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For Immediate Release
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E-beam Lithography Precision at Optical Lithography Speed: Complementary Lithography Breaks the NGL Logjam

September 6, 2011 - What is semiconductor lithography's current state? Cost is rising, debate is raging, and a solution is wanting. The chip manufacturing industry has long expected optical lithography to reach resolution limits, eventually, as IC features shrink below 193nm, the wavelength of ArF lithography. Since 1999, program after program has sought a new lithography with extreme ultraviolet (EUV) light at 13.5nm to enable continued scaling of ICs. While 193nm lithography overcame a multitude of sub-wavelength patterning challenges, optical-as-usual became increasingly complex and costly. EUV was designated as the next-generation lithography (NGL) for high-volume manufacturing (HVM)....

EBL, when used to complement optical lithography, is called CEBL (complementary e-beam lithography). Multibeam's CEBL vector-scans shaped beams for cutting in critical layers, exploiting e-beam's strength in resolution and avoiding its weakness in speed. The technology eliminates the magnetic field; e-beam columns are small and beam deflection is fast. A multi-column module delivers five wafers per hour. Each column is equipped with an SEM for in-situ, in-process e-beam registration to attain best alignment. CEBL needs no masks, further reducing CoO. Optimized for cutting, this technology plays a limited but crucial role.

Courtesy of:
Debra Vogler
Sr. Technical Editor
Photovoltaics World
Solid State Technology/Advanced Packaging
Small Times

To access the full article, please go to: **http://www.electroiq.com/content/eiq/en/articles/sst/2011/09/e-beam-lithography-precision-at-optical-lithography-speed-complementary-lithography.html**

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.

Multibeam is led by Dr. David K. Lam, founder and former CEO of Lam Research Corporation.

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