

flexible electronics  
(© Philips MiPlaza)

diffractive grating (6µm pitch)  
(© Centro Ricerche FIAT)

metrological atomic force microscopy  
(© NPL)

nanomaterials characterisation  
(© CEA Grenoble)

He-Ion microscope  
(© CRANN, Trinity College Dublin)

nano channels  
(© TEKNIKER)

# Your gateway to micro and nanofabrication

## Consortium

The EUMINAFab consortium consists of leading European enterprises, universities and national laboratories in the area of micro and nano-fabrication; coordinated by Karlsruhe Institute of Technology/KNMF.

- Karlsruhe Institute of Technology (Germany)
- Cardiff University (United Kingdom)
- Centro Ricerche FIAT S.C.p.A. (Italy)
- Commissariat à l'Energie Atomique (France)
- CRANN, Trinity College Dublin (Ireland)
- Fraunhofer Gesellschaft (Germany)
- Fundación TEKNIKER (Spain)
- Kungliga Tekniska Högskolan (Sweden)
- MiPlaza, Philips Innovation Services (The Netherlands)
- National Physical Laboratory (United Kingdom)
- University of Birmingham (United Kingdom)
- Vrije Universiteit Brussel (Belgium)

## Contact EUMINAFab

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EUMINAFab user office

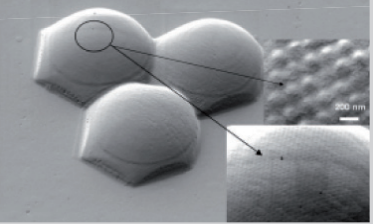
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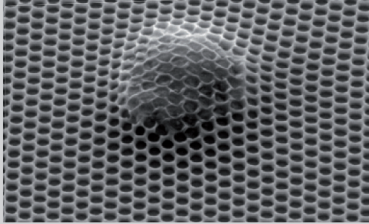
[www.euminafab.eu](http://www.euminafab.eu)



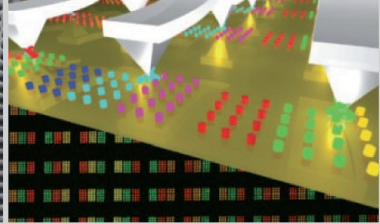
EUMINAFab is an Integrating Activity funded by the European Commission under FP7 Capacities Programme  
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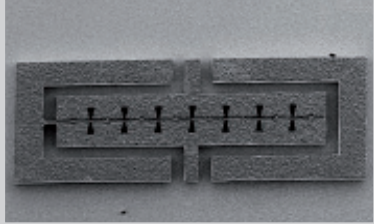
**multi scale integration**  
(© Cardiff University)



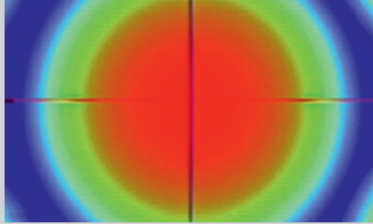
**nano printing on curved surfaces**  
(© Philips MiPlaza)



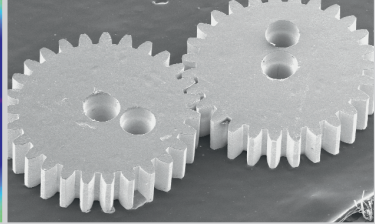
**bottom-up nano bio structuring**  
(© Karlsruhe Institute of Technology/KNMF)



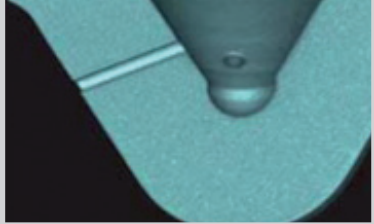
**Ni-RF MEMS micro component**  
(© Karlsruhe Institute of Technology/KNMF)



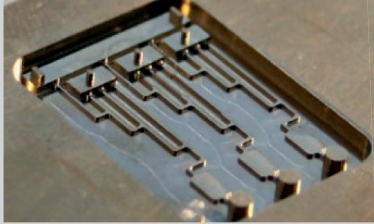
**micro optical characterisation**  
(© Vrije Universiteit Brussel)



**low pressure replication**  
(© University of Birmingham)



**X-ray tomography of injection nozzle**  
(© CEA Grenoble)



**mould inserts**  
(© Cardiff University)

## ★ Welcome to EUMINAFab!

EUMINAFab is your gateway to the state of the art of multimaterial micro and nanotechnologies. By combining scientific expertise with technological capabilities, EUMINAFab

- offers you one-stop no fee access to 49 installations and processes at leading European institutions and enterprises
- provides you with innovative and efficient solutions to your challenges in the area of fabricating functional structures and devices from a large repertoire of materials

**It's easy:** visit our web site ([www.euminafab.eu](http://www.euminafab.eu)) to select from a unique MNT platform to complement your technology portfolio or to establish a personal contact with our technology experts

EUMINAFab is grateful for funding from the European Commission that covers the costs of access, transport and accommodation for EUMINAFab users.

- Benefit from efficient solutions in multimaterial micro and nanofabrication
- Experience hands-on access or services on emerging micro and nano technologies
- Test and evaluate new technologies for your applications
- Develop tailored process chains

## ★ Easy to access

Access to EUMINAFab's services and installations is by on-line proposal submission through the EUMINAFab Entry Point ([www.euminafab.eu](http://www.euminafab.eu)).

- 1 contact our user office or find the details of our technologies & experts
- 2 discuss your ideas with our experts
- 3 fill in an on-line proposal description
- 4 if needed, provide additional information during peer review process
- 5 receive your approval
- 6 plan your visit and start working

**Please note:** access is granted according to scientific merit. Following international standards, any public proposal will be evaluated in an independent peer review process. Further conditions for no fee access can be found on the web page. Proprietary proposals will not be peer reviewed but will be subject to full cost recovery.

Several dedicated calls are planned. Visit [www.euminafab.eu](http://www.euminafab.eu) to see whether this fits your interests.

**In a hurry?** Ask about our Fast Track to access

## ★ Unique Portfolio

EUMINAFab offers to users a comprehensive technology profile that is unique even on a global scale. The fabrication technologies offered, span from IC-technologies to multimaterial micro and nanotechnologies towards bio-inspired nano-processes. These converging technologies are complemented by a set of high resolution and partially traceable characterisation methods. EUMINAFab's technology profile covers:

### Micro nano patterning

Electron beam lithography, ion beam nanolithography and nanopatterning (focused cross beam; substrate conformal imprint lithography (SCIL), dip pen nanolithography, direct X-ray lithography, laser technologies, freeform mechanical micromachining, mastermaking process chain, photopolymerisation process, DRIE (Si, glass, SiO<sub>2</sub>), laser lithography pattern generator, photonics laboratory, temescal evaporator, optical modelling and design platform, prototyping and fabrication platform

### Thin film deposition

PVD technologies (e.g. noble metals, DLC, nanocomposites, metals, nitrides), organic PVD (e.g. organic liquids & powders, oxides), CVD (metals, polymers, ceramics), self assembly (e.g. semiconductors, organic), screen printing (e.g. metals, dielectrics), electroforming, optical coatings

### Replication

Micro injection moulding (polymers, metals, ceramics; small series), micro hot embossing (small series), thermal imprinting & UV-NIL, nano imprint lithography process chain, dry & wet etching, low pressure replication

### Characterisation

HRTEM, XPEEM, Auger nanoprobe, in situ synchrotron X-ray diffractometry (from 2010), AFM, conductive AFM, spectrophotometry / -radiometry, profilometry, X-ray tomography, helium ion microscope, characterisation and measurement platform