

# Fast and automated large-area imaging MALDI mass spectrometry in microprobe and microscope mode

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Since the introduction of matrix-assisted laser desorption/ionization (MALDI) imaging mass spectrometry (IMS), numerous instrumental developments have been presented. The introduction of microscope MALDI IMS was a major breakthrough, making micron-range resolution MALDI imaging of kiloDalton mass species possible. We discuss new developments that makes large (cm range) field of view, high resolution ( $\mu\text{m}$  range) microscope mode imaging mass spectrometry (IMS) possible in a single experiment, using three different data acquisition approaches simultaneously. We demonstrate how a combination of these acquisition approaches is used to correlate mass spectral and high resolution imaging data.

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