

The Australian National Fabrication Facility

151 Wellington Road, Clayton 3168, Australia

*Providing micro and nano fabrication facilities for
Australian researchers.*

ABN 50 124 231 661



Advice for Research Grant Applicants

ANFF was established under NCRIS to support micro, nano and advanced materials fabrication research in Australia.

As well as providing access to a portfolio of over 500 tools based in 20 Universities and CSIRO, ANFF can also help clients prepare applications for many of the R&D funding and grant programs available in Australia.

For University Researchers:

This document has been prepared to provide specific advice on how ANFF can help with planning your research project and how to include ANFF facility access time in your Australian Research Council (ARC) Discovery or National Health and Medical Research Council (NHMRC) project application.

For Industry Researchers:

ANFF can provide advice on all aspects of establishing a research project, from identifying ideas or collaborators from within the ANFF Network of over 2,500 researchers, to experimental planning, training or performing research on behalf of a client.

ANFF can also advise clients on the many funding programs available to support their R&D project. There are more than 100 grant types available, some key programs include:

- [ARC Linkage Programme](#), which is now open to continuous applications.
- [Innovation Connections](#).
- Technology voucher schemes from various State Government organisations e.g. [TechVouchers](#).
- Defence Grants e.g. through the [Defence Innovation Hub](#) or Next Generation Technologies Fund.

Most of the grants available in Australia for R&D can be searched [here](#).

For more information please contact Mr Matthew Wright, ANFF Office Manager, or your local Node Facility Manager. Contact details are on page 6 of this document.

ANFF staff can help with your applications by:

Providing Project advice:

- **Facilities Required:** Understanding the ANFF portfolio available for your project. A searchable database of ANFF facilities can be found [here](#).
- **Planning:** ANFF staff can provide advice on components of your project which require ANFF facilities and the approximate number of instrument hours required.
- **Budgeting:** Information or quotes on facility access and ancillary costs (e.g. project-specific accessories) required for your project can be obtained directly from the nodes. Instrument access charges can be obtained through the ANFF access and pricing policy.
- **Information on subsidies:** Most ANFF facility access is heavily subsidised for university or government programs. This should be recognised as an in-kind contribution, for example in section E2 of an ARC Discovery Project application. Contact ANFF Ltd or the relevant node for a statement on the extent to which access charges are subsidised by university or government funding.

Providing a supportive “Research Environment”:

For an ARC discovery project, if a significant portion of the experimental component of a research project will use ANFF capabilities, it is important to discuss the details with the relevant node and to articulate in the grant application how ANFF will provide the most supportive environment to achieve the goals of the project. The main elements of a supportive research environment which ANFF can provide are as follows:

- **Training:** ANFF provides regular training courses on the key capabilities of each node. Dedicated technical staff are also on hand to either perform complex experimental procedures or provide one-on-one training of new users tailored to their individual research problem.
- **Technical Support:** Dedicated technical staff of all ANFF facilities are on hand to ensure they are operating at an optimal level and also to provide advice during user sessions.
- **Research Support:** Each node of ANFF houses a critical mass of academic knowledge, technical know-how and world class research facilities to provide Australia's most well supported academic centres in their specialist fields. By performing projects in the relevant nodes, the researcher will become part of the ANFF collaborative network and be mentored by leaders in their respective specialist fields.

The remainder of this document provides specific guidance on the inclusion of facility access time via the online research management systems for ARC or NHMRC grants.

ARC Grants

Grant proposals to the ARC must be submitted in their online [Research Management System \(RMS\)](#). For ARC Discovery Project applications, ANFF access costs should be included as a line item in the '**Project Costs**' table (**Part D**) under '**Other**'.

For example, if the project requires access to an Electron Beam Lithography (EBL) unit for one sample per week, at 2 hours per sample, for 40 weeks in Year 1, which equates to 80 h of beam time. At \$50 per hour for access charges, this translates to a total cost of \$4,000 for instrument access in Year 1 of the project.

