NOVELLUS INTRODUCES ADVANCED PLANARIZATION SYSTEM FOR 65-NM AND SMALLER TECHNOLOGY NODES

SAN JOSE, Calif., June 21, 2004--Novellus Systems, Inc. (Nasdaq NM: NVLS) today introduced Xceda, a 300-mm chemical mechanical planarization (CMP) platform designed to exceed both the technical and economic requirements of CMP at 65 nm and beyond. Engineered to address the challenges associated with planarizing next-generation multi-level copper/low-k structures, Xceda dramatically reduces cost of ownership (CoO) by slashing slurry usage by up to 40 percent.

Said Dr. Sass Somekh, president of Novellus Systems, "We believe that the core technology of Xceda will allow us to extend to the 32-nm node without a disruptive change in platform. In fact, recent data from a leading semiconductor research consortium has validated that Novellus' CMP technology approach generates quality planarization results on porous ultra low-k (ULK) materials with k values of less than 2.0. Moreover, the Xceda process is optimized for efficient copper removal, while ensuring that ULK material remains intact and watermark/defect-free."

In contrast to conventional CMP tools, Xceda sets a new productivity benchmark by featuring four independent polishing modules that are key to its industry-leading throughput. The tool's unique through-the-pad slurry management, coupled with a patented pad design, delivers uniform slurry flow to the wafer surface, resulting in improved uniformity, as well as low dishing and erosion across the features.

Commenting on the tool, Damo Srinivas, vice president and general manager of Novellus' CMP business unit, stated, "Xceda will allow our customers to meet their technology goals without sacrificing the productivity and reliability that is essential for overall fab efficiency. Fundamentally, Xceda represents a new breed of CMP technology--one that is designed to transform a cumbersome process into a simpler and more efficient step."

Calling Xceda a compelling new product entry in the fast-growing copper CMP space, VLSI Research Inc CEO and President, G. Dan Hutcheson, noted, "Novellus is doing it again--addressing the technology, productivity, cost and reliability issues that have plagued CMP processing with a platform designed to meet both the technical and production requirements at emerging technology nodes." Hutcheson added, "When the tool's innovative features are coupled with Novellus' proven copper expertise, it gives the industry a credible, new CMP contender for 65-nm and smaller copper interconnects."

The copper CMP market is one of the fastest growing process segments. According to market research firm Dataquest, the total CMP market stood at $728 million in 2003, and is projected to reach $843 million by 2008. Tracked separately, the copper CMP market is estimated to reach $473 million by 2008--a trend that is greater than five times the growth rate of the overall CMP market.

The technology and productivity advantages of Xceda can also be leveraged to planarize other films. Based on its proven productive performance and low consumables usage, Novellus has received several customer commitments for its first production units.

Xceda will be on display at Novellus' booth at the Yerba Buena Center for the Arts in San Francisco, during SEMICON West, July 12-14, 2004.

XCEDA: THE FACTS

Technology Advantages:

- Patented polishing technology maintains the integrity of low-k and ultra low-k materials
- Through-the-pad direct slurry distribution improves uniformity and reduces slurry usage
- Efficient platen design features an embedded microchannel dispense, providing uniform and highly targeted distribution of slurry across the wafer
- New pad configuration with patented pad grooving provides precise control of slurry to the wafer, improving uniformity
- Multi-zone carrier (polishing head) maximizes control of the polishing profile
- Advanced vapor dryer for watermark-free hydrophobic dielectrics

- Configurable cleaner with brush or megasonic options for process flexibility

Productivity Advantages:

- Four-polish module architecture for high throughput
- Dedicated load cups and conditioners for faster, reliable wafer handling
- Configurable cleaner for process flexibility
- Compact, simple design for serviceability
- In-situ and in-line metrology control for real-time copper profile management across 100 percent of the wafer
- 18 percent fewer handling steps than the competition

Cost Advantages:

- 70 percent pad size reduction
- 50 percent lower pad cost per wafer
- Up to 40 percent reduction in slurry usage (runs any set of consumables independently on any combination of modules)
- 22 percent footprint savings
- Extendible to future nodes - no costly and complex platform change

"Safe Harbor" Statement Under the Private Securities Litigation Reform Act of 1995:

The statements regarding (i) the new productivity benchmarks set by Xceda; (ii) Xceda's ability to reduce ownership costs by decreasing slurry usage; (iii) the ease of Xceda's extendibility; (iv) Xceda's industry-leading throughput; (v) Xceda's abilities to efficiently remove copper while keeping ULK material intact and watermark/defect-free, improve uniformity and minimize dishing and erosion; (vi) Xceda's ability to allow customers to meet technology goals without sacrificing productivity and reliability; (vii) the pace of growth of the CMP and copper CMP markets; and (viii) leveraging Xceda to planarize other films, as well as other matters discussed in this news release that do not concern purely historical data, are forward-looking statements. The forward-looking statements involve risks and uncertainties, including, but not limited to, unexpected technical difficulties that result in decreased productivity or increased cost of ownership; unanticipated extendibility problems; unforeseen technical difficulties that cause ULK defects; Xceda's inability to improve uniformity and lower dishing and erosion; productivity and reliability difficulties that inhibit customer technology goals; a slowdown in growth of the CMP and copper CMP markets; and difficulties in using Xceda to planarize other films, as well as other risks and uncertainties discussed in Novellus' filings with the Securities and Exchange Commission (SEC). Actual results could differ materially. Novellus assumes no obligation to update this information. For more details relating to risks and uncertainties that could cause actual results to differ from those anticipated in the forward-looking statements, and risks to Novellus' business in general, please refer to Novellus' SEC filings, including its Annual Report on Form 10-K for the fiscal year ended December 31, 2003 and its Quarterly Report on Form 10-Q for the quarter ended March 27, 2004.

About Novellus:

Novellus Systems, Inc., an S&P 500 company, manufactures, markets and services advanced deposition, surface preparation and chemical mechanical planarization equipment for today's advanced integrated circuits. Our products are designed for high-volume production of advanced, leading-edge semiconductor devices at the lowest possible cost. Headquartered in San Jose, Calif., with subsidiaries throughout the United States, as well as in the United Kingdom, France, Germany, the Netherlands, Ireland, Italy, Israel, India, China, Japan, Korea, Malaysia, Singapore and Taiwan, we are a publicly traded company on the Nasdaq stock exchange (Nasdaq: NVLS) and a component of the Nasdaq-100 Index®. Additional information about Novellus is available on our home page at www.novellus.com

Xceda is a trademark of Novellus Systems, Inc.

---

https://newsroom.lamresearch.com/2004-06-21-NOVELLUS-INTRODUCES-ADVANCED-PLANARIZATION-SYSTEM-FOR-65-NM-AND-SMALLER-TECHNOLOGY-NODES