



WESTFÄLISCHE
WILHELMS-UNIVERSITÄT
MÜNSTER



FACHBEREICH
PHYSIK

› Allgemeines Physikalisches Kolloquium

› Donnerstag, 17.05.2018 um 16 Uhr c.t.

Dr. Jens Soltwisch

Universitätsklinikum Münster



“Laser mass spectrometry imaging of intact bio-molecules”

Imaging techniques, first and foremost different types of microscopy and their ability to visualize biological samples from the organ level down to intracellular processes are indispensable to virtually all fields of the life sciences. Mass spectrometry, on the other hand, is widely employed to explore chemical and molecular composition of samples, typically without spatial information. Mass spectrometry imaging now strives to add the spatial domain to the information on the molecular content, usually in a scanning microscopy-type approach. This results in the paralleled visualizations of a large number of molecular distributions within a sample.

In the presentation I will give a brief introduction to the concept of mass spectrometry imaging and how matrix-assisted laser desorption/ionization mass spectrometry (MALDI-MS) is used in this context. After some examples how MALDI-MSI is used as a tool in research already today, the presentation will touch on current limitations in terms of spatial resolution, measuring speed, and sensitivity. I will outline how basic research on the MALDI mechanism not only deepened the understanding of the underlying processes but also how these principle findings can be used to push the current limits of the technique in instrumental development.

Kolloquiums-Kaffee
ab 16 Uhr vor dem Hörsaal

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