PRESS RELEASE

Scienta Omicron Introduces DeepCore-X: Redefining What's Possible with Lab-Based Hard X-Ray Photoelectron Spectroscopy

Uppsala, Sweden- 22nd Sept 2025 – Scienta Omicron, a world leader in surface science and photoelectron spectroscopy instrumentation, today announces the launch of DeepCore-X, its newest flagship platform for advanced surface and bulk chemical analysis. DeepCore-X merges high-resolution X-ray Photoelectron Spectroscopy (XPS) and Hard X-ray Photoelectron Spectroscopy (HAXPES, bringing synchrotron-quality insights directly to lab and applied spectroscopy environments.

A Leap Forward in Performance and Usability

DeepCore-X is engineered to meet the demands of researchers working on semiconductors, energy materials, advanced coatings, and interface devices. Its key features include:

- Synchrotron-like performance in your own lab enabled by the high-flux Ga Kα (9.25 keV) F-series MetalJet source.
- Surface precision and bulk access in one instrument with dual excitation from Al Kα (1.5 keV) for surface sensitive XPS and Ga Kα for HAXPES with up to ~50 nm information depth.
- More data in less time with high accuracy using the EW4000 analyser with 200 mm radius, 60° acceptance.
- Minimal operator time and reduced errors through automation, guided sample introduction, camera navigation, and easy access sample library.

Collectively, these enhancements build on Scienta Omicron's legacy and with a new generation of laboratory HAXPES instrument that will empower researchers to advance next-generation devices, sustainable energy, and breakthrough materials.

„Our innovation has always been driven by the needs of the research community, and DeepCore-X is no exception," said Susanna Eriksson, CEO, Scienta Omicron. "By combining synchrotron-quality performance with smart automation and intuitive software, we are empowering scientists and engineers to explore surfaces, interfaces, and bulk properties with unprecedented clarity and efficiency."

Committed to Sustainable Science

Scienta Omicron embeds sustainability into both design and operation of DeepCore-X. Long-lifetime components, modular upgrade paths, and efficient manufacturing help reduce environmental impact. Instrument energy efficiencies and a streamlined footprint further align with global responsible research goals.

To learn more about DeepCore-X, please visit our website

About Scienta Omicron

Scienta Omicron leads the field in materials and surface science, providing modular and integrated solutions for spectroscopy, microscopy, and thin film growth under ultra-high vacuum. With decades of innovation, the company supports scientists worldwide in pushing the boundaries of nanotechnology and quantum materials research.

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