



Contribution ID: 32

Type: **Oral presentation**

Pixel Imaging Mass Spectrometry with fast pixel detectors

Wednesday, 3 February 2010 14:25 (20 minutes)

We report on 'proof of concept' experiments in Pixel Imaging Mass Spectrometry (PIImMS) using an ultra-fast frame-transfer CCD camera and also describe an intelligent CMOS sensor which is being developed for this application by the PIImMS collaboration in the UK. PIImMS is a combination of a traditional TOF mass spectrometry and of the ion imaging. Information provided by the ion imaging gives access to valuable structural information of the molecule under investigation, in addition to the normal mass spectrum. Recording of the 2D spatial information of the arriving ions allows to reconstruct the ion velocity distributions for separate ion masses and to correlate them to each other. The new PIImMS sensor will be capable to time stamp up to four arriving ions per pixel during the 200 microsec acquisition cycle with 50 nsec resolution which should meet the demanding requirements for complete recording of mass spectra of complex organic molecules.

Primary author: Dr NOMEROTSKI, Andrei (University of Oxford)

Presenter: Dr NOMEROTSKI, Andrei (University of Oxford)

Session Classification: Applications of intelligent detectors II

Track Classification: Applications of intelligent detectors