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David Lam Talks at 2013 SPIE Advanced Lithography

You're Invited!

2013 SPIE Advanced Lithography is Playing Host to Industry-veteran David Lam

Please be our guest...

Santa Clara, CA - January 23, 2013 - Multibeam Corporation today confirmed that it will participate in SPIE Advanced Lithography 2013 in San Jose, CA, the world renowned symposium on semiconductor lithography and inspection/metrology. Multibeam is scheduled to participate at the San Jose Convention Center on the evening of February 27, Wednesday:

- Dr. David K. Lam will participate in a panel on Next-Generation Electron-Beam Inspection (EBI) to discuss the advantages of using mini-column arrays.
- Multibeam will also present findings in its recent analysis of CEBL patterning of line-cuts and contacts features below 20nm with Multibeam's proprietary e-beam column design.

7:30 - 9:00 PM

Panel Discussion featuring Dr. David K. Lam, Multibeam Chairman

"Making a Business Case for Disruptive Metrology Technologies: What Should We Invest In?"

Moderators: Alok Vaid, GLOBALFOUNDRIES, Inc.
Benjamin D. Bunday, SEMATECH North
Matthew J. Sendelbach, Nova Measuring Instruments, Inc.

Overview:

Continuing decrease in the device dimensions, combined with complex disruptive materials and 3D architectures have placed increasing demands on metrology tools. Over the years, the industry has implemented several innovative solutions to alleviate these challenges, but most of them have been incremental improvements rather than revolutionary. There seems to be inertia preventing the adoption of revolutionary and disruptive measurement techniques, some of which have been in the limelight for about a decade. The panel will focus on three key disruptive solutions which have been identified as potential next-generation metrology and inspection technologies for some time - CD-SAXS, Multi-ebeam-based inspection, and He-ion imaging. The panel will recommend whether the industry should continue to invest in these technologies, and if so, then what it will "actually" take to get them implemented in HVM.

Please visit Multibeam at the Poster Session:

6:00 -8:00 PM

Poster Session: Direct-Write/Maskless Lithography

"Image contrast of line-cut/contact features in complementary e-beam lithography"

Authors: Enden D. Liu, David K. Lam, Paper 8680-70

Abstract:

Image contrast of line-cut / contact features in Complementary E-Beam Lithography (CEBL) at advanced technology nodes will be analyzed where feature sizes become < 20 nm in Full Width Half Maximum (FWHM). When the feature size approaches the resolution of e-beam column design, the dose intensity profile follows Gaussian model. Using Gaussian profiles, the image contrast of line cut or contact hole features can be studied as a function of beam FWHM size, spacing between features, and proximity effect. As expected, the image contrast is dominated by contact stepping distance at one end, and proximity effect at the other in the plot of image contrast versus lateral position.

About Multibeam Corporation

Headquartered in Santa Clara, California, Multibeam Corporation is a leading developer of multi-column e-beam technologies that add high value to semiconductor lithography by doing away with costly masks. The company's Complementary E-Beam Lithography (CEBL) system augments optical lithography at critical layers by eliminating expensive optical multiple patterning at 20nm processing nodes and beyond. Multibeam's systems can also be cost-efficiently leveraged as primary lithographic tools for low-volume production of ASICs as well as in multi-project wafer programs. Multibeam's patent-protected e-beam technologies encompass deployment of multi-column arrays to perform wafer inspection.

For more information, visit **www.multibeamcorp.com**.