



AMMRF @ In South Australia

The South Australian Regional Facility (SARF)

The South Australian Regional Facility for Microscopy and Microanalysis is an alliance of laboratories at the three SA-based universities, which aims to provide researchers with ready access to a wide range of major instrumentation locally and nationally. The Facility offers analytical support to diverse researchers from materials science to biology, in academia and industry. Facility staff are also actively engaged in advanced research and in the development of novel analytical methodologies.

Contact and information

The South Australian Regional Facility (SARF)

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Node Director:
Prof. Hans Griesser

About the Node

The SARF operates as a distributed network. Seamless access to participating laboratories and instrumentation and to analytical support are provided, regardless of affiliation. Its laboratories are:

- Adelaide Microscopy, which is the University of Adelaide's centre for advanced microscopy and microanalysis. Its main strengths are in electron, optical, scanned-laser, and X-ray microscopies, and in electron-beam microanalysis. Laser-ablation ICPMS and laser micro-dissection are also available.
- Flinders University, which contributes core expertise in scanning probe and optical microscopy methods and instrumentation, as well as other methods such as matrix-assisted laser desorption/ionisation mass spectrometry (MALDI-MS).
- The Ian Wark Research Institute at the University of South Australia, which focuses on surface-analysis techniques for materials, nanoparticles and biological samples. A wide range of instrumentation for surface analysis is available; the time-of-flight secondary-ion mass spectrometers are a unique capability within the AMMRF.

At all three institutions, the instrumentation and analytical services are provided and supported by specialist instrument operators and research staff who keep at the forefront of microscopy and microanalysis by applying the techniques to their own research and developing new methodologies. The SARF also serves an essential function by providing advice on and access to a wide range of techniques and by catalysing collaborations.

SARF staff advise new and existing users about instruments and analytical methodologies suitable for their scientific needs, and they can refer users to appropriate laboratories and specialists. Intending users who require consultation are advised to contact the SARF principals (reverse side) or any other SARF staff member.

SOUTH AUSTRALIAN REGIONAL FACILITY (SARF)



Node Director



Prof. Hans Griesser

Hans is Professor of Surface Science at the University of South Australia. His research efforts focus on the surface modification and surface

characterisation of materials, particularly for applications in biomedical devices and biotechnology. Another research area is thin-film coatings, for bio-interface applications and as protective layers. Surface analytical techniques are integral to his research. His research group has in-depth experience with time-of-flight secondary ion mass spectrometry, X-ray photoelectron spectroscopy, quartz-crystal microbalance, surface plasmon resonance, optical waveguide lightmode spectrometry, atomic force microscopy, and other analytical techniques. Hans has written book chapters and reviews on various aspects of surface characterisation of materials and biomaterials.

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Node Manager

Ms Kathryn Prohaska

Kathryn is Personal Assistant to Prof. Hans Griesser and Prof. Roger Horn, deputy directors of the Ian Wark Research Institute. As SARF Node Manager, she is responsible for the collation of information from the South Australian Regional Facility and the administrative and reporting aspects of the AMMRF. Kathryn is liaising directly with Prof. Hans Griesser, Prof. Joe Shapter and Mr John Terlet.

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Deputy Director



Prof. Joe Shapter

Joe has been involved in surface-science research, both in vacuum and ambient conditions, for 20 years.

Recently, his research ef-

forts have been in the area of nanotechnology and the nanoscale patterning of substrates. He leads a group of 15 researchers, examining a range of issues from biological membranes to the patterned attachment of single-walled carbon nanotubes to silicon substrates. The nanotube work will lead to the construction of novel biosensors. All these projects use various surface-science techniques to follow the progress of reactions and surface treatments. The strength of the work at Flinders University lies in scanning probe microscopy as well as in chemical characterisation such as X-ray photoelectron or surface vibrational spectroscopy.

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Flinders University

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Laboratory Manager



Mr John Terlet

John has been the Director of Adelaide Microscopy for the past 15 years. He has an extensive background in electron microscopy and

microanalysis. Prior to joining the University of Adelaide, John had managed a materials characterisation laboratory at DSTO. John's involvement with the Australian microscopy and microanalysis community over some 30 years has been acknowledged and his role in the AMMRF is to lead the Laboratory Managers' Committee. This committee plays an important role in the development and ultimate success of the Facility as it will implement seamless processes across the nodes to ensure that users can travel between nodes and experience similar levels of support and conditions at each node.

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Flagship Manager



Dr Len Green

Len is Adelaide Microscopy's specialist for the FEI Helios NanoLab DualBeam flagship instrument. He is a metallurgist with extensive experience

in electron microscopy, and he brings a wealth of experience to the AMMRF. His background knowledge and personality make him the perfect person to train and mentor the next generations of FIB/SEM users.

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Flagship Manager



Dr John Denman

John is ToF-SIMS Technologist at the Ian Wark Research Institute at University of South Australia.

He is providing specialised

expertise in ToF-SIMS for the Wark's consultancy and research projects and the AMMRF's user community. In particular, he is responsible for the commissioning, operation and maintenance of the AMMRF ToF-SIMS flagship instrument and he will be involved in research towards the development and implementation of new analytical methodologies and protocols to extend the use of ToF-SIMS to new fields of research.

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