Applications of MALDI-TOF/TOF Mass Spectrometry using the Bruker ultrafleXtreme

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Matrix-Assisted Laser Desorption/Ionization Tandem Time-of-Flight Mass Spectrometry (MALDI-TOF/TOF) provides a powerful and versatile method for the molecular characterization of biologically derived and synthetic macromolecules, including peptides, proteins, glycans, polymeric materials, and nanoparticles. The high mass range, superior resolution, and unparalleled sensitivity of the new Bruker ultrafleXtreme MALDI-TOF/TOF system at the ARC permits the conclusive and confident elucidation of molecular weight (MW), functionality, and structure for molecules and materials that may be difficult to analyze by other MS methods. This seminar will briefly discuss the fundamentals of MALDI-TOF/TOF MS, highlight the advanced capabilities of the ultrafleXtreme, and review analysis workflows for a wide variety of macromolecules.

Dr. Volker Sauerland studied chemistry at Christian-Albrechts-University in Kiel. During his Ph.D., he focused on the mass spectrometric analysis of conductive electrochemically generated synthetic polymers. He joined Bruker in 1998 as MALDI application specialist and now has more than 20 years’ experience with various applications of MALDI-TOF mass spectrometry.