User Guidelines
Karlsruhe Nano Micro Facility (KNMF)
Dear user,

These user guidelines aim at supporting the interaction between users and staff as it describes services and boundary conditions which are binding for the users. These user guidelines are subject to regular updating. Be sure you are working with the latest edition. In case you face any problems please contact the user office.

Your sincerely,
Karlsruhe Nano Micro Facility
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1 Introduction

The Karlsruhe Nano Micro Facility (KNMF) is a distributed high-tech platform for structuring and characterising a multitude of functional materials at the micro- and nanoscale. The platform belongs to the Helmholtz Association and operates in the frame of its Helmholtz Programme “NANOMICRO: Science • Technology • Systems” as a large-scale user facility on the campus of the Forschungszentrum Karlsruhe GmbH, Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany.

The facility is focused on providing users from industry and academia, either national or international, open and in case of public work free access to multimaterial state-of-the art micro- and nanotechnologies. KNMF offers therefore a unique and dedicated set of high-end technologies for high precision structuring and high resolution characterisation of functional materials in micro- and nanometre dimensions. The technology portfolio is coordinated in three laboratories which ensure the scientific and technological quality for the user’s needs and expectations. These are the laboratory for micro- and nanostructuring, the laboratory for microscopy and spectroscopy and the laboratory for synchrotron characterisation.

These user guidelines explain how users can obtain access to KNMF installations.
Access to KNMF installations requires the submission of proposals via the online proposal submission system (www.kit.edu/knmf). Please obey to the following guidelines.

**Before submitting a proposal**
1. Select the type of proposal (section 2.3)
2. Select the technologies of interest (section 2.4)
3. Select and contact the experts of the technologies of interest to discuss and define the work to carry out (section 2.5)

**Submit your proposal**
4. Sign up online for a user account and login (section 3.1)
5. Prepare online the standard application form (section 3.2)
6. Prepare offline the experimental method form (section 3.3)
7. Submit online the proposal (section 3.3)
8. Receive information about time allocation (section 3.4)

**Start your project**
9. Visit us (section 6)

**Finish your project**
10. Prepare offline the project report (section 4.2)
11. Submit online the project report (section 4.2)
12. Pay attention to the arrangements (section 5)

In case you face any problems please contact the user office.

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2 Applying for access

2.1 General instructions

Applying for access to KNMF installations requires the submission of proposals via the online proposal submission system (www.kit.edu/knmf).

Please obey to the following guidelines. Before proposers (section 2.2) are submitting their proposals (section 2.3) it is recommended to select the technologies of interest (section 2.4) and to select and contact the experts of the technologies of interest to discuss and define the work to carry out (section 2.5).

2.2 Proposers

Proposers from academia and industry either national, transnational European or international can apply for access to KNMF installations. Basically any one requiring access to KNMF installations can apply for access.

Details of the proposers are given below.
2.2.1 National, transnational and international proposers

National proposers are proposers from Germany. Transnational European proposers are proposers from any EU member state or EU associate state other than Germany. International proposers are all other proposers.

2.2.2 Principal investigator

Proposals can be submitted by one or several proposers. When a proposal is submitted by several proposers, the principal investigator receives all correspondence associated with the proposal. The principal investigator is expected to act as the spokesperson and coordinator of the proposer team taking all responsibilities regarding the adherence to the present user guidelines.

2.3 Proposals

Proposals are the access to KNMF installations. There are four different types of proposals, namely standard, long term, fast track and proprietary proposals.

Standard, long term and fast track proposals are public work. Public work is free of charge, must be received by submission deadlines, will be peer reviewed and results must be published.

Proprietary proposals are non-public work. Non-public work is based on full cost recovery, must not be received by any submission deadlines, will not be peer reviewed and results are kept strictly confidential.

Details of the proposals are given below.
2.3.1 Standard proposals

Standard proposals can be submitted for a period of up to 6 months. Standard proposals must be received by the submission deadlines of June 30 for the scheduling period October 1 to March 31 and January 15 for the scheduling period April 1 to September 30.

Submission of standard proposals must follow the guidelines for online application (section 3, section 4). Otherwise proposals will be rejected.

Standard proposals will be reviewed by an international and independent peer review board on the basis of scientific excellence and technological relevance.

