

Nanotoxicology is emerging area of nanoscience

Product category: [Particle size analysis equipment](#)

News Release from: [NanoSight](#) | Subject: **Nanosight LM**

Edited by the Laboratorytalk Editorial Team on **19 November 2007**

NanoSight reports growth in sales of the LM series of bench-top system for rapid and easy sizing and counting of individual nanoscale particles in suspension

One of the most important emerging nanoscience areas is nanotoxicology. In this rapidly growing science, the characterisation of nanoparticles, including their size distribution in a biological medium is critical. Average size is not enough, as the smaller particles in a wide dispersion could well be the ones to enter and affect cells.

This article was originally published on [Laboratorytalk](#) on 19 November 2007 at 8.00am (UK)

Related stories

[Commendation for nanoparticle characterisation](#)

The Organic Materials Team within AWE Aldermaston has successfully tested and validated NanoSight's characterisation systems for accurate analysis of nanoparticles in suspension

[Nanoparticle characterisation on the benchtop](#)

NanoSight announces the launch of the Nanosight LM20; a bench-top system for rapid and easy sizing, and counting of individual nanoscale particles in suspension

Professor Kenneth Dawson of the department of chemistry at University College Dublin has recently led a European Science Foundation symposium in Barcelona to investigate the interactions between nanoparticles/biomaterials and biological systems.

This emerging topic attracted over 150 participants to look into alternative approaches to bio- and nano-safety.

Professor Dawson's work has been greatly enhanced since he started to use the NanoSight nanoparticle sizing system.

'While we still use dynamic light scattering to find average particle size, we really need the complete particle distribution map in the sub-micron area in our work.

'The NanoSight instrument identifies and tracks individual particles, enabling us to see how they are organised (into clusters or otherwise) for the first time.

Further reading

[Firefly LM10 system launched](#)

Nanosight announce the launch of Firefly LM10 a nanoparticle characterisation system that enables highly accurate visualisation of individual nanoscale particles in suspension

[Spray analysis seminar was cooperative effort](#)

One-day seminar by Malvern Instruments, Copley Scientific, and Melbourn Scientific presented delegates with an opportunity to learn about different techniques for pharmaceutical spray analysis

[Automated online second virial coefficient method](#)

Wyatt Technology has developed a static light scattering (SLS) method for measuring the second virial coefficient (A_2), using its Dawn and Minidawn light scattering and Optilab Rex refractometers

'It is impressive to see just how limited DLS is in these respects, where it will often smear or mask true cluster distribution'.

NanoSight's systems offer the ability to obtain higher resolution particle size distribution profiles than other more time-consuming and expensive methods, from samples with minimal sample pre-treatment.

After simply diluting to an acceptable concentration range, the instrument uses a patented laser illumination method to visualise individual nanoscale particles moving under Brownian motion.

The system instantly recognises and quantifies polydispersed and multimodal samples as well as agglomerates and contaminants.

The Nanoparticle Tracking Analysis (NTA) analytical software package directly and simultaneously measures the dynamic behaviour and, thus, hydrodynamic size of each particle in a suspension and avoids the problems associated with the intensity bias to larger particles inherent in other bulk measurement dynamic light scattering techniques.

The software enables real-time dynamic nanoparticle visualisation from which independent quantitative estimation of particle size and size distribution can be obtained.

The technology is not restricted to nanotoxicology and is finding uses in many areas across multiple industries.

The system enables non-microscope users to quickly and accurately analyse nanoparticles in suspension and complements light scattering techniques such as DLS, which is also known as photon correlation spectroscopy (PCS).

Nanosight's growing user base includes international companies such as the 3M, BASF, ICI, BP, Unilever, and GSK.



Nanosight LM identifies and tracks individual particles

- [NanoSight: contact details and other news](#)
- [Email this article to a colleague](#)
- [Register for the free Laboratorytalk email newsletter](#)
- [Send a comment on this recent news story to the Editor](#)
- [Laboratorytalk Home Page](#)

Related Business News

[Reportlinker.Com: the Iphone Effect - Apple's...](#)

...Entry into the Mobile Space. Reportlinker.com announces that a new market research report related to the worldwide telecommunication industry is now available to its catalogue.

[Metal Storm Announces Half Yearly Report](#)

American Greetings Retail Stores First to...

...Bring 'Gift Card Mall' to the Mall Channel. American Greetings Corporation announced today that the company's U.S. card and gift shops will soon sell gift cards for other retailers, making them the first mall-based stores to offer what is known as a 'gift card mall.'

FundsTech Corp Announces New Strategic Partner...

...in Worldwide Prepaid Debit Card Space. FundsTech Corp , announced today that it has signed an agreement with its second Strategic Partner in South Africa called ProCard Technologies which will provide a prepaid debit card solution to its customers.

Scientists Lend Expertise to Green Chemistry Initiative

About two dozen of the nation's top scientists and engineers will join the state Department of Toxics Substances Control to build the California Green Chemistry Initiative - a new program to cut toxic chemicals in consumer products