

## Parallel sessions ACID 1 November 2019

### 1a Be aware of legislation

Be aware of legislation; how can you adapt your development for sustainable products and to inform environmental risk assessment.

[Prof.dr. Annemarie van Wezel – UvA Institute for Biodiversity and Ecosystem Dynamics](#)

### 1b Valorisation of knowledge @ VU Chemistry & Pharmaceutical Sciences

Four divisions of the VU Department of Chemistry & Pharmaceutical Sciences will shed light on their initiatives to valorise knowledge to business and society. Topics that will pass by are: ideation by young chemistry innovators; chemistry software spin-off business; medicine production efficiency and effectiveness licensing, and science-to-business case study teaching. The pitches exemplify how scientific, business and social development go hand in hand. Innovation through valorisation, in a variety of ways, which makes chemistry work only more interesting and worthwhile.

[Prof.dr. Bart Bossink – VU University](#)

[Henrik Cornelisson van de Ven - VU University](#)

### 1c Friction and lubrication

UvA's chemists and physicists have in recent years jointly designed a number of unique 'tools' to be able to visualize and quantify friction and lubrication on a microscopic level (with fluorescence microscopy). This allows us, for example, to predict lubrication based on the surface roughness of the sliding surfaces, or to measure contact pressures directly to predict wear and ultimately prevent it. This session shows examples and applications of these techniques and we are very interested in getting to know practical problems to which we can apply our techniques and which inspire us to further develop the tools.

[Prof.dr. Fred Brouwer – UvA Van 't Hoff Institute for Molecular Sciences](#)

[Prof.dr. Daniel Bonn – UvA Institute of Physics](#)

### 2a Perspectives for PPP's

In this workshop NWO and Holland Chemistry (Topsector Chemie) will sketch the role of Public Private Partnerships (PPP's) in the brand new mission-driven innovation agendas. What are the implications of the new policy on the range of PPP instruments?

Beyond funding opportunities, we will also reflect on what drives a good partnership. Come for the latest uPPPdates!

[Dr. Maarten de Zwart – NWO](#)

[Dr. Marijn Goes - Topsector Chemie](#)

### 2b Electrochemistry: current and potential development at Amcel

The ever-increasing quest for sustainability in the chemical industry calls for green solutions. Ideally, renewable energy and carbon sources should be used instead of fossil fuels. This provides exciting opportunities for electrochemistry: the direct use of renewable electricity to convert water and air into various value-added chemicals. This session gives an overview of the state-of-art in electrochemistry as well as the opportunities and challenges.

Researchers at the Amsterdam Science Park joined forces in the Amsterdam Centre for

Electrochemistry ([www.Amcel.nl](http://www.Amcel.nl)). We will show you why this collaboration is crucial, and give some examples of specific projects that are currently ongoing.

[Dr. Ning Yan - UvA Van 't Hoff Institute for Molecular Sciences](#)

[Dr. Klaas Jan Schouten - UvA Van 't Hoff Institute for Molecular Sciences / Avantium](#)

## **2c Analyzing bio-active molecules: spectroscopy and spectrometry**

Knowledge of the absolute configuration and conformational heterogeneity of molecules is of key importance in many industrial applications ranging from the synthesis of chiral fine chemicals to drug development as well as the analysis of the enantiomeric purity of chiral samples. This session introduces two essential techniques that are being developed in Amsterdam.

Vibrational Circular Dichroism (VCD) -the differential absorption between left- and right-circularly polarized light- is a powerful technique to provide information under realistic biological and industrial conditions. Notoriously difficult problems such as determining the absolute configuration of many-center chiral systems as well as the levels and identity of stereochemical contaminants become visible with one single measurement.

Surface acoustic wave nebulization (SAWN) mass spectrometry (MS) is a very fast method to generate gaseous ions compatible with direct MS of minute samples at femtomole sensitivity. Through fission and evaporation ions of large molecules are produced in a non-destructive manner. Therefore it becomes a crucial technique in protein-, art- and environmental sciences where very large molecular structures have to be elucidated.

[Prof.dr. Wybren Jan Buma – UvA Van 't Hoff Institute for Molecular Sciences](#)

[Prof.dr. Garry Corthals – UvA Van 't Hoff Institute for Molecular Sciences](#)

## **2d Students meet Industry – special session for BSc-, MSc and PhD students**

Employees of chemical companies and chemistry entrepreneurs will sketch potential career paths in their organization/field. On the other hand, these representatives have the chance to meet the chemistry talent in Amsterdam. There will also be plenty of time for further discussions and networking. Pitches confirmed by representatives of Shell, Unilever, InCatT, Smit&Zoon, TNO.

[PhD council – UvA Van 't Hoff Institute for Molecular Sciences](#)

[Amsterdams Chemisch Dispuut](#)