High-Tech Distribution and Consulting

merconics is a competent and experienced partner for the distribution of advanced capital equipment and process materials for the European semiconductor, photovoltaic industry, printed electronics and related markets. The systems of our principals can be used in a variety of segments of the above-mentioned markets, such as advanced chip or Compound Semi and MEMS manufacturing as well as respective R&D activities. We focus our efforts on providing solutions that enable our customers to meet today´s challenging technology and manufacturing requirements.

>focus< today on

Bruker

Bruker has provided high-end technological solutions for each analytical task for more than 50 years now, covering a broad spectrum of applications in all fields of research and development. merconics is proud to represent Bruker's Automated AFM and X-Ray Metrology systems for the Semiconductor industry in Europe.

Atomic-Force Microscopy (AFM)

Bruker's industry-leading AFM microscopes provide the highest levels of performance, flexibility and productivity, and incorporate the very latest advances in atomic force microscopy techniques. These advancements include the proprietary Peak Force Tapping® technology.

The *InSight® 3DAFM* was designed specifically to address CD, depth and CMP metrology in a production environment. It provides the unparalleled accuracy and precision required for non-destructive, high-resolution 3D measurements of critical semiconductor features.

The *Dimension AFP* (DAFP) is the world's only fab-based metrology tool specifically designed for both CMP profiling and etch depth metrology for current and advanced technology nodes.

X-RAY Metrology Products

The Bruker-JV Series (former Jordan Valley) consists of several tools for a broad spectrum of applications in metals, WPS and device thin film as well as defects and CD metrology market.

Bruker's *JVX6200iRF* features a multi-channel metrology platform with small spot XRF and Fast XRR channels, for measurement of thin metal layer stacks on product or blanket wafers. The tool is designed for advanced process control of metals and transparent films at the back-end of line (BEOL), MEOL and front end of line (FEOL) of advanced semiconductors processes (Logic, DRAM, Flash and HDD process lines).

The *Bruker-JVX 6200iF Galaxy* as a small spot XRF is the tool of record for single bump composition measurements. It is an XRF tool that is ideal for non-destructive, in-line µ-bump %Ag measurements.

The *JVX7300F* is the latest generation X-Ray Fluorescence (XRF) tool from Bruker. It includes all features of the *JVX6200iF*, which is the tool of record at many fabs, and extends the metrology capabilities for advanced micro-bump and Under Bump Metallization (UBM) processes. The *JVX7300HR* extends the capabilities of previous High-Resolution X-ray Diffraction (HRXRD) and X-Ray Reflectivity (XRR) platforms to meet advanced node challenges.

The *JVX7300LSI* was designed for in-fab R&D and in-line production process monitoring of semiconductors materials. It enables fully automated characterisation of many advanced materials in the semiconductor industry. The system provides scanning HRXRD, XRR, WA-XRD for sub 20nm Si logic R&D, process development and production process monitoring on blanket and patterned wafers.

The *JVSensus* is the latest defect metrology system for Si device manufacturers. It helps identify problems encountered during wafer production using the latest X-Ray diffraction imaging (XRDI) technology. Applications include monitoring edge damage to prevent costly wafer breakage during ultra-fast anneal.

The Bruker *D8 FABLINE* is the fully automated X-Ray metrology tool for the semiconductor industry, with applications in the front and back end of the process line and packaging. Whether for R&D purposes or production quality control, the *D8 FABLINE* offers fast, non-destructive, high precision thin film analysis on blanket or structured wafers.

The Bruker *D8 DISCOVER for FA Lab* is an advanced X-Ray Diffraction System for materials research applications. The *D8 DISCOVER* with *DAVINCI* design increases ease-of-use with real-time component detection, plug-and-play functionality and fully integrated 2-dimensional XRD2 capabilities.

The Bruker *S8 FABLINE-TXRF* is the tool for monitoring trace metal contamination on the wafer surface by TXRF (Total Reflection X-Ray Fluorescence). It has full mapping capability with 0 mm edge exclusion measurement and contains multiple X-Ray sources for the optimized excitation for light, medium and heavy elements.

Please contact merconics to learn more about the unique features of the Bruker product lines.

Partners deliver success

merconics GmbH & Co. KG
Maisachweg 4
85232 Bergkirchen (Munich)
Germany

www.merconics.com
Phone: +49-8131-80535
Mobile: +49-173-5627-425
E-Mail: haraldmoder@merconics.com