european semiconductor

print this page

E-Beam Lithography to Fraunhofer Nanoelectronic

Date: Monday 19 of September 2005

Leica Microsystems and Fraunhofer CNT report the start-up of a Leica SB351 DW e-beam system at the recently opened Fraunhofer Center for Nano-electronic Technology (CNT) in Dresden, Germany. Representing a two-digit million amount capital investment, this system will be used for selected processes used in the development of high-density storage devices and high performance transistors.

The Leica system uses a variable shape beam to enable high precision direct write patterning down to 45 nm feature size. The system meets all requirements for the 65 nm technology node for 300 mm wafer lithography.

Research results from a project (T207) sponsored by MEDEA+/BMBF were instrumental in the development of this system. BMBF supports the challenging '65 nm CMOS process on 300 mm wafer project, in particular the 'Use of electron beam technology for wafer direct writing with minimal 25 nm feature sizes sub-project (sponsor code 01M3147B).

Fraunhofer CNT took over an 800m2 clean room facility on May 31, 2005, which was previously owned by Infineon. Dresden offers an excellent location for joint R&D in nano-electronics between research institutes and material and system manufacturers. Research will focus on the development of selected process steps for the production of high density storage devices and high performance transistors. Infineon Technology Dresden, IMS Chips Stuttgart and Leica Microsystems Jena were involved in an intense collaborative effort before the delivery of the Leica system.