Standard proposals are free of charge. Therefore, the obtained results must be published in a timely manner and most preferably in ISI refereed journals with an acknowledgement to KNMF (section 5).

2.3.2 Long term proposals

Long term proposals can be submitted for a period of up to 2 years. Long term proposals must be received by the submission deadlines of June 30 for the scheduling period October 1 to March 31 and January 15 for the scheduling period April 1 to September 30.

Submission of long term proposals must follow the guidelines for online application (section 3, section 4). Otherwise proposals will be rejected.

Long term proposals will be reviewed by an international and independent peer review board with special emphasis on scientific excellence and technological relevance. In particular, the reasons for the extended time must be convincing for the peer review board. Previous experiences and results at KNMF are also considered. The peer review board has the authority to recommend the termination of a long term proposal at any time.
Long term proposals are free of charge. Therefore, the obtained results must be published in a timely manner and most preferably in ISI refereed journals with an acknowledgement to KNMF (section 5).

2.3.3 Fast track proposals

Fast track proposals are an exception of standard proposals. Fast track proposals are not restricted to any submission deadlines because the fast track mode allows access without prior evaluation by the peer review board.

Fast track proposals require an agreement with the responsible technology experts. The proposer might not be able to choose the fast track mode at the online proposal submission system. Therefore, the proposer has to get in touch with the responsible technology experts in order to have him or her to choose the fast track mode.

Submission of fast track proposals must follow the guidelines for online application of standard proposals (section 3, section 4). Otherwise proposals will be rejected. In any case the urgency of the work to be conducted and the reasons why the proposer cannot follow the regular process of standard proposals must be evident. Fast track proposals will be presented to the peer review board for a posterior approval.

Fast track proposals are free of charge. Therefore, the obtained results must be published in a timely manner and most preferably in ISI refereed journals with an acknowledgement to KNMF (section 5).

2.3.4 Proprietary proposals

Proprietary proposals can be submitted for a period of up to 6 months (standard) or for a period of up to 2 years (long term). Proprietary proposals are not restricted to any submission deadlines.
Submission of proprietary proposals may follow the guidelines for online application of standard or long term proposals (section 3, section 4) but can be also submitted in any other adequate way.

Proprietary proposals will be kept strictly confidential and will be only reviewed by the responsible technology experts.

Proprietary proposals are based on full cost recovery. Therefore, publications are not required.

2.4 Technologies

Technologies are subject to continuous improvement of KNMF installations. There are three different types of technologies operating in three different types of laboratories, namely technologies for micro- and nanostructuring, microscopy and spectroscopy and synchrotron characterisation.

Please note that only proposals for those technologies requested on the online application form can be considered. It is recommended to select the technologies of interest and to select and contact the experts of the technologies of interest prior to a proposal submission.

Details of the technologies are given below. More details can be downloaded from the instrumentation book (www.kit.edu/knmf).

2.4.1 Technologies for micro- and nanostructuring

Technologies operated in the laboratory for micro- and nanostructuring are subject to high precision structuring for a multitude of functional materials at the micro- and nanoscale.
1. Electron beam lithography
2. Deep x-ray lithography
3. Laser material processing
4. Injection moulding
5. Hot embossing
6. Focused ion beam
7. Dip-pen nanolithography
8. Thin film technologies

2.4.2 Technologies for microscopy and spectroscopy

Technologies operated in the laboratory for microscopy and spectroscopy are subject to high resolution characterising for a multitude of functional materials at the micro- and nanoscale.

1. Scanning electron microscopy
2. Transmission electron microscopy
3. X-ray photoelectron spectroscopy
4. Auger electron microscopy
5. Bulk and trace analysis of nanomaterials
6. Electron micro-probe analysis
7. Laser ablation ICPMS
8. Thin film characterisation methods

2.4.3 Technologies for synchrotron characterisation

Technologies operated in the laboratory for synchrotron characterisation are subject to high resolution characterising for a multitude of functional materials at the micro- and nanoscale.

1. Photo emission electron microscopy
2. In-situ x-ray diffraction
3. X-ray microscopy and tomography
4. Small angle scattering
5. In-situ powder x-ray diffraction
6. IR near field microscopy
2.5 Technology experts

Technology experts support potential and actual users in all questions relating to the access and use of KNMF installations. There are technologies experts for micro- and nanostructuring, microscopy and spectroscopy and synchrotron characterisation.

