Summary of Linkage Infrastructure Applications for Funding to Commence in 2006

Queensland

Griffith University

LE0667984 Prof GA Hope; Dr DJ Bernhardt; Dr MI Jeffrey; A/Prof PM Fredericks; A/Prof RL Frost

Approved Project Title **Near Excitation Raman Micro Spectrometer**

2006 : $210,000

Primary RFCD 2501 PHYSICAL CHEMISTRY (INCL. STRUCTURAL)

Partner Organisation(s)
Griffith University
Monash University
Queensland University of Technology

Administering Institution Griffith University

Project Summary

The unique properties of nanomaterials have recently been fully realized, and their use has resulted in new technologies, transforming industrial processes. Our research teams at Griffith, Monash and Queensland University of Technology develop optimal, nanostructured materials for technological applications. To maintain a competitive edge in this research, we require a near excitation Raman spectrometer. Used in-situ, it rapidly yields structural information on the materials, enabling their formation and function to be better understood. This information will allow enhanced design and synthesis of nanomaterials, producing advanced products and processes for the energy, biotechnology, environmental and mining fields.

LE0668477 Prof RJ Quinn; Prof Z Xu; Dr SE Boyd; Dr GK Pierens; Dr WA Loughlin; Prof PC Healy

Approved Project Title **Upgrade of existing university low field and high field nuclear magnetic resonance facilities**

2006 : $350,000

Primary RFCD 2501 PHYSICAL CHEMISTRY (INCL. STRUCTURAL)

Partner Organisation(s)
Griffith University
AstraZeneca Pty Ltd

Administering Institution Griffith University

Project Summary

The ongoing pursuit of new medicines and therapies, the development of sustainable forestry management practices and the assessment of the impact of global climate change on Australian forest soils are some of the research objectives being addressed by researchers at Griffith University. The Eskitis Institute for Cell and Molecular Therapies and the Centre for Forestry and Horticultural Research (CFHR) bring together researchers from a range of disciplines to further research in these key areas. The instruments funded here will provide researchers with access to spectroscopic facilities with state-of-the-art performance. This will ensure the continued international competitiveness and the sustained productivity of our research programmes.

LE0668008 Prof Z Xu; Prof SE Bunn; A/Prof SJ Lee; Prof WS Price; Prof JW Cairney; Dr RM Connolly; Dr MA Burford; Dr CS Fellows; Dr C Chen

Approved Project Title **Advanced stable isotope ratio mass spectrometer for investigations on carbon and nutrient cycling processes in terrestrial and aquatic ecosystems**

2006 : $100,000

Primary RFCD 2707 ECOLOGY AND EVOLUTION

Partner Organisation(s)
Griffith University
University of Western Sydney

Administering Institution Griffith University

Project Summary

The effective use of innovative stable isotope techniques, particularly in combination with other advanced technologies (eg bio-molecular and nuclear magnetic resonance), has resulted in exciting advances in the understanding and management of critically important carbon and nutrient cycling processes in terrestrial and aquatic ecosystems. This application seeks to purchase an advanced isotope ratio mass spectrometer for supporting and undertaking current and potential new leading research projects with the collaborating institutions, particularly in the above- and below-ground processes in terrestrial ecosystems, and nutrient transformations and impacts in aquatic ecosystems in response to global change and management options.