

Novel TIMS based solutions for advancing Metabolomics and Phenomics research

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Abstract:

Substance characterization by mass spectrometry typically involves the dimensions of MS and MS/MS analysis. Current high resolution QTOF instruments add the dimensions of true representation of isotopic patterns of precursor as well as the fragment ions, which enhance the capability of determining a compound and its subunits element formula significantly.

In this talk we present the timsTOF QTOF instrument featuring trapped ion mobility (tims) and its application to further enhance the analytical options beyond those 4 dimensions for compounds that are otherwise difficult to separate and to analyze, such as carbohydrate, flavonoid or lipid isomer analysis. Ion mobility separations on timsTOF can be adjusted with regards to the analysis scope and reaches mobility resolutions beyond 200.

Built on the timsTOF platform, two new instrument platform will be presented, the timsTOF Pro and the timsTOF flex featuring high speed PASEF MS/MS mode and MALDI Imaging, respectively.

