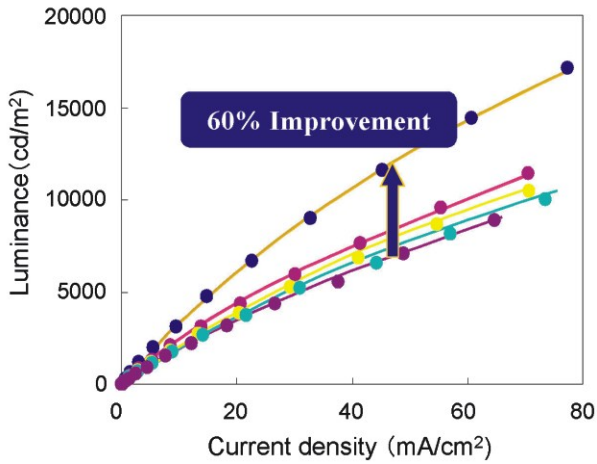


ACCOMPLISHMENTS

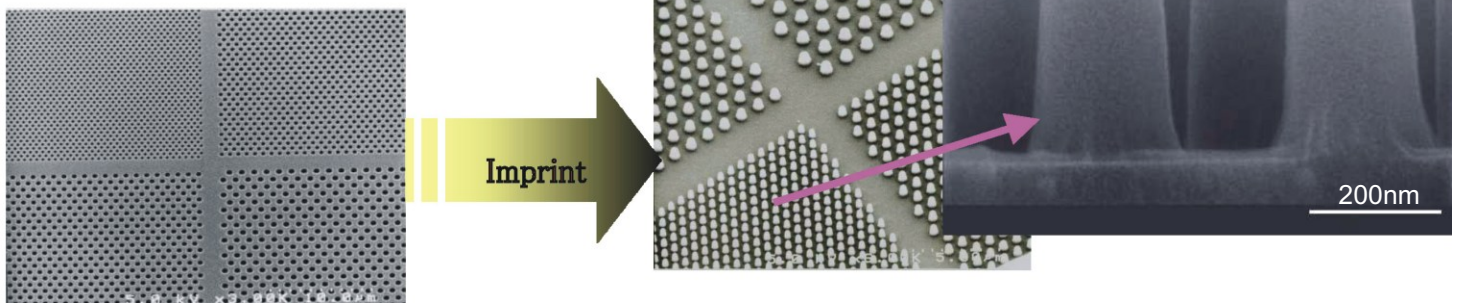


Courtesy of ITES

What is an OLED? It is a very attractive technology as next generation display and illumination, based on its light emission capabilities, thin size, light weight, wide viewing angle, low power consumption and quick response characteristics.

Nanoimprint Lithography is a potential process technology that ensures higher device luminescence efficiency at potentially lower manufacturing cost.

Applications and components developed with NILCom® technology can take full advantage of the most advanced and cost efficient pattern replication methods promoting an accelerated product commercialization path. NILCom® promotes standard process parameters, test stamps and qualified hardware solutions for high volume manufacturing and application development.

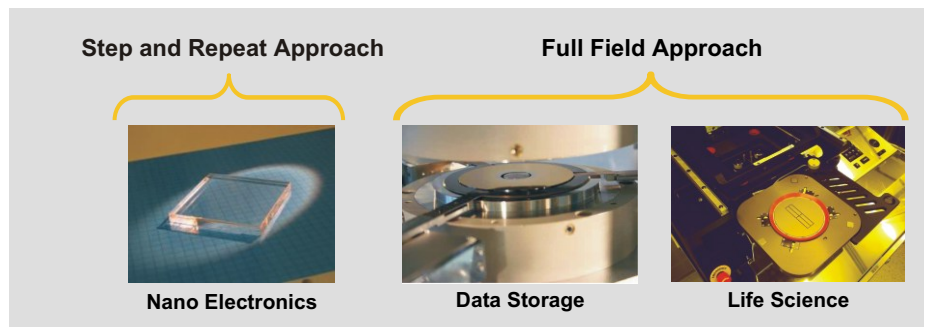


STANDARDIZATION

NILCom® Member companies are actively contributing to drive nanoimprint standardization activities

A large range of feature sizes and surface structures can be replicated in a single step by NIL providing process simplification and low cost material alternatives to conventional lithography processes. To make NIL a reality in semiconductor manufacturing, developments are required in template fabrication, resist definition, process control and metrology. The SEMI Standards Micropatterning Technical Committee established a new task force to tackle those questions during SEMICON Europa in April 2005. Headed by EV Group, the NIL standardization task force inaugural meeting during SEMICON West in July 2005 attracted significant attention from blank mask suppliers (Schott Lithotec, Asahi Glass), mask houses (DNP, Photronics, Toppan), next generation lithography and metrology equipment suppliers (ASML, EVG, FEI Company, KLA Tencor, Vistec, Molecular Imprints), as well as semiconductor manufacturers and suppliers (Agilent Technologies, Dow Corning, HP).

