



Short Course “Ambient Mass Spectrometry”

Instructors

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Description

Ambient Mass Spectrometry refers to the emerging methodology of direct analysis of chemical and biological samples in their ambient status using mass spectrometry. It is characterized by minimal sample preparation while retaining high sensitivity and high specificity for the analysis.

The aim of this short course is to share the philosophy and vision for an important future direction of mass spectrometry, to provide fundamental knowledge on direct sampling ionization and associated mass analysis methods, to teach the practical aspects of device design, performance optimization, and application development using ambient mass spectrometry.

The key topics of the short course include the design configurations and operation principles for major types of ambient ionization methods, real-time reactions and other fundamental studies, applications to fast chemical detection, direct quantitation of biomarkers in biological samples, ambient mass spectrometry imaging, and integration with miniature mass spectrometers for point-of-care applications.

The short course will be taught with tutorial lectures, discussions and exercises.

Language

English