NOVELLUS LAUNCHES ALTUS® DIRECTFILL™ TUNGSTEN NITRIDE/TUNGSTEN DEPOSITION SYSTEM FOR 65 NM AND BELOW

SAN JOSE, Calif., Nov. 24, 2004--Novellus Systems, Inc. (Nasdaq NM: NVLS), the productivity and technology leader in advanced deposition, surface preparation and chemical mechanical planarization (CMP) processes for the global semiconductor industry, today announced the introduction of ALTUS DirectFill--a single-system solution designed to meet contact and via-fill needs at 65 nm and below. Leveraging Novellus' production-proven ALTUS platform, DirectFill eliminates the need for conventional titanium/titanium nitride (Ti/TiN) toolsets. This advanced plug-fill technique can reduce contact resistance (Rc) and lower overall cost of ownership (CoO) by 50 percent or more when compared to existing processes.

Novellus' ALTUS DirectFill simplifies the tungsten deposition process by replacing the standard multi-tool, Ti/TiN/W approach with a single system. This system integrates an advanced preclean process in one process module, followed by Novellus' proprietary, pulsed nucleation layer (PNL) deposition of tungsten nitride (WN) in a second module, and then a combined PNL and chemical vapor deposition (CVD) tungsten (W) deposition in a third module. The multi-station sequential deposition process modules used for WN and W deliver high productivity and process reproducibility.

ALTUS DirectFill technology provides several key technical benefits. First, the tungsten nitride barrier exhibits atomic layer deposition (ALD) conformality and is substantially thinner than the Ti/TiN liner-barrier it replaces, allowing more of the contact to be filled with lower resistivity tungsten. The tungsten nitride/low resistivity tungsten DirectFill process can reduce contact plug resistance by as much as 50 percent at the 45-nm node. Additionally, PNL tungsten nitride provides excellent barrier characteristics for tungsten and adheres to a variety of dielectric materials. All process temperatures are below 400°C, providing compatibility with future process integration requirements. Unlike competitive systems, ALTUS DirectFill technology solves fill problems at advanced nodes without compromising resistivity.

"ALTUS DirectFill combines an innovative new model for advanced contact fill with the benefits of a proven Novellus platform," said Karl Levy, vice president and general manager of Novellus' Tungsten Business Unit. "Unlike the conventional PVD/MOCVD process sequence, our integrated single-architecture technology approach enhances current tungsten deposition applications, such as contact and bit line, while enabling future applications, such as capacitor electrode and metal gate electrode, where tungsten nitride and tungsten are currently being evaluated. It is a system that carries significant technical advantages without sacrificing productivity," added Levy.

The new tool is available in both 200-mm (Concept Two ALTUS DirectFill) and 300-mm (Concept Three ALTUS DirectFill) configurations. Novellus is actively engaged in joint development projects and working with more than two dozen customers worldwide to develop processes for a wide range of applications and emerging technologies.

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

The statements regarding ALTUS DirectFill's 50 percent or greater lower overall cost of ownership, the ability of ALTUS DirectFill's multi-station sequential deposition process modules to deliver high productivity and process reproducibility, the compatibility of ALTUS DirectFill with future process integration requirements, ALTUS DirectFill's ability to solve fill problems at advanced nodes without compromising resistivity, ALTUS DirectFill's unique ability to offer significant technical advantages without sacrificing productivity, as well as other matters discussed in this news release that are not purely historical data, are forward-looking statements. The forward-looking statements involve risks and uncertainties, including, but not limited to, competitor introduction of a system with a lower overall cost of ownership, technical difficulties with ALTUS DirectFill's process reproducibility, incompatibility of ALTUS DirectFill with future process integration requirements, competitor improvements in fill/resistivity interplay at advanced nodes, increased operating costs for the ALTUS DirectFill system, and other risks indicated in our filings with the Securities and Exchange Commission (SEC). Actual results could differ materially. We assume no obligation to update this information. For more details, please refer to our SEC filings, including our Annual Report on Form 10-K for the year ended December 31, 2003 and our Quarterly Reports on Form 10-Q for the quarters ended March 27, 2004, June 26, 2004 and September 25, 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.

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