NOVELLUS SHIPS 100TH ALTUS® PNL™ MODULE FOR TUNGSTEN DEPOSITION

SAN JOSE, Calif., Sept. 23, 2004--Novellus Systems, Inc. (Nasdaq NM: NVLS), the productivity and technology leader in advanced deposition, surface preparation and chemical mechanical planarization processes for the global semiconductor industry, today announced the shipment of its 100th ALTUS® PNL (Pulsed Nucleation Layer) module for tungsten deposition. The milestone delivery will be installed in a leading-edge 300-mm production fab in Korea, where it will be used for advanced tungsten applications.

Novellus' PNL approach integrates a high throughput, atomic layer deposition (ALD) nucleation layer with a chemical vapor deposition (CVD) bulk deposition. Both the nucleation layer and the CVD fill are deposited within the same ALTUS chamber in sequential processing steps. During the PNL process, precisely controlled doses of reactant gases are sequentially introduced into a reactor chamber and then quickly purged. This controlled sequential dosing leads to a surface-limited growth for each cycle. The integration of this dose-purge approach within the same module as CVD bulk fill results in dramatically higher system throughput when compared to other approaches.

The success of ALTUS PNL is due to several key benefits. The thin nucleation layer deposited by the PNL technique is insensitive to underlying materials, such as PVD titanium nitride (TiN), metal organic CVD (MOCVD) TiN or TiCl4 TiN CVD films. Aspect ratios in excess of 20:1 have been filled using the in-situ PNL nucleation-CVD plug-fill, providing extendibility to the 32-nm node on the same ALTUS platform. Additionally, resistivity reductions of up to 50 percent over conventional tungsten ALD/CVD approaches have been recently demonstrated with the PNL technique. PNL can be retrofitted to Novellus' entire ALTUS installed base of 200- and 300-mm systems.

With PNL-enhanced ALTUS systems now installed in 35 fabs around the world, Novellus' vice president and general manager of the tungsten business unit, Karl Levy, noted, "The system's success and widespread adoption is due to its ability to meet the requirements of plug fill down to 32 nm without sacrificing productivity. It's an extremely cost-effective solution for advanced tungsten plug capabilities. We're gratified that this Korean customer is leveraging the ALTUS PNL advantages in its world-class facilities."

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

The statements regarding ALTUS PNL (i) installation plans; (ii) system throughput; (iii) extendibility; (iv) productivity and cost-effectiveness; as well as other matters discussed in this news release that do not concern purely historical data, are forward-looking statements. These forward-looking statements involve risks and uncertainties, including, but not limited to (i) problems with installation of the ALTUS PNL system in the Korean fab; (ii) technical difficulties that inhibit the ability of ALTUS PNL to meet aggressive production schedules; (iii) problems with ALTUS PNL's extendibility; (iv) increased operating costs for the ALTUS PNL system; and other risks and uncertainties discussed in our 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 Novellus' forward-looking statements, and risks to Novellus' business in general, please refer to Novellus' SEC filings, including our Annual Report on Form 10-K for the year ended December 31, 2003, our Quarterly Reports on Form 10-Q for the quarters ended March 27, 2004 and June 26, 2004 and our Current Reports on Form 8-K.

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

ALTUS is a registered trademark of Novellus Systems, Inc. PNL is a trademark of Novellus Systems, Inc.

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