- Terminology: template / stamp
- Form factor - application driven
- Compatibility to established processing requirements (alignment features, active area), pre and post processing
- Best if compatible with existing mask manufacturing infrastructure



- Life science:
 - Microfluidic devices
 - Surface functionalisation
- Displays
- Data storage
- Opto electronics

SEMI nanoimprint task force to make NIL a reality in manufacturing

CENTERS OF EXCELLENCE

NILCom® has access to three worldwide centers of excellence for infrastructure qualification and process development. In Europe, AMO and EV Group have teamed up on a cooperation on advanced UV-Nanoimprint lithography.

With EV Group having the world's largest installation base of nanoimprinting equipment and AMO with its UV nanoimprint application lab, industrial processes can be developed and qualified. On a worldwide basis, the NILCom® infrastructure is complemented with NRC-IMI in North America and Waseda University in Japan from the process side.

North America



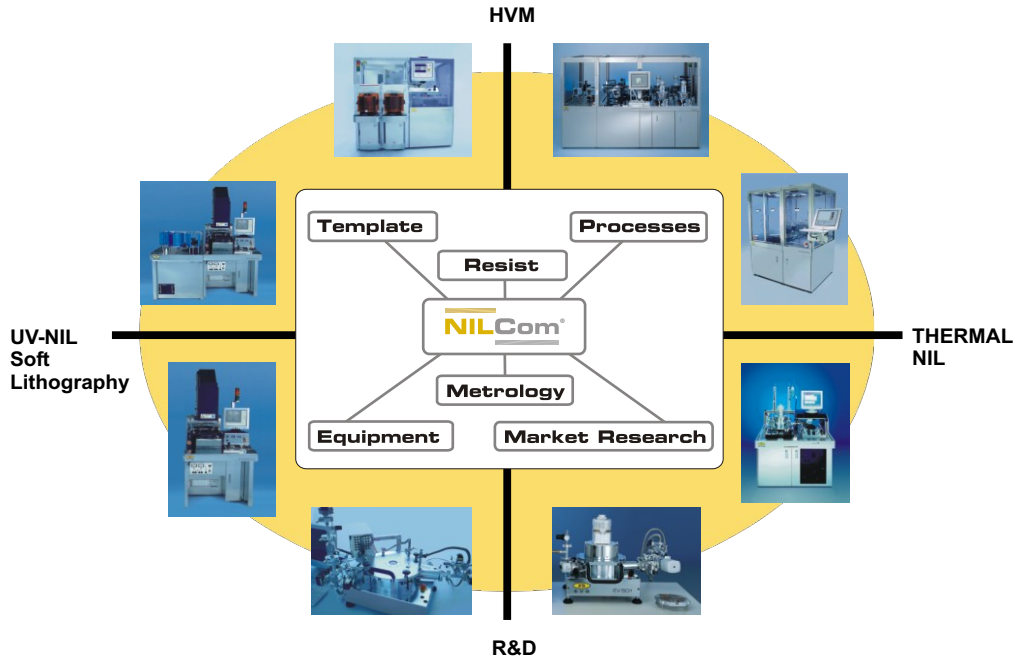
Europe



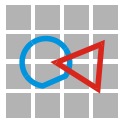
Korea Japan



From R&D to HVM – EVG's Equipment Portfolio



NILCom® MEMBERS



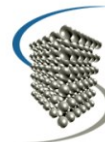
www.amo.de



www.applied-microswiss.ch



www.appliedmst.com



Canadian NanoBusiness Alliance
Alliance canadienne du commerce
en nanotechnologie

www.nanobusiness.ca



www.EVGroup.com



www.ims-chips.com



www.cnrc-nrc.gc.ca



www.impattern.com



www.ites.co.jp



www.microresist.de



www.quantiscript.com



www.nnfc.com



www.technotrans.de



www.toyogosei.co.jp



www.transferdevices.com



www.vistec-semi.com



WASEDA UNIVERSITY

www.coe.waseda.ac.jp



www.yole.fr

APPLICATION DEVELOPMENT

Companies seeking access to industry leading development partners promoting micro and nanopatterning technologies for low cost application development in semiconductor, data storage, life science and opto electronics development.

