

# **Photon Tools for Physical Chemistry 2019**

## **PTPC2019**

**Tuesday, 8 January 2019 - Friday, 11 January 2019**

**Beatenberg, Switzerland**

## **Scientific Programme**

PTPC2019 follows in the footsteps of PTPC2014 (see conference details here and an overview here) and intends to widen the scope of previous IWPTCEC meetings to cover physical chemistry topics from chemical dynamics and (combustion) kinetics to characterizing nanoparticles and aerosols and their interaction with ionizing radiation. The workshop emphasizes state-of-the-art approaches, particularly at large scale facilities, to use VUV to soft X-ray radiation for the study of

Flames and reactors,

Chemical kinetics and molecular dynamics,

Sprays, aerosols and particulate matter,

Advanced spectroscopy techniques,

Astrochemistry

Catalysis, surface and cluster reactivity.

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PTPC2019 will bring together synchrotron and free electron laser experts to promote synergies and identify topical issues to be addressed at such facilities.</div>

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The preliminary scientific program of the meeting includes</div>

### **Flames and reactors**

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The study of elementary reactions and elusive intermediates in reactive environments, such as reactors, shock tubes, and flames to unveil uni- and bimolecular reaction mechanisms.</div>

### **Chemical kinetics and molecular dynamics**

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From fundamental reaction mechanisms in combustion and atmospheric chemistry to the interaction of molecules with ultrashort high-intensity laser pulses</div>

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

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Interactions of VUV to X-ray radiation with nanoparticles and clusters to elucidate ionization and fragmentation mechanisms as well as chemical processes producing particulate matter.</div>

### **Molecular spectroscopy**

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The use of advanced spectroscopy techniques, e.g., imaging and coincidence approaches, to probe various structural properties of molecules. Isomer-selective characterization of the (ro)vibrational and electronic structure of (elusive) species. Investigating energetics, chirality, reaction mechanisms, conformational and constitutional isomerism.</div>

### **Astrochemistry**

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Elementary reactions and chemistry in interstellar space. Investigations ranging from atmospheres

of earth-like planets to the origin of biomolecular asymmetry.</div>

**Catalysis, surface and cluster reactivity**

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

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