

# LIVERMORE INSTRUMENTS

5776 Stoneridge Mall Road  
Suite 265  
Pleasanton, CA 94588

T 925-708-7780

F 925-264-0775

[inquiry@livermoreinstruments.com](mailto:inquiry@livermoreinstruments.com)

<http://www.livermoreinstruments.com>

July 1, 2008

- For Immediate Release -

## *Livermore Instruments Announces its Formation*

Livermore Instruments Inc. (LII) announces its foundation in order to commercialize real-time aerosol technology developed at Lawrence Livermore National Laboratory and the University of California, Riverside. The technology, referred to alternatively as as Single Particle Aerosol Mass Spectrometry (SPAMS) and Aerosol Time-of-Flight Mass Spectrometry (AT-OFMS) was developed over a matter fifteen years and with an investment of more than twenty million dollars of Federal and state research funds. SPAMS is a sufficiently well-developed aerosol analysis technology as to allow applications beyond those considered to be within the traditional boundaries of aerosol science and technology including such non-traditional fields as military and homeland security.

SPAMS constitutes a revolutionary improvement in aerosol detection and analysis over competing technologies. SPAMS functions by collecting individual mass spectra from individual aerosol particles and analyzing the data in real-time to determine the identity and chemical composition of the particles. Up to 1000 particles can be analyzed per second, allowing the technology to detect a "needle in a haystack" when applied to security applications in polluted environments. SPAMS is also highly automated with a SPAMS 2.0 instrument having been operated autonomously over a matter of weeks at an international airport with the instrument's status having been observed over a TCP/IP network by telemetry.

LII has acquired the rights to a multi-institutional suite of patents including the licensure of technologies from Lawrence Livermore National Laboratory, the University of California, Riverside and the University of Minnesota. Additionally, LII has developed its own improvements to the SPAMS device, for which a patent is pending. Development is scheduled to begin shortly on the improved instrument, to be marketed under the designation "SPAMS 3.0."

SPAMS is a platform technology and can be implemented in a wide variety of applications with the alteration of the particle pattern recognition library. Due to the wide variety of potential applications, collaborators are sought to perform the scientific research to open markets beyond the security scope as will be detailed in a future release.