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New advisory board on maskless lithography

MEDEA+ recently installed a European Advisory Board on Maskless Lithography (EAB-ML2) with the objective to provide guidance to the various European initiatives on maskless lithography.

Commenting on the subject, Mart Graef, chair of the EAB-ML2, said: “The expertise and skills that are needed to create maskless lithography tools are available in Europe. The involvement of the major European semiconductor manufacturers and semiconductor equipment companies will ensure that the solutions provided will be tuned to the requirements of the IC industry. This is the most important issue that we will address in the EAB-ML2.”

Peter Tischer, vice chairman of MEDEA+, added: “Lithography is a large part of the MEDEA+ Programme. We estimate maskless lithography as a promising solution for low-volume IC products, maybe also for prototyping of new designs. Having different proposals for ML2 in Europe, the EAB-ML2 offers the chance to identify joint technical challenges and address them in collaborative work within the MEDEA+ Programme.” The MEDEA+ outlined: “As lithography continues to drive Moore’s Law, the increasing mask costs tend to constrain the economic viability of new technology generations. Presently, several European consortia are in various stages of developing tools for maskless pattern definition. Different concepts are under development, based upon either particle optics or photons. Also a number of ideas on beam modulating devices are being tested. In all cases, effective and reliable imaging will require enormous data transfer rates.”

It added that the EAB-ML2 would serve as a platform for the exchange of ideas between suppliers and users, and explore application scenarios for the implementation of maskless lithography. The equipment manufactures represented in the EAB –ML2 are ASML, Leica Microsystems, and MAPPER Lithography. ASML aims at a maskless extension of the optical roadmap via optical mask-less lithography (OML). Leica and MAPPER champion mask-less multiple e-beam concepts. The semiconductor companies Infineon Technologies, Philips Semiconductors and STMicroelectronics represent the users’ side.