

Research Directions

Office of Research Services

High Resolution Thermo-Analytical Facility

Professor Mick Wilson, School of Natural Sciences, is leading a team that has won an ARC Linkage Equipment and Facilities (LIEF) grant. The funds will enable the purchase of a high-resolution thermo-analytical facility to be commissioned at the University of Western Sydney.



High Resolution Simultaneous DSC/DTA-TGA-FTIR System

The infrastructure is the current state-of-the-art for conducting thermodynamic, kinetic and spectroscopic analyses of high temperature processes simultaneously. The significantly higher apparatus sensitivity and operational range provides unique ability to characterise little temperature differences and mass changes up to 1650°C.

The research conducted with this facility will have a major impact in a number of National Research Priorities including, "An Environmentally Sustainable Australia", "Frontier Technologies for Building and Transforming Australian Industries, Developing Deep Earth Resources" and "Safeguarding Australia".

'The projects the facility will enable are largely interdisciplinary in nature and will involve an unusually high degree of collaboration and linkage between researchers from the partner institutions' said Professor Wilson. 'The research carried out will benefit Australia through the development of new materials, by transforming existing industries, and by progressing research that will enable the sustainable use of Australia's water and soil resources under global change conditions'.

There are fourteen projects that have already received funding which will use the equipment when it is commissioned.

Apart from the likely research outcomes, the establishment of this research facility will also contribute economically to Australia through technology development, supporting existing Australian companies in the development and marketing of their products.

Project Title: *High Resolution Simultaneous DSC/DTA-TGA-FTIR System*

Collaborating Institutions: *University of New South Wales, Australian National University*

Funding has been set at: \$360,000.
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Contact Details

Adriyan Milev a.milev@uws.edu.au
<http://www.uws.edu.au/about/acadorg/schools/naturalsciences>