News

Machine learning powers Malvern Panalytical's new NanoSight Pro

Malvern Panalytical, global leader in the development of analytical instrumentation, today announces the launch of its NanoSight Pro nanoparticle tracking analysis (NTA) system. Powered by machine learning coupled with designed-in smart features, NanoSight Pro simplifies nanomaterials characterization, enabling every user to quickly generate reproducible, robust, and high-quality data.

The NanoSight Pro, with upgraded NS Xplorer software, delivers advanced capabilities and improved accessibility for all users. The new instrument boasts best-in-class, ultra high-resolution size and concentration measurements for nanomaterials, up to three times faster than ever before. Previous limitations linked to small biological particles and other low-scatterers are overcome by NanoSight Pro, which is optimized for use with samples including exosomes, viruses, vaccines, and drug delivery systems.

NanoSight Pro has a sleek new design with a compact footprint, making it the perfect fit for busy laboratories. The instrument is powered by machine learning coupled with cutting-edge technology, including an upgraded temperature controller which allows stress and aggregation studies to be performed at up to 70°C. There is a dedicated fluorescence mode, enabling confident detection of fluorescent subpopulations, and allowing their discrimination from the total population. Advances in fluorescence measurement provide powerful insights into sample specificity while opening new possibilities in diagnostic and therapy applications.

Agnieszka Siupa, NanoSight Product Manager, said: *"NanoSight Pro delivers the perfect balance of both accessibility and power, without compromising on either. The machine learning algorithms and smart tools built into the software enable any level of user to generate extremely detailed and accurate size and concentration data very quickly and simply. This fuels productivity and increases confidence, while eliminating any concerns about subjectivity or human error. NanoSight Pro can be easily self-installed, and its SmartManagerTM connectivity enables remote diagnostics and fast support, monitoring instrument health and ensuring maximum uptime."*

Mark Fleiner, Malvern Panalytical President, added: *"The launch today of the Nanosight Pro represents the culmination of many months of research, design, and development carried out by a highly connected cross-functional team. We are incredibly proud of the result because the new instrument has been designed entirely around our customers' requirements and workflows, and we know it will make a positive impact as a result. The key applications which will benefit from NanoSight Pro include the development of new vaccines and drug delivery systems - research which will save and improve lives and contribute to a healthier world."*

NanoSight is already trusted by scientists around the world for its superior data quality and ease of use, with thousands of publications referring to NanoSight NTA data. As nanotechnology finds more and more applications, especially in key fields like drug delivery and virus and vaccine research, high-quality analytical characterization has become even more important. The NanoSight Pro ensures your analysis can keep up with the speed of innovation, decoding the nature of complex nanomaterials and bringing new discoveries to light.

About Malvern Panalytical

We draw on the power of our analytical instruments to make the invisible visible and the impossible possible. Through the chemical, physical and structural analysis of materials, our high precision analytical systems support our customers in creating a better world. We help them improve everything from the energies that power us and the materials we build with, to the medicines that cure us and the foods we enjoy.

We partner with many of the world's biggest companies, universities and research organizations. They value us not only for the power of our solutions, but also for the depth of our expertise, collaboration and integrity. We are committed to Net Zero in our own operations by 2030 and in our total value chain by 2040. This is woven into the fabric of our business, and we help our employees and customers think about their part in creating a healthier, cleaner, and more productive world. With over 2300 employees, we serve the world, and we are part of Spectris plc, the world-leading precision measurement group.

www.malvernpanalytical.com

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(Photos: Malvern Panalytical)