

The Applications of Imaging Mass Spectrometry: Unravelling Complexity

A comprehensive understanding of molecular patterns of health and disease is needed to pave the way for personalized medicine and tissue regeneration. One barrier to predictive, personalized medicine is the lack of a comprehensive molecular understanding at the tissue level. As we grasp the astonishing complexity of biological systems (whether single cells or whole organisms), it becomes more and more evident that within this complexity lies the information needed to provide insight in the origin, progression and treatment of various diseases. In this lecture applications of new high resolution SIMS and MALDI MS based chemical microscopes that target biomedical tissue analysis in various diseases as well as other chemically complex surfaces will be discussed. In concert they elucidate the way in which local environments can influence molecular signaling pathways on various scales. Novel applications and fundamental research in the area of oncology, transplantation surgery and innovative biomaterials will be described and discussed. It demonstrates the enabling role MS and MS based imaging has in true translational medical and material research.

Joint Analytical & ChemBio Seminar

presented by

Prof. Ron Heeren

Maastricht University, Netherlands

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1:00 p.m., Room 1315 Chemistry

Hosted by Prof. Lingjun Li