



Microsaic Systems

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Microsaic Systems launches products based on a mass spectrometer chip

Microsaic Systems to launch revolutionary new products based on ionchip® – the world's first mass spectrometer on a chip - at the Pittcon 2006 New Product Forum.

London, 24th January 2006

Microsaic Systems (Woking, UK) today introduces its patented ionchip technology which integrates the key components of a mass spectrometer onto a silicon chip. Ionchip products are capable of 'fingerprinting' the chemicals in solids, liquids or gases using industry standard reference libraries.

Alan Finlay, CEO of Microsaic Systems said, "Until now, if customers wanted to know exactly what was in a sample they had to buy something the size and cost of a 1970s minicomputer. Our patented ionchip technology makes it possible for customers to buy a 'personal analyser' and use it just like any PC peripheral. The market is still dominated by products manufactured in old-style machine shops; the semiconductor revolution is long overdue. Microsaic is proud to be the first and only company to successfully commercialize a mass spectrometer on a chip."

Microsaic is launching two products targeted at laboratory and security applications:

- **ionchip® ChemCube™** - is a compact PC peripheral: its tiny footprint and flexible sample interface make it ideal as a personal sample analyser.
- **ionchip® ChemPack™** - is a waterproof, ruggedised, battery powered system designed for field use.

The ion source, filter and detector are integrated on a tough, interchangeable module which can be replaced by the user in under 10 minutes, eliminating the need for cleaning and radically reducing system downtime.

All ionchip products come with an extensive, customizable software application which can be interfaced with a laboratory network.

The October 2005 issue of the Journal of Microelectromechanical Systems (Vol. 122, 517-527) published a paper describing how the Microsaic team, led by Prof. Richard Syms of Imperial College London, has developed a chip-based mass spectrometer system using standard semiconductor processes. This technology is called ionchip and is based on classic quadrupole mass spectrometer. The performance of a mass spectrometer depends on its mechanical precision; the more perfectly aligned the components are, the better the system's sensitivity and selectivity. Manufacturing tolerances of a few microns are possible using semiconductor processes and Microsaic has used them to



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achieve the performance of 'benchtop' mass spectrometer on-chip. Precision micro-structures are fabricated by selectively etching away silicon, or adding new layers. In this way, entire batches of identical quadrupole mass spectrometer chips may be manufactured from silicon wafers.

About Microsaic Systems

Microsaic Systems is a rapidly growing UK company developing next generation systems capable of identifying trace compounds such as pharmaceuticals, explosives, chemical weapons and narcotics. Mass spectrometers are sophisticated systems used in everything from explosives detection to drug discovery. Today's mass spectrometers are large, heavy and expensive. Microsaic's breakthrough lonchip® technology integrates the mass spec onto a single silicon chip leading to massive size, cost and reliability advantages.

Microsaic partners with customers to deliver products incorporating lonchip technology. Portable and laboratory systems are available from Microsaic for a variety of applications including the analysis of petrochemicals, drug-bearing compounds, pollutants, chemical & biological warfare agents, explosives and narcotics.

Microsaic was formed in 2001 with technology developed at Imperial College London, the UK's leading technical university. Microsaic owns 30 patents, of which 18 protect lonchip technology. Microsaic's headquarters are twenty minutes from London Heathrow.

Visit Microsaic Systems at Pittcon stand 5954!