EUMINAfab

A European Research Infrastructure for micro-nano technologies

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www.euminafab.eu

Your Gateway
to unique portfolio for micro- and nano-technologies

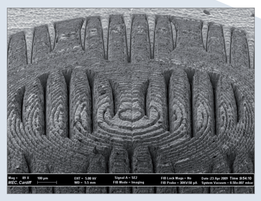
- 38 installations
- 75 technologies
- 40 internal experts

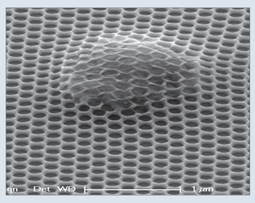
- Public access is free of cost
- Proposals are peer reviewed
- Proprietary projects upon request

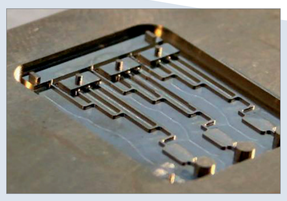
Your Benefits

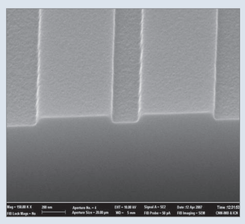
- ➔ Benefit from efficient solutions in multimaterial micro- and nanofabrication
- ➔ Experience hands-on access or services on emerging micro- and nanotechnologies
- ➔ Test and evaluate new technologies for your applications
- ➔ Develop tailored process chains
- ➔ EC facilitates transnational access by reimbursing costs of access and travel for EUMINAfab's users

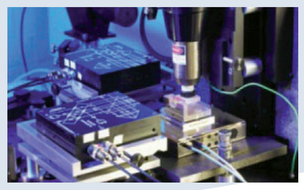
Application examples

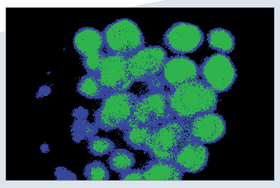

3D structure machined by ps laser on tungsten carbide © CU

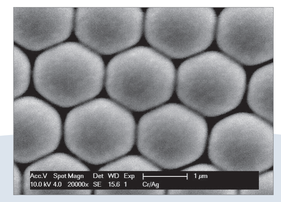

SCIL printing of nano-photonic structures © MiPlaza

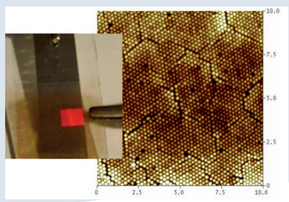

Micro milled mould insert © Cardiff University


Silicon nanochannels (80x80 nm) fabricated by NIL © TEKNIKER


Metrological atomic force microscopy © NPL


Multivariate analysis of Co and O EFTEM maps revealing the Co und CoO_x distribution © KIT


Microspheres self assembling © CEA Liten


Self assembly © Centro Ricerche FIAT

Technologies

Micro nano patterning

- Focussed ion beam
- Mechanical micro machining
- Laser methods (µs,ns,ps,fs)
- Wet etching
- DRIE
- Mastermaking process chain
- Lithography (Dip Pen, Direct X-ray, E-beam, Nano imprint, UV photo, SCIL)
- NIL LAB – Moulds for micro and nanoreplication

Replication

- µ injection moulding (e.g. polymers, metals, ceramics; small series)
- µ hot embossing (small series)
- Thermal imprinting & UV-NIL
- Nano imprint lithography process chain
- Screen printing (e.g. metals, dielectrics)

Characterisation

- HRTEM
- XPEEM
- Auger Nanoprobe
- In situ synchrotron X-ray diffractometry
- AFM, conductive AFM
- Spectrophotometry / -radiometry
- Profilometry µCMM
- Low force balance, ellipsometry
- X-ray tomography

Thin film deposition

- PVD technologies (e.g. noble metals, DLC, nano-composites, metals, nitrides)
- Org. PVD (e.g. organic liquids & powders, oxides)
- CVD (metals, polymers, ceramics)
- Photopolymerisation process
- Self Assembly (e.g. semicon-ductors, organic)
- Electroforming
- SolGel: Dip and spin coating

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CAPACITIES
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