Justify the funding requested for ANFF instrument access in **Part E1 - 'Budget Justifications'**

The following example text may be used as a basis for your justification:

"This research project requires the synthesis/fabrication/analysis [insert as appropriate] of N samples per week/month/year [insert as appropriate] with the advanced technique/s of [specify; e.g. electron beam lithography]. The estimated time required for the synthesis/ fabrication/ characterisation [insert as appropriate] of each sample is X hours, at a cost of \$X per hour of instrument time."

You should add further specific explanation of why the chosen synthesis/fabrication/analysis technique/s is/are necessary for the research project, for example:

"Electron beam lithography is necessary to produce fine features (<30nm) on a silicon wafer with a high degree of control and accuracy whilst allowing the sample to be produced under an efficient time frame" with a reference to further detail elsewhere in the application.

In **Part E2 - 'Details of non-ARC contributions'**, input information on contributions arising from other sources from the relevant Node. Most ANFF facility access costs are heavily subsidised through funding contributions from the host institution, State and Federal Government. This information can be provided by your local Node.

NHMRC Grants

Grant proposals to the NHMRC must be submitted in their online grants management system called [Sapphire](#).

Budget Proposal – Third party research facilities. Please add ANFF here as a research facility and contact your local node for a letter of support including their contribution to your project and costs if appropriate.

For the budget itself please calculate the annual access fees relevant for the ANFF instrument required (e.g. \$4,000) and then add it as a line item to Other Research Costs section of the application. The amount for each individual year of the project will be needed.

The following example text may be used as a basis for your justification:

"This research project requires the synthesis/fabrication/analysis [insert as appropriate] of N samples per week/month/year [insert as appropriate] with the advanced technique/s of [specify; e.g. electron beam lithography]. The estimated time required for the synthesis/fabrication/characterisation [insert as appropriate] of each sample is X hours, at a cost of \$X per hour of instrument time."

You should add further specific explanation of why the chosen synthesis/fabrication/analysis technique/s is/are necessary for the research project, for example:

"Electron beam lithography is necessary to produce fine features (<30nm) on a silicon wafer with a high degree of control and accuracy whilst allowing the sample to be produced under an efficient time frame" with a reference to further detail elsewhere in the application.

About ANFF:

Established under the National Collaborative Research Infrastructure Strategy (NCRIS), ANFF provides researchers and industry with access to state-of-the-art fabrication capabilities through a network of 8 nodes including 21 institutions throughout Australia. The ANFF facility portfolio consists of over 500 instruments valued at approximately \$200m.

The 8 Nodes of ANFF draw on existing infrastructure and expertise providing a research environment that supports world class interdisciplinary research in their respective fields. These fields include:

ANFF WA

Infrared technologies; compound semiconductor growth; MEMS; photonic; microelectronic; and optoelectronic materials and devices.

ANFF Q

Microfluidics; organic electronics; biomaterials; and novel semiconductor materials; characterising the bio-nano interface.

Optofab

Photonic and semiconductor device fabrication; laser machining; and polymer and glass optical fibre fabrication.

ANFF SA

Design and engineering solutions in lab-on-a-chip sensing; separation and synthesis; functional interfaces; integrated electrodes; and optical structures.



ANFF NSW

High-resolution electron-beam lithography; thin-film deposition; etching; ion implantation; and epitaxy of compound semiconductors and complex oxides.

ANFF VIC

Biosensors; drug delivery methods; MEMS; microfluidics; and photonics in a purpose built ISO 9001 certified cleanroom facility.

ANFF ACT

III-V compound semiconductors; dielectrics for metamaterials and plasmonics; integrated optics; and silicon and perovskite solar cells.

Materials

Organic conducting polymers; graphene; bioadditive fabrication; new biomaterials; electro-materials; and scale up of processing to the multi-gram level.

Contacts:

ANFF is committed to providing world class equipment and expertise for your research. The following ANFF people are available to assist with ANFF facility inclusion in your grant application:

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