

Spatially Resolved Thermal Desorption/Ionization Coupled with Mass Spectrometry

Disclosure Number

200802194

Technology Summary

This technology will be a robust atmospheric pressure thermal desorption secondary ionization mass spectrometry system that is capable of imaging with micrometer and nanometer spatial resolution. The micrometer resolved system can be applied to studying chemical distributions where high spatial resolution is needed to detect molecules in low concentrations. This system can also serve as a basis for the development of a nanometer spatially resolved system. This setup incorporates a heated tip technology that will allow for chemical as well as topographic imaging at the nanometer scale. This new technique will have broad application for studying systems such as cell walls, membrane proteins, material junctions, etc. that require enhanced or high spatial resolution chemical information.

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