PROTOTYPING

Micro and nanopatterning prototyping services offered by contract manufacturers for biosensors, lab-on-a-chip devices, optics and photonics, magnetic storage, OLEDs and other applications that use low-cost NIL processes and materials.

BENCHMARKING

Companies seeking to position their materials and services with cost efficient micro and nanopatterning technologies.

MARKET RESEARCH

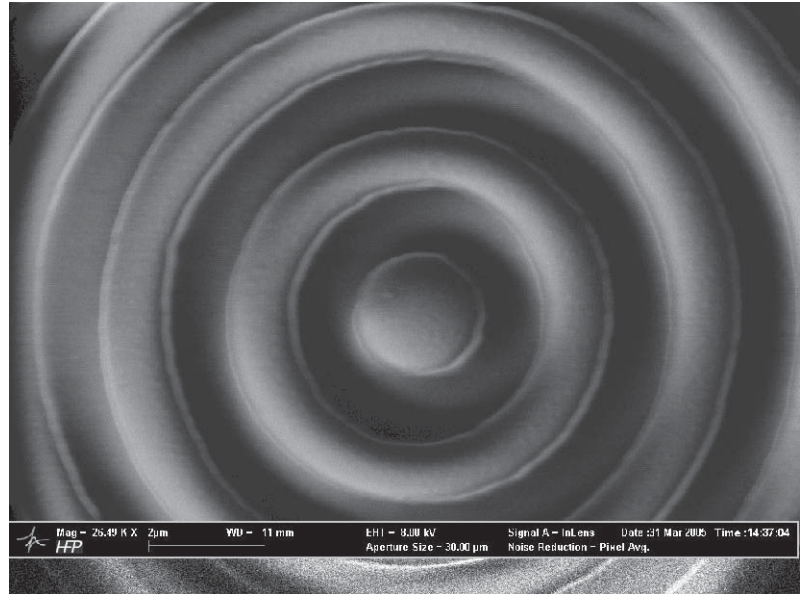
Up-to-date micro and nanopatterning market information provided by leading experts and consultants.

MISSION

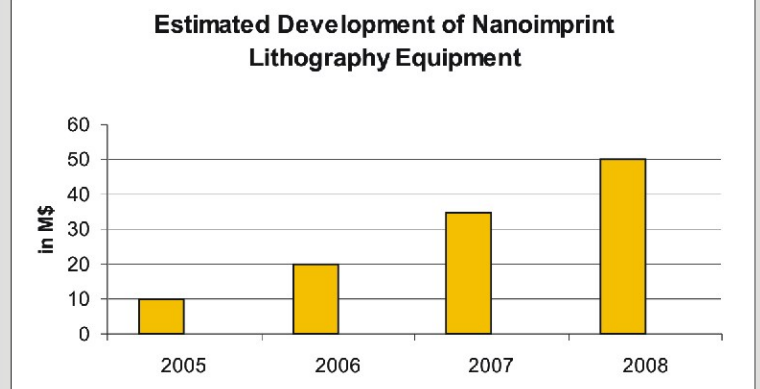
The mission of NILCom® is to establish a high volume manufacturing NIL platform in:

- Nano electronics
- Data storage
- Life sciences
- Opto electronics

by creating a technology interface for qualifying and standardizing the related infrastructure.



Imprinted circular moire pattern, developed within the 3-D NanoPrint cooperative research project.



... New equipment (nano imprint ...): mainly R&D equipment today and in the next 3 years. The market is between 10 M\$ and 20 M\$ in 2005, going to 35 M\$ in 2007

- Characterisation equipment (AFM, STM ...): it is the main business at the moment, linked to the R&D investment in each country. It is evaluated at 90 M\$ in 2005, going to 110 M\$ 2007

- Miniaturisation of mechanical equipment (milling, MRF, EDM ...): no clear estimation at the moment, in the range of 20 M\$ worldwide.

In total the nano equipment market can be estimated at 130 M\$ in 2005 and 165 M\$ in 2007....

Source: Yole Micronews

» NILCom® Markets

- Nano Electronics
- Data Storage
- Life Sciences
- Opto Electronics

» NILCom® Contacts

info@EVGroup.com
info@NILCom.org
www.NILCom.org

» Technology Platform



» NILCom® Objectives

- Approved Nanoimprint Solutions
- Worldwide Demonstration Labs
- Joint Research Initiatives
- Stimulation of Industrial Utilization
- Accumulation of Expertise
- Service, Material & Know-How Supply

» Global Community

