# University of Bath installs PHABLE Photolithography system from Eulitha to lead the way in the development of advanced manufacturing techniques for nano-engineered semiconductors

**The unique PhableR 100 Nano-Lithography System has been installed in the University of Bath's Department of Electronic & Electrical Engineering.**

Würenlingen, Switzerland, March 22, 2016

EULITHA, a Swiss startup company offering innovative lithography equipment and services for the nanotechnology, photonics and optoelectronic markets announced today the installation of one of its unique PhableR 100 photolithography systems at the University of Bath, UK.

The PhableR 100 exposure tool incorporates Eulitha's proprietary Displacement Talbot Lithography technology that enables robust printing of very high resolution periodic patterns at low-cost. The system was purchased by the university as part of a comprehensive research program designed to develop advanced manufacturing techniques for nano-engineered semiconductors, particularly Gallium Nitride.

The purchasing of this innovative system was made possible following the award of a 5-year, £2.7 million grant from the UK Engineering & Physical Sciences Research Council (EPSRC) as part of the council's Manufacturing of Advanced Functional Materials funding programme (www.ManuGaN.org).

The university has been active in Gallium Nitride semiconductor research since 1999 and has an excellent reputation for combining nanofabrication techniques with semiconductor growth in order to improve the performance of optoelectronic devices such as light-emitting diodes.

As a result of the EPSRC investment, researchers in the Department of Electronic & Electrical Engineering now have access to a new nanolithography suite within the David Bullet Nanofabrication Cleanroom, of which the PhableR tool forms part, alongside the existing access to crystal growth reactors and more conventional fabrication facilities.

The PhableR 100 tool was chosen as it offers the unique capability to pattern large areas up to 100 mm in diameter with high fidelity in a very simple way. Its capability will be compared with another low-cost patterning technique, nanoimprint lithography as part of the research.

Lead researcher and Lecturer in the Department of Electronic and Electrical Engineering, Dr Philip Shields, said: "We are very excited to have this new capability at Bath. Initial results from the tool have matched and even exceeded our expectations. There has been a lot of interest from other researchers to use the tool and we look forward to developing new research collaborations as a consequence."

Dr. Harun Solak, CEO of Eulitha, said "we are very pleased by the choice of the University of Bath especially because their research program focuses on manufacturing technologies for nano-engineered semiconductors which is an area where our innovative technologies have the potential to make a significant impact."

The PhableR 100 system is capable of exposing periodic patterns down to feature sizes below 150 nm which rivals much more expensive high-end i-line steppers. The patented focus-free imaging technology used by the system enables uniform printing on non-flat samples often found in photonic and optoelectronic sectors. Eulitha had recently announced the delivery of further lithography systems to the Twente University in the Netherlands and CIOMP institute in China.

Eulitha AG is a spin-off company of the Paul Scherrer Institute, Switzerland. It specializes in the development of lithographic technologies for applications in optoelectronics and photonics. It produces and markets nano-patterned samples and templates using its own PHABLE tools and state-of-the-art e-beam lithography systems. PHABLE is a registered trade mark and the brand name of Eulutha's proprietary photolithography platform, which includes exposure tools and wafer patterning services.

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