It is recommended to select and contact the experts of the technologies of interest prior to a proposal submission. The user office can assist you to find the most appropriate technology experts. Upon proposal permission the responsible technology experts will serve as local user contacts. The technology experts will accompany the users to reach the goals stated in their proposals. This may include conducting processes at the laboratories or organising overall workflows for their projects.

Details of the technology experts are given below. More details can be downloaded from the instrumentation book (www.kit.edu/knmf).

2.5.1 Technology experts for micro- and nanostructuring

Laboratory for Micro- and Nanostructuring
Prof. Dr. Volker Saile
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1. Electron beam lithography
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   e-mail: Manfred.Kohl@imt.fzk.de
   DI (FH) Peter-Jürgen Jakobs
   institute for microstructure technology, building 301
   phone: +49 7247 82-3864, fax: +49 7247 82-4331
   e-mail: Peter.Jakobs@imt.fzk.de
2. X-ray lithography
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   institute for microstructure technology, building 310
   phone: +49 7247 82-4437, fax: +49 7247 82-4331
   e-mail: Martin.Boerner@imt.fzk.de

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   institute for microstructure technology, building 310
   phone: +49 7247 82-4433, fax: +49 7247 82-4331
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3. Laser material processing
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   institute for materials research I, building 681
   phone: +49 7247 82-2889, fax: +49 7247 82-7288
   e-mail: Wilhelm.Pfleging@imf.fzk.de

4. Injection moulding
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   institute for materials research III, building 681
   phone: +49 7247 82-6463, fax: +49 7247 82-2095
   e-mail: Volker.Piotter@imf.fzk.de

5. Hot embossing
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   e-mail: Markus.Guttmann@imt.fzk.de

6. Focused ion beam
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   institute for nanotechnology, building 640
   phone: +49 7247 82-8365, fax: +49 7247 82-6368
   e-mail: Torsten.Scherer@int.fzk.de

7. Dip-pen nanolithography
   Dr. Steven Lenhert
   institute for nanotechnology, building 640
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   e-mail: Steven.Lenhert@int.fzk.de
8. Thin film technologies
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2.5.2 Technology experts for microscopy and spectroscopy

Laboratory for Microscopy and Spectroscopy
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1. Scanning electron microscopy
   Dr. Ralph Krupke
   institute for nanotechnology, building 640
   phone: +49 7247 82-6417, fax: +49 7247 82-6368
   e-mail: Ralph.Krupke@int.fzk.de

2. Transmission electron microscopy
   Dr. Christian Kübel
   institute for nanotechnology, building 640
   phone: +49 7247 82-8970, fax: +49 7247 82-6368
   e-mail: Christian.Kuebel@int.fzk.de

3. X-ray photoelectron spectroscopy
   Dr. Michael Bruns
   institute for materials research III, building 321
   phone: +49 7247 82-2641, fax: +49 7247 82-7641
   e-mail: Michael.Bruns@imf.fzk.de

4. Auger electron microscopy
   Dr. Christel Adelhelm
   institute for materials research III, building 688
   phone: +49 7247 82-2914, fax: +49 7247 82-3436
   e-mail: Christel.Adelhelm@imf.fzk.de
5. **Bulk and trace analysis of nanomaterials**  
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   institute for materials research I, building 688  
   phone: +49 7247 82-2914, fax: +49 7247 82-3436  
   e-mail: Christel.Adelhelm@imf.fzk.de

6. **Electron microprobe analysis**  
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   institute for materials research I, building 688  
   phone: +49 7247 82-3891, fax: +49 7247 82-3436  
   e-mail: Uta.Gerhards@imf.fzk.de

7. **Laser ablation ICPMS**  
   Dr. Christel Adelhelm  
   institute for materials research III, building 688  
   phone: +49 7247 82-2914, fax: +49 7247 82-3436  
   e-mail: Christel.Adelhelm@imf.fzk.de

8. **Thin film characterisation methods**  
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   institute for materials research III, building 688  
   phone: +49 7247 82-2541, fax: +49 7247 82-4567  
   e-mail: Harald.Leiste@imf.fzk.de

### 2.5.3 Technology experts for synchrotron characterisation

Laboratory for Synchrotron Characterisation  
Prof. Dr. Tilo Baumbach  
phone: +49 7247 82-6820  
fax: +49 7247 82-6287  
e-mail: Tilo.Baumbach@iss.fzk.de

1. **Photo emission electron microscopy**  
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   institute for solid-state physics, building 424, 425  
   phone: +49 7247 82-3987, fax: +49 7247 82-6103  
   e-mail: Stefan.Schuppler@ifp.fzk.de
2. In-situ x-ray diffraction
Dr. Sondes Bauer
institute for synchrotron radiation, building 329
phone: +49 7247 82-6489, fax: +49 7247 82-6287
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Dr. Thorsten Schwarz
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phone: +49 7247 82-8664, fax: +49 7247 82-6287
e-mail: Thorsten.Schwarz@iss.fzk.de

3. X-ray microscopy and tomography
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phone: +49 7247 82-6820, fax: +49 7247 82-6287
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Dr. Daniele Pelliccia
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e-mail: Daniele.Pelliccia@iss.fzk.de

4. Small angle scattering
Dr. Gernot Buth
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phone: +49 7247 82-6185, fax: +49 7247 82-6287
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Dr. Volker Heger
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phone: +49 7247 82-3313, fax: +49 7247 82-6287
e-mail: Volker.Heger@iss.fzk.de
5. **In-situ powder x-ray diffraction**  
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   institute for synchrotron radiation, building 329  
   phone: +49 7247 82-6185, fax: +49 7247 82-6287  
   e-mail: Stephen.Doyle@iss.fzk.de  
   Dr. Udo Krieg  
   institute for synchrotron radiation, building 329  
   phone: +49 7247 82-8372, fax: +49 7247 82-6287  
   e-mail: Udo.Krieg@iss.fzk.de

6. **IR near field microscopy**  
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   institute for synchrotron radiation, building 329  
   phone: +49 7247 82-6756, fax: +49 7247 82-6287  
   e-mail: Mathis@anka.fzk.de  
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   institute for synchrotron radiation, building 329  
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   e-mail: David.Moss@anka.fzk.de
3 Online application

3.1 General instructions

Access to KNMF installations can be applied to any time via the online proposal submission system (www.kit.edu/knmf).

Please obey to the following guidelines. Sign up online for a user account and login (section 3.1), prepare online the standard application form (section 3.2), prepare manual the experimental method form and submit it online (section 3.3), receive information about time allocation (section 3.4).

3.2 Registration and login

The online proposal submission system requires the identification of the user, the principal investigator, via user name and user password. When you first enter the online proposal submission system you have to sign up for a user account by filling in user name, title, first name, last name, phone, fax, e-mail, affiliation/institute, street, postal code, city and country. After registration you will receive a user name and a user password from the user office.
If you have already registered to the ANKA submission system please use the user account received from ANKA.

## 3.3 Standard application form

All sections of the standard application form must be completed online (www.kit.edu/knmf). It is possible to edit, store, delete and submit the application online to any time. All applications, either incomplete or complete, are saved and listed on the online proposal submission system. The status of the applications can be tracked online.

Pay attention to safety aspects. In particular, any hazardous materials used must be specified in detail (section 5).

Details of the standard application form are given below.

### 3.3.1 Proposer

[Mandatory] Select the type of proposer you are (section 2.1).

1. National proposer
2. Transnational European proposer
3. International proposer

### 3.3.2 Proposal

[Mandatory] Select the type of proposal you like to submit (section 2.2). The proposer might not be able to choose the fast track mode. Therefore, the proposer has to get in touch with the responsible technology experts in order to have him or her to choose the fast track mode.
1. Standard proposal
2. Long term proposal
3. Proprietary proposal

### 3.3.3 Title

[Mandatory] Include the title of your work. Please do not include more than 100 characters.

### 3.3.4 Keywords

[Mandatory] Include the keywords of your work comma separated. Please do not include more than five keywords.

### 3.3.5 Research areas

[Mandatory] Select the research areas of your work. You can select the following research areas: microsystems, environment, condensed matter, analytics and characterisation, optics and photonics, nanoscience, integrated micro/nano processes, nanotechnology, materials research, micro/nanoelectronics, energy, nanobiology, molecular building blocks, micro/nano fabrication. Please select at least one research area.

### 3.3.6 Project reports

[Optional] Project reports on previous applications must be available before any additional access can be approved (section 4). Therefore, include the identification number of previously relevant project reports. Please do not include the identification numbers of more than three project reports).
3.3.7 Technologies

[Mandatory] Select the technologies most relevant to your work (section 2.3). Please select at least one technology.

3.3.8 User time

[Optional] Include the requested user time. The units for measuring access of equipment and laboratory use are hours and hours per week.

3.3.9 Technical reasons

[Optional] Explain the technical reasons for your choice of technologies. If you have chosen multiple technologies please give also a short explanation for their choice. Please do not include more than 1000 characters.

3.3.10 Experience level

[Optional] Select your experience level on the requested technologies.

1. Beginner
2. Advanced
3. Expert

3.3.11 Previously experiments

[Optional] Provide information about previously experiments using any of the chosen technologies. Please do not include more than 1000 characters.
3.3.12 Publications

[Optional] Include the most relevant publications to your work, preferably your own. Please do not include more than ten publications.

3.3.13 Sample descriptions

[Mandatory] With respect to the requested technologies you have to give detailed information about the work you want to carry out.

3.4 Experimental method form

All sections of the experimental method form must be completed manual. The template for the experimental method form can be downloaded and uploaded online at the end of the standard application form (www.kit.edu/knmf). It is possible to edit, store, delete and submit the application online to any time. All applications, either incomplete or complete, are saved and listed on the online proposal submission system. The status of the applications can be tracked online.

Pay attention to safety aspects. In particular, any hazardous materials used must be specified in detail (section 5).

Details of the experimental method form are given below.

3.4.1 Aims of the experiment and scientific background

State clearly the aim of the application together with the general and specific scientific background. Give results of preliminary works, preferably owns.
In a long term proposal the aim of the proposed experiment and its high standard of scientific and/or technological importance should be clearly stated together with the general and specific background.

Be aware on answering the following questions:

1. What do you want to measure?
2. Why it is new or interesting?

3.4.2 Experimental method

The suitability of the methods and equipments for the application should be clearly described. Queries concerning the feasibility (technical or safety aspects) of the application should be clarified with the technology experts before the proposal is submitted. The user office can assist you to find the most appropriate person.

Be aware on answering the following questions:

1. Why do you need the instruments for your measurements?
2. Estimate the instrument time required
3. Will several visits to the installation be needed?
4. Do you have experience in the measurements proposed?

3.4.3 Results expected

Describe the results expected from the application, their scientific or technical relevance. If you apply for a long term project please include a time table for your work and give detailed reasons why the project needs a long term commitment, rather than a 6-month rolling allocation of experimental time.
3.4.4 References

Include any references most relevant to your proposal. References can be yours, your co-workers or from other sources.

3.4.5 Safety

Ensuring safety of our users and staff is the highest priority. Therefore, any information relevant to safety has to be disclosed in the proposals. Safety comprises everything from toxic materials, radioactive samples, potentially hazardous biological materials, dangerous equipment, and others. Failure to provide this information in the correct format will automatically void the application.

3.5 Time allocation

The peer review board reviews all standard and long term proposals and ranks them according to scientific and technological merit. However, time at specific installations is allocated to the recommendations of the peer review board, of the technology experts and of the management board.
4 Online Reporting

4.1 General instructions

Online reporting is necessary to monitor the progress of projects.

Please obey to the following guidelines. The preparation (section 4.2) and submission (section 4.2) of project reports for standard, long term and fast track proposals is required.

4.2 Preparation of reports

If you are submitting a proposal for a new project or for continuing a project for which you have previously been allocated time, you must submit electronically a project report or, if necessary, a preliminary project report. In your new proposal you have to refer to such project reports including the corresponding project numbers.
4.2.1 Standard proposals

1. Prepare the project report for standard proposals and note the deadline January 15 for projects carried out between April 1 and September 30 of the same year

2. Prepare the project report for standard proposals and note the deadline June 30 for projects carried out between October 1 and March 31 of the following year

Download. The template for the project report for standard proposals can be downloaded under www.kit.edu/knmf.

4.2.2 Long term proposals

1. Prepare the interim project report for long term proposals after the first year

2. Prepare the final project report for long term proposals at the end of the project

The interim project report will be subject to a review by the peer review board which might even stop the project if not sufficient evidence for a successful execution is given.

Download. The template for the interim and final project report for long term proposals can be downloaded under www.kit.edu/knmf.

4.2.3 Fast track proposals

Prepare the project report for fast track proposals at the end of the project.

Download. The template for the project report for fast track proposals can be downloaded under www.kit.edu/knmf.
4.2.4 Proprietary proposals

To keep the confidentiality of proprietary proposals, no project reports are required.

4.3 Submission of reports

The submission of the project reports consists of three separate steps.

1. Prepare the project report and the user feedback questionnaire
2. Convert the project report and the user feedback questionnaire to pdf-files
3. Submit the pdf-files under www.kit.edu/knmf

Download. The template for the user feedback questionnaire can be downloaded under www.kit.edu/knmf.
5 Arrangements

5.1 Collaborations

KNMF encourages collaborations between users and staff. Collaborations are relevant in cases, where technology experts at KNMF are expected to develop technologies, techniques or processes that are beyond the current state-of-the-art. Collaborations should be agreed on before a proposal is submitted but in any case well before the work on a project commences.

5.2 Publications

Users need to keep track of all publications resulting from work carried out at KNMF. It is mandatory for KNMF to track publications as they directly impact the public funding for KNMF. Bear in mind, that the users’ publication record will also be made available to the peer review board and will impact the success of future applications. Users are requested to send an e-mail to the related technology experts and to the user office with details of a publication as soon as it has been published or accepted.
5.3 Acknowledgements

Publications resulting from work at KNMF have to contain the following acknowledgement. The acknowledgement has to be included in journals, proceedings, presentations and at any other public publications.

"We acknowledge the Karlsruhe Nano Micro Facility (KNMF, www.kit.edu/knmf) of the Forschungszentrum Karlsruhe for provision of access to instruments at their laboratories and we would like to thank x for assistance in using laboratory y."

5.4 Responsibilities

KNMF is exempt from the liability of the user’s equipment. Users bringing equipment, including samples, devices or materials, to KNMF are advised that such equipment remains entirely in the responsibility of the users concerned.

5.5 Safety regulations

Prior users are visiting KNMF it is necessary to read the safety regulations of the Forschungszentrum Karlsruhe GmbH with utmost care. Any additional equipment installed by the user has to meet the German and the Forschungszentrum Karlsruhe GmbH safety regulations which will be checked by the safety officers at KNMF.

Download. The safety regulations can be downloaded under www.kit.edu/knmf.
5.6 Support of European and transnational users through European funding

KNMF coordinates the European research infrastructure project EUMINAfab (Integrating European research infrastructures for micro-nano fabrication of functional structures and devices out of a knowledge-based multi-materials’ repertoire, grant agreement no. FP7-226460).

Presumably from September 2009 on users from European member states or associate states can have access to KNMF – but also to the installations of seven more leading European infrastructures in the field of micro- and nano-fabrication. This transnational access is supported by the European Commission via reimbursing of the travel expenses of successful applicants. Transnational access to EUMINAfab’s installations is free of cost, if the results are public and will be published accordingly. More details can be downloaded from the EUMINAfab web page under www.euminafab.eu.
6 Visit

6.1 Address

KNMF is located on the campus of the Forschungszentrum Karlsruhe.

Karlsruhe Nano Micro Facility (KNMF)
Forschungszentrum Karlsruhe GmbH
Hermann-von-Helmholtz-Platz 1
76344 Eggenstein-Leopoldshafen
Germany

User Office
Jacqueline Heinrich
phone: +49 7247 82-6188
fax: +49 7247 82-6287
e-mail: knmf-useroffice@kit.edu
6.2 Directions

The presence and participation of the users during the work of their projects is desirable and often mandatory. Details of the travelling descriptions are given below and can be downloaded under www.kit.edu/knmf.

6.2.1 Travelling by car

Coming from Frankfurt and Heidelberg (A 5)

1. Leave the motorway at the exit of Bruchsal and go in the direction of Bruchsal
2. Turn off in the direction of Stutensee at the next junction and keep on driving in this direction at the next traffic lights
3. After a few kilometres, at the outskirts of Bruchsal, turn right in the direction of Stutensee-Büchenau
4. Go straight ahead in the direction of Stutensee-Büchenau at the two following roundabouts. Then drive in the direction of Karlsruhe until you reach the "Forschungszentrum" direction sign, where you turn off to the right
5. Go straight ahead through an underpass in the direction of Leopoldshafen until you reach the entrance road of the Research Centre (on your right)

Coming from Basel and Freiburg (A 5)

1. Leave the motorway at the Karlsruhe-Mitte exit and go in the direction of Landau (B 10)
2. Stay on this road another 9 km and turn off in the direction of Mannheim (B 36)
3. Beware of radar controls: Observe the speed limit of 80 km/h
4. The exit can be missed easily, as it is located directly behind a building very close to the road
5. Drive straight ahead on the B 36 at all junctions
6. Leave the B 36 after some 10 km at the exit of Bruchsal-Stutensee-Forschungszentrum
7. After about 1 km, you reach the entrance road to the Research Centre on your left

**Coming from Stuttgart and Munich (A 8)**

1. At the Karlsruhe motorway triangle, turn off in the direction of Karlsruhe-Frankfurt
2. Leave the motorway at the Karlsruhe-Mitte exit and go in the direction of Landau (B 10)
3. Stay on this road another 9 km and turn off in the direction of Mannheim (B 36)
4. Beware of radar controls: Observe the speed limit of 80 km/h
5. The exit can be missed easily, as it is located directly behind a building very close to the road
6. Drive straight ahead on the B 36 at all junctions
7. Leave the B 36 after some 10 km at the exit of Bruchsal-Stutensee-Forschungszentrum
8. After about 1 km, you reach the entrance road to the Research Centre on your left

**Coming from Landau and Wörth (A 65)**

1. Leave the motorway at the Knielingen exit and go straight ahead on the road (Rheinbrückenstraße) for another 3 km as far as to the Neureuter Straße junction (after having passed the premises of Siemens AG). Then turn left in the direction of Mannheim (B 36)
2. Go straight ahead at all following junctions
3. After some 10 km, turn right at the exit of Bruchsal-Stutensee-Forschungszentrum
4. Go ahead for another 1 km until you reach the entrance road to the Research Centre on your left
6.2.2 Travelling by train

1. Karlsruher Verkehrsverbund (KVV) (www.kvv.de)
2. Deutsche Bahn (DB) (www.bahn.de)

6.2.3 Travelling by plane

1. Airport Baden-Baden: 40km away (www.badenairport.de)
2. Airport Strasbourg: 80km away (www.strasbourg.aeroport.fr)
3. Airport Stuttgart: 80km away (www.stuttgart-airport.com)
4. Airport Basel: 120km away (www.euroairport.com)
5. Airport Frankfurt: 140km away (www.airportcity-frankfurt.com)
6. Airport Munich: 300km away (www.munich-airport.de)
Karlsruhe Nano Micro Facility (KNMF), Forschungszentrum Karlsruhe GmbH, Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany
6.3 Installations

The presence and participation of the users during the work of their projects is desirable and often mandatory. Details of the installation descriptions are given below and can be downloaded under www.kit.edu/knmf.

6.3.1 Management

1. User office
   building 329
2. Guest office
   building 440

6.3.2 Laboratories

1. Laboratory for micro- and nanostructuring
   building 301, 307, 310, 640, 681
2. Laboratory for microscopy and spectroscopy
   building 321, 640, 688
3. Laboratory for synchrotron characterisation
   building 329, 424, 425

6.3.3 Canteen, cafeteria and food store

1. Canteen
   building 211 (open from 11:40-13:15 during working days)
2. Cafeteria
   building 211 (open from 7:45-13:40/14:45-20:00 during working days)
3. Food store
   building 211 (open from 7:00-10:00/11:45-14:15 during working days)
Karlsruhe Nano Micro Facility (KNMF), Forschungszentrum Karlsruhe GmbH, Hermann-von-Helmholtz-Platz 1, 76344 Eggenstein-Leopoldshafen, Germany