

Summary of Linkage Infrastructure, Equipment and Facilities Proposals

Victoria

La Trobe University

LE0882878 Dr CI Pakes; Prof JD Riley; Prof S Prawer; Prof CM Stampfl; Prof DN Jamieson

Approved Project Title **Facility for imaging, manipulation and measurement of molecular-scale quantum materials**

2008 : \$ 350,000

Primary RFCD 2402 THEORETICAL AND CONDENSED MATTER PHYSICS

Partner Organisations & Collaborating Organisations

La Trobe University

The University of Melbourne

The University of Sydney

Administering Organisation La Trobe University

Project Summary

The development of functional electronic devices relies on understanding how properties on the atomic-scale influence the performance of new device materials. We will develop the capability to image and manipulate surfaces, and enable new protocols for probing the quantum properties of a wide range of materials that cannot currently be accessed at the molecular-level. By facilitating studies of important emerging materials such as diamond, fullerenes and magnetic molecules, the facility aims to place Australia at the forefront of new areas of surface and device science, and to develop new devices for quantum metrology, information and molecular detection within frontier quantum industries.

LE0883021 A/Prof PJ Pigram; Dr N Brack; Dr CI Pakes; Prof JD Riley; Dr CF Hogan; Dr E Hanssen; A/Prof BF Usher; Prof GP Simon; Prof M Forsyth; Dr PA Webley; A/Prof JR Friend; Dr GL Kelly; Dr T Lin; Dr BL Fox

Approved Project Title **Advanced Surface Characterisation Facility**

2008 : \$ 350,000

Primary RFCD 2501 PHYSICAL CHEMISTRY (INCL. STRUCTURAL)

Partner Organisations & Collaborating Organisations

La Trobe University

Monash University

Deakin University

Administering Organisation La Trobe University

Project Summary

This proposal underpins a major expansion of surface characterisation resources at La Trobe University, one of Australia's leading providers in this field, and builds associated research programs and collaborations, in particular, with Monash University and Deakin University. New opportunities will be provided for hands-on training in state-of-the-art surface characterisation for postgraduates in fields such as physics, chemistry, nanotechnology, materials science and engineering. The Australian community will benefit through internationally significant research outcomes leading to, for example, enhanced medical testing technologies, biocompatible medical appliances, better waste water treatment processes, and new battery technologies.