



PRESS RELEASE

CEA-Leti and Entegris to Study Cross-Molecular Contamination Between Wafers and Containers in Chip Industry

GRENOBLE, France and BILLERICA, Mass. USA – July 11, 2011 – CEA-Leti and Entegris, a provider of critical products and materials used in advanced high-technology manufacturing, have signed a two-year agreement to study cross-molecular contamination to and from semiconductor wafers and containers.

The chip industry's need for increased device performance has spurred the introduction of new materials, while the need to improve yield has led to new methodologies for wafer production. But these developments have spawned new challenges.

New materials introduce new contamination issues that must be managed and avoided. Meanwhile, new methodologies in wafer production will lead to new types of containers and new approaches for cleaning and managing them.

In particular, airborne molecular contaminants as well as cross-contamination issues emerging from the interaction between the cleanroom environment, the process tool mini-environment, the wafer-container system and the pod-mask system must be addressed. Therefore, it will be crucial to have the appropriate methodologies to understand the physics and chemistry behind the contamination process.

Leti's 8,000m² cleanroom facilities with 200mm and 300mm pilot lines, used for advanced development at the 32nm node and below and its tight collaboration with key semiconductor manufacturers, meet all the conditions for conducting contamination studies in production conditions.

Moreover, Leti will share its high-level technical competencies in studying the contamination process together with access to its Nanocharacterization Platform, which can eventually provide complementary analytical techniques. Entegris will provide different microenvironment platforms designed to protect critical materials from molecular contaminants as well as share its expertise in material science.

"Advanced technology nodes are increasingly sensitive to molecular contamination. Leti can characterize the microenvironment and correlate it to the sensitivity of critical substrates and surfaces," said Dr. Jim Ohlsen, Entegris director of materials characterization. "Entegris will contribute to the project by providing polymer materials and products based on our deep knowledge of material science and microenvironment control."

"This project is aligned with our roadmaps on the development of new methodologies analysis related to the study of all aspects of contamination in the semiconductor-production environment," said Narciso Gambacorti, CEA-Leti program manager. "Leti will contribute its knowhow on contamination analysis, while Entegris will have the opportunity to test new polymer materials and new carrier designs in Leti's production-like environment."

About ENTEGRIS

Entegris' products purify, protect and transport critical materials in the semiconductor, data storage, flat panel display, solar and other high-technology industries. As the

materials science and contamination control expert, Entegris enables its customers to meet the demands of the market with products and services that improve productivity, reduce cost and enhance yield. Entegris' solutions include wafer carriers and shippers, filtration products, liquid systems and components, specialty coating, premium graphite materials, shippers and trays and on- or off-site services.

Entegris is ISO 9001 certified and has manufacturing, customer service or research facilities in the United States, China, France, Germany, Israel, Japan, Malaysia, Singapore, South Korea and Taiwan. Additional information can be found at www.entegris.com

About CEA-Leti

Leti is an institute of CEA, a French research-and-technology organization with activities in energy, IT, healthcare, defence and security. Leti is focused on creating value and innovation through technology transfer to its industrial partners. It specializes in nanotechnologies and their applications, from wireless devices and systems, to biology, healthcare and photonics. NEMS and MEMS are at the core of its activities. An anchor of the MINATEC campus, CEA-Leti operates 8,000-m² of state-of-the-art cleanroom space on 200mm and 300mm wafer platforms. It employs 1,400 scientists and engineers and hosts more than 190 Ph.D. students and 200 assignees from partner companies. CEA-Leti owns more than 1,700 patent families.

For more information, visit www.leti.fr.

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