fragmentation-mechanisms as well as chemical processes producing particulate matter.

### **Coincidence Spectrometry**

Spectrometric assessment of elusive species and their unimolecular reaction mechanisms to improve kinetic models. Elaboration of thermochemical data, especially heats of formation.

### **Astrochemistry**

Elementary reactions and dynamics in interstellar space. Investigations ranging from atmospheres of earth-like planets to the origin of biomolecular asymmetry.

### **Catalysis, Surfaces and Reacted Clusters**

Investigations in surface science. Reactions on condensed matter and clusters.