

## Summary of Discovery Projects Applications for Funding to Commence in 2006

### Victoria

#### CSIRO - Molecular Science

**DP0666961** Prof CJ Drummond

**Approved Project Title** **Protic Ionic Liquids: Design, Creation, Characterisation and Application**

**2006 :** \$195,000

**2007 :** \$104,000

**2008 :** \$104,000

**Primary RFCD** 2501 PHYSICAL CHEMISTRY (INCL. STRUCTURAL)

**Administering Institution** CSIRO - Molecular Science

#### Project Summary

The project activities fall within National Research Priority 3: Frontier Technologies for Building and Transforming Australian Industries. To remain internationally competitive in the future many Australian manufacturing enterprises will need to make significant advancements in the design and processing of products at multiple length scales, including at molecular and atomic levels. The plan is to translate this project's anticipated cutting edge research results into new high technology products that can be manufactured in Australia. Australian post-graduate students and post-doctoral fellows will be trained in the design, creation, characterisation and application of advanced materials.

**DP0667189** Prof CJ Drummond; Dr BJ Boyd; Dr AJ Hill

**Approved Project Title** **Determining the Nano-Structure of Ordered Amphiphile Self-Assembly Materials with Positron Annihilation Lifetime Spectroscopy (PALS)**

**2006 :** \$150,000

**2007 :** \$100,000

**2008 :** \$110,000

**Primary RFCD** 2501 PHYSICAL CHEMISTRY (INCL. STRUCTURAL)

**Administering Institution** CSIRO - Molecular Science

#### Project Summary

To remain internationally competