

Nanostructuring News

Newsletter of EULITHA AG - June 2016

We are excited to present to you our new products, solutions and news in this newsletter. We look forward to hearing from you and working with you to find solutions to your lithography needs.

Phabler 100 News

The Unique PhableR 100 Photolithography System Adopted by More International Universities

Two prestigious universities have joined the ranks of PhableR 100 users

The system was installed at the University of Bath in the UK 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 program. www.ManuGaN.org

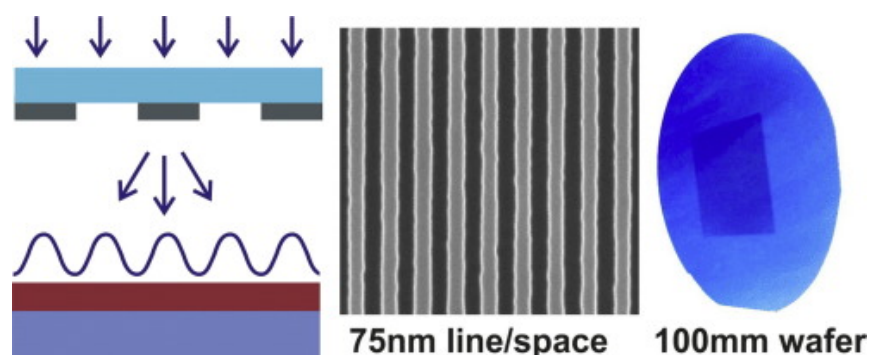
Another system was delivered to the Laboratory of Microfabrication in Beijing, which belongs to the Institute of Physics of the Chinese Academy of Sciences. The laboratory provides technical service and advice to researchers within the Institute of Physics and elsewhere. It also trains users and holds summer school often for young researchers in engineering, physical sciences and biomedicine. The aim of the laboratory is to provide the nanoscience and nanotechnology needed to explore fundamental physical phenomena and effects in low-dimensional structures and novel materials, as well as to solve major problems in information processing, green energy, healthcare and environment. http://lmf.iphy.ac.cn/index_en.php



New Publication

Eulitha Publishes New Article on 75nm Patterning with Deep-UV PHABLE System

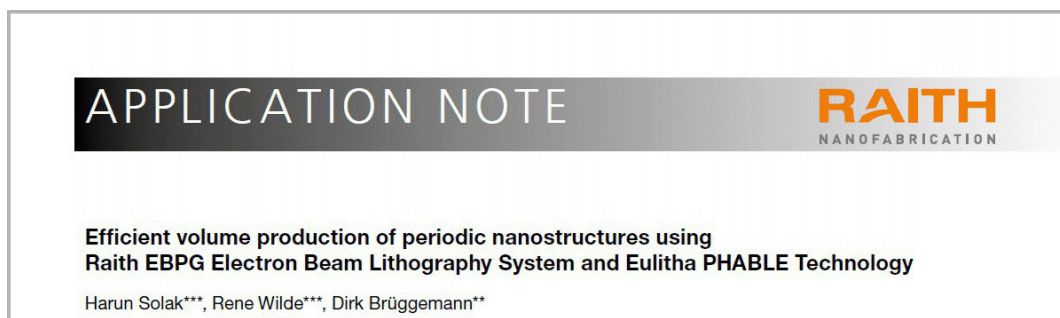
The article published in the Microelectronic Engineering journal describes the extension of Eulitha's proprietary Displacement Talbot Lithography technology to the deep-UV region in order to print ultra-high resolution periodic structures needed in many photonic applications. The new capability targets such applications as fabrication of wire-grid polarizers and distributed feedback lasers. DUV version of the popular PhableR 100 lithography system with sub-100nm resolution is now available from Eulitha.



[Read the full article](#)

Raith & Eulitha Issue New Application Note

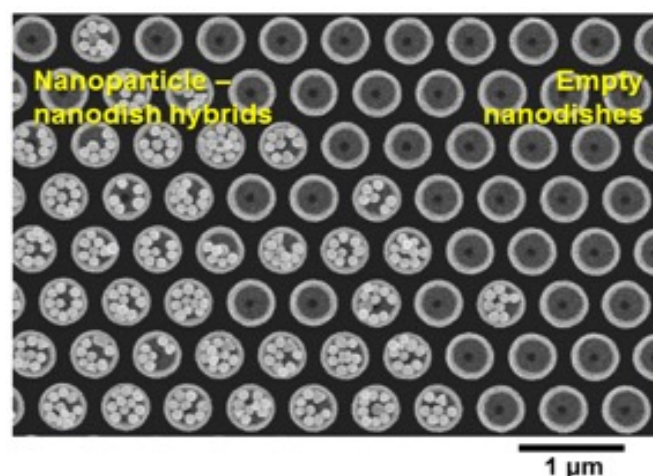
Cost-effective fabrication of periodic structures over large areas is the basic promise of Eulitha's PHABLE technology. The method requires the use of photomasks. Eulitha uses a Raith EBPG electron-beam lithography system to write various kinds of photomasks efficiently and with very high precision. The newly released application note explains the critical factors involved in this process. The written photomasks are used on Eulitha's PhableR 100 system to achieve printing with high throughput. [Download the application note.](#)



Customer Project

Researchers from Korea use Nanoimprint Template from Eulitha to Assemble Gold Nanoparticles in Nanodishes for Enhanced Plasmonic Response

Obtaining predictable and strong plasmon resonance response is critical in the exploitation of this physical phenomenon in applications such as enhanced Raman scattering and photochemical reactions. Jung-Sub Wi and his collaborators from the Korea Research Institute of Standards and Science and KAIST have developed a new method to achieve just that using a hybrid method. They demonstrate the fabrication of three dimensional nanodishes that serve as small containers to host guest nanoparticles. The nanodishes were fabricated using nanoimprint lithography and oblique-angle film deposition. One of Eulitha's PHABLE-made standard nanoimprint molds with a 600 nm period hexagonal array was used in this process. Gold nanoparticles were drop-cast onto the host nanodishes. These Au nanoparticle–nanodish hybrids excited a strong surface plasmon resonance.



[Read the full article](#)

Product News

New Phable Standard Templates

New large-area photonic structures are now available giving our customers more choice in the design of their experiments and devices. Here are some of the new additions:

[P200L_75d](#)

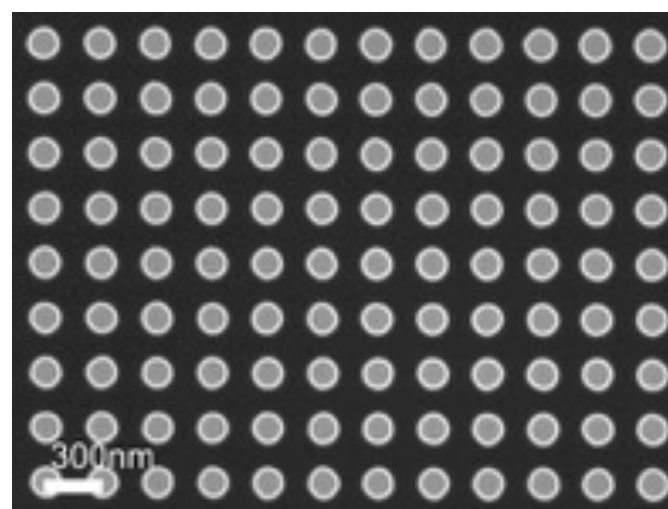
200 nm-period linear grating, 75 mm-circular area

[P300s_p_100d](#)

300 nm-period square array, 100 mm-circular area

[P450h_h_50d](#)

450 nm-period hexagonal array, 50 mm-circular area



Conferences & Events

Laser Optics - June 2016

17th International Conference "Laser Optics 2016"
27 June - 1 July, 2016, St. Petersburg, Russia

Eulitha talk:

"Displacement Talbot Lithography for the manufacture of distributed feedback lasers and distributed Bragg reflector lasers"



China MOCVD - August 2016

The 14th National Conference on MOCVD
16-19 August, 2016, Jilin, China

第十四届全国MOCVD学术会议
THE 14TH NATIONAL CONFERENCE ON MOCVD

MNE - September 2016

Micro and Nano Engineering
19-23 September, 2016, Vienna, Austria



MRS - December 2016

Materials Research Society Fall 2016 Meeting
27 November - 2 December, 2016, Boston, USA



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