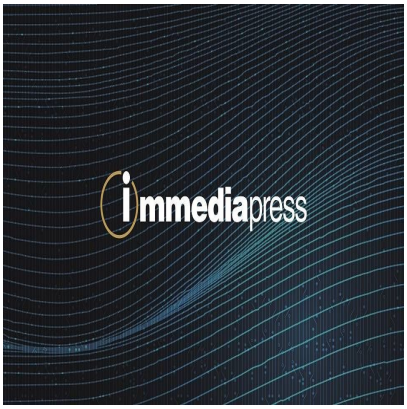

Park Systems Launches Park FX40 IR, Uniting Full AFM Performance and Nanoscale IR Spectroscopy in a Single Automated Platform

Descrizione

COMUNICATO STAMPA â?? CONTENUTO PROMOZIONALE

GWACHEON, South Korea, May 29, 2026 /PRNewswire/ â?? Park Systems Corp., the worldâ??s leading provider of atomic force microscopy (AFM) and nanoscale metrology solutions, today announced the commercial launch of the Park FX40 IR, completing the companyâ??s Nano-IR spectrometer portfolio with a small-sample platform. The FX40 IR enables researchers to simultaneously acquire nanoscale IR chemical information and surface topography on samples up to 20 mm Ã? 20 mm, identifying molecular composition at sub-5 nm spatial resolution without surface contact. The FX40 IR follows the 2025 launch of the FX200 IR and FX300 IR, which brought nanoscale IR spectroscopy to large-sample and full wafer-scale configurations, and extends the same capability to small-sample research.

The FX40 IR is built on the Park FX40 â?? the worldâ??s first fully automated research-grade AFM, which integrates robotics and intelligent automation to handle every step of measurement from probe exchange and beam alignment to tip approach and image acquisition. The FX40 delivers a low noise floor, minimal thermal drift, and enhanced mechanical stability through its superior FX mechanical design, in which the optical microscope is decoupled from the Z stage to reduce susceptibility to mechanical disturbances. The FX40 IR extends this platform with nanoscale IR spectroscopy capability, enabling simultaneous acquisition of molecular chemical information and surface topography in a single measurement session.

Nanoscale IR chemical characterization on the FX40 IR is realized through Photo-induced Force Microscopy (PiFM), which detects the photo-induced force between the AFM cantilever and the sample to map molecular vibrations without surface contact. This non-contact detection approach achieves sub-5 nm spatial resolution â?? surpassing the ~10 Âµm optical diffraction limit of conventional Fourier Transform IR Spectroscopy (FT-IR) and the 10â??20 nm resolution of contact-based photothermal techniques â?? while eliminating sample damage and tip contamination inherent to contact-mode methods. Nanoscale IR spectra acquired by the FX40 IR show close agreement with conventional FT-IR results in peak positions and relative band profiles, providing a familiar reference point for

researchers experienced in bulk IR characterization.

â??The FX40 IR is not simply an add-on spectrometer â?? it is a complete AFM platform with nanoscale IR capability fully integrated. Completing the FX IR series, it means our customers can now work with the same precision, the same workflow, and the same level of automation whether their sample fits in a chip carrier or spans a full wafer,â?• said Dr. Sang-joon Cho, Executive Vice President and Head of the Research Equipment Business Unit at Park Systems.

Park Systems also introduces a phased acquisition path for the FX40 IR. Laboratories can purchase the FX40 IR for upgradable configuration â?? a fully functional FX40 AFM pre-configured for future IR integration, including the acoustic enclosure â?? and subsequently add the IR module as chemical analysis requirements grow. This approach allows research groups to make an initial investment in a world-class automated AFM and expand into nanoscale IR spectroscopy without replacement.

For more information on the Park FX40 IR, visit www.parksystems.com/en/products/research-afm/small-sample-afm/fx40-ir

About Park Systems

Park Systems is a global leader in nanometrology, providing advanced measurement solutions for both research and industrial applications. Founded by Dr. Sang-il Park, a contributor to the invention of atomic force microscopy (AFM) at Stanford University, the company has grown through continuous innovation and strategic acquisitions to become a leading force in the global nanometrology industry. Park Systemsâ?? technology portfolio includes AFM, white light interferometry (WLI), digital holographic microscopy (DHM), imaging spectroscopic ellipsometry (ISE), active vibration isolation systems, and solid metal probes. With regional offices across the Americas, Europe, and Asia, Park Systems supports customers in semiconductor manufacturing, materials science, and nanotechnology research.

For more information, visit www.parksystems.com

Photo â?? https://mma.prnewswire.com/media/2990749/Park_Systems_FX40_IR.jpg

Logo â?? https://mma.prnewswire.com/media/490994/Park_Systems_Logo.jpg

View original content:https://www.prnewswire.co.uk/news-releases/park-systems-launches-park-fx40-ir-uniting-full-afm-performance-and-nanoscale-ir-spectroscopy-in-a-single-automated-platform-302785736.html

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