

## Access

### Proposal submissions

Submit your proposals online via [www.knmf.kit.edu](http://www.knmf.kit.edu).

### Submission deadlines

- Proposals for no fee access are reviewed by an independent panel following two annual submission deadlines: January 15 and June 30.
- Proposals for proprietary research are handled immediately upon submission.

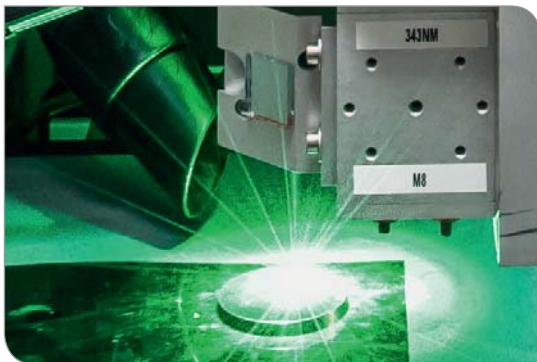
### General conditions

Access is granted according to the KNMF User Guidelines.

- Open research is free of charge and will be evaluated by an international and independent peer review board. The obtained results should be intended for publication in high impact journals.
- Proprietary research is based on full cost recovery and will not be peer reviewed. The obtained results will not be published.

### Worldwide access

Scientific expertise and technological capabilities of KNMF are open to industry and academia from all over the world.



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## Images

- A Grain boundary character in nanocrystalline palladium  
Left: orientation image  
Right: distribution of  $\Sigma 3$  and  $\Sigma 9$  boundaries
- B Auxetic structures in silicon by using a cryo-RIE process
- C Metallic wires and nailhead/mushroom structures
- D Ultra-short pulse laser material processing

## Contact



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# Karlsruhe Nano Micro Facility

Open access to advanced  
multimaterial micro-  
and nanotechnologies

A HELMHOLTZ RESEARCH INFRASTRUCTURE



## Welcome to KNMF

The Karlsruhe Nano Micro Facility (KNMF) is a high-tech innovation platform for structuring, functionalising and characterising a multitude of materials at the micro- and nanoscale.

KNMF provides users from industry and academia open and, in case of public work, no cost access to an integrated set of multimaterial state-of-the-art micro and nanotechnologies.

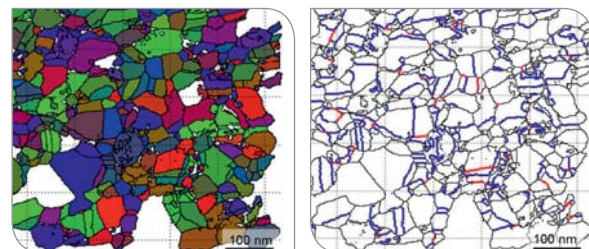
KNMF is operated by the Karlsruhe Institute of Technology as a Helmholtz Research Infrastructure.

## Unique technologies and leading expertise

KNMF possesses a unique technology portfolio and leading expertise which can be combined to provide individual solutions to challenging user requests.

An on-going investment programme is enabling an enhancement of our facilities.

Visit our website [www.knmf.kit.edu](http://www.knmf.kit.edu) for up to date information and establish your first personal contact with our experts.

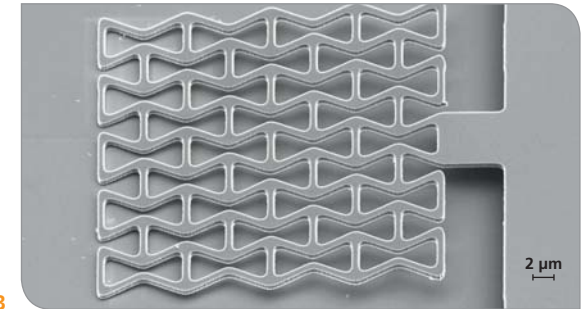


## KNMF Laboratory for Micro- and Nanostructuring

- Atomic layer deposition
- Deep X-ray lithography
- Dip-pen nanolithography and polymer pen lithography
- Dry etching cluster
- Electron beam lithography
- Focused ion beam
- Hot embossing
- Injection moulding
- Laser lithography systems
- Laser material processing
- Thin film technologies
- Next generation X-ray lithography (in preparation)

## KNMF Laboratory for Microscopy and Spectroscopy

- 3D atom probe tomography
- Atomic force microscopy
- Auger electron spectroscopy
- Bulk and trace analysis of nanomaterials
- Helium ion microscope
- Laser ablation ICPMS
- Single crystal X-ray diffraction
- Soft X-ray spectroscopy, microscopy, and spectromicroscopy
- Thin film characterisation methods
- Time-of-flight secondary ion mass spectrometry
- Transmission electron microscopy
- Travelling wave ion-mobility time-of-flight mass spectrometry
- X-ray photoelectron spectroscopy
- Matrix assisted laser desorption/ionisation TOF MS (in preparation)



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## Opportunities

### Create values for your individual success

- Open innovation facility to achieve your scientific goals
- Comprehensive set of high-end technologies
- Extensive expert and application know-how
- Tailored process chains
- Individual support and advice on at all stages

### Tailor collaborations to satisfy your needs and expectations

- Short-term projects (< 6 months)
- Long-term projects (< 2 years)
- Confidential services
- Rapid prototyping
- Small series production



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