

Ascatron and LPE cooperate on 150 mm SiC epitaxy for power electronics

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Ascatron AB, supplier of silicon carbide (SiC) epitaxy material, and LPE SpA, a pioneer in epitaxy reactors for power electronics, have entered into a cooperation agreement to develop high performance SiC epitaxial material for volume production on 150 mm substrates. The first results demonstrating outstanding uniformity will be presented at the ICSCRM2015 conference in Catania.

Ascatron has installed a new SiC epitaxy reactor supplied by LPE in its production fab in Kista-Stockholm. The reactor system with 150 mm wafer capability has the model name PE106. It is a new development from LPE and has recently been introduced on the market. Industry shortest cycle time and smallest footprint makes it an optimal choice for production of Ascatron's high quality epitaxial material for high voltage power devices.

"The new production equipment from LPE is key to scale-up Ascatron advanced epitaxy processes to state-of-the-art 150 mm SiC wafers", says Christian Vieider, CEO of Ascatron. "We are now ready to provide our customers with n-type doped epi wafers with thicknesses from 0.1 μm up to 100 μm ".

"The new PE106 will further enhance Ascatron unique epitaxy based SiC technology, which is set to gain worldwide acceptance among device makers because of its superior features", according to Franco Preti, CEO of LPE. "The cooperation with Ascatron enables LPE to strengthen our position on the market even further".

"The single wafer concept of the LPE reactor is ideal to optimize growth parameters for a wide range of processes", says Adolf Schöner, CTO of Ascatron. "We are now able to establish our unique growth processes for embedded pn junctions and 3D structures on this 150 mm wafer platform, which is a crucial step towards cost effective production of next generation SiC power devices".

About Ascatron

Ascatron develops next generation Silicon Carbide (SiC) power semiconductors radically reducing electrical conversion losses. With the 3DSiC® technology Ascatron provides doped device structures based on epitaxy enabling material quality and device performance unattainable through current methods. Ascatron offers fast delivery of custom designed epitaxy wafers in small series for market verification and ramp up to large volume production in accordance with the customer needs. To support customer product development, Ascatron offers the complete prototyping of device wafers as well as technology licensing. Ascatron started the operation in 2011 as a spin-out from the Swedish R&D institute Acreo, and has 10 employees in Sweden. www.ascatron.com

About LPE

Since 1972, LPE focused on design, manufacturing and sale of epitaxy reactors for power management and power saving applications. In the last decade LPE has developed products for wide bandgap materials such as SiC, introducing the PE106 which is rapidly winning market leadership. LPE reactors are particularly suited for thick and very thick epi layers on substrates and patterned wafers. Customers are both device makers and epi houses, operating worldwide. About 400 reaction chambers are in operation in more than 30 leading semiconductor companies. www.lpe-epi.com

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