



SAK Symposium on Ion Mobility Spectrometry (IMS)

Date: Monday 25th April 16.30 – 18.30

Location: University of Copenhagen, Faculty of Science, 6. Floor, Room R645, Thorvaldsensvej 40, 1871 Frederiksberg C. The meeting will be a hybrid meeting <https://ucph-ku.zoom.us/j/8221428612>

Organizers: SAK

Program

16.30 – 16.40 Welcome, coffee and Danish Hygge/cake

Presentation 1: Cyclic ion mobility mass spectrometry for deep characterisation of peptides in biopharma

16.40 – 17.15 Kim F. Haselmann, Novo Nordisk

Ion mobility mass spectrometry is an emerging technique within mass spectrometry and addresses the inherent issue of isobaric species i.e. species having the same mass. Ion mobility mass spectrometry separates ions based on the collisional cross sectional area to charge and can therefore separate isobaric species e.g. isomers. In the biopharmaceutical industry identification and localisation of isomeric peptide and protein modifications is a critical requirement. Here, very high resolution cyclic ion mobility mass spectrometry is combined with liquid chromatography to differentiate isomeric peptides and their fragments for identification and localisation of isomeric sites.

Reference: Tomczyk et al. <https://doi.org/10.1021/acs.analchem.1c02834>

Presentation 2: Trapped Ion Mobility (TIMS)

17.15 – 17.45 **Noud van der Borg**, Market & Business Development Manager Applied Market Europe, Bruker

Ion Mobility separation is created differently by several vendors. A good understanding of the chosen technology helps to understand the implication of using this technology in different application areas. Ion Mobility separation before or after the quadrupole, gas flow parameters, duty cycle are just some factors which highly influence the final result. Ion Mobility should not only be used to separate but should also deliver accurate and stable CCS values which are comparable with databases and quantifiably reproducible. Within this presentation the TIMS technology will be explained and will be linked to complex environmental analytical examples to highlight its performance.

Presentation 3: The Agilent Ion Mobility Q-TOF Mass Spectrometer System

17.45 – 18.15 **Agilent speaker**

18.15 – 18.30 Final Discussion of IMS