

# Press release

## **Picosun brings ALD into pacemakers and electric cars**

Dresden, Germany and Espoo, Finland - Oct. 25, 2013 – Picosun Oy, the leading Atomic Layer Deposition (ALD) equipment manufacturer, provides novel batch ALD processes for fast, cost-efficient mass production of next generation 3D capacitors.

High power density 3D capacitor technology, which is suitable for storing and handling large quantities of energy, is utilized for example in pacemakers and other implantable medical devices, electric cars, and more and more efficient memories for computers and mobile devices. To realize these

applications, power consumption, long-term stability, and general reliability of the capacitors and other related electronic components need improvement and their footprint substantial reduction. Advanced, innovative ALD structures are in a central role when addressing these challenges and Picosun, as the leading supplier of mature batch ALD technology, is a natural choice for providing both ALD tools and processes for the capacitor manufacturing. With its demonstrated, optimized and production-proven ALD processes, Picosun is solidifying its position as the technological leader in the future 3D capacitor market.

“Picosun is the only company offering mature ALD batch equipment that can run stand alone or be clustered using a vacuum robot enabling a production ramp in a cost-efficient way. We aim at transferring our proven high-k capacitor material and process knowledge to an ALD batch system from Picosun and thereby improving cost-of-ownership for applications employing thicker high-k for high voltage applications. Such an offering is not available at the market today,” comments Dr. Jonas Sundqvist, group leader of high-k devices at Fraunhofer CNT, Germany. Fraunhofer CNT, a top European research center for micro- and nanoelectronics is one of Picosun’s collaboration partners in the EU 7th Framework Program project PICS (“Development of innovative ALD materials and tools for high density 3D integrated capacitors”, <http://www.fp7-pics.eu/>), a part of which the work for the next generation 3D capacitor production upscaling is.

Picosun’s world leading ALD technology enables industrial leap into the future by novel, cuttingedge coating solutions, with four decades of pioneering, groundbreaking expertise in the field. Today, PICOSUN™ ALD systems are in daily production use in numerous prominent industries around the globe. Picosun is based in Finland, it has its subsidiaries in USA and Singapore, and world-wide sales and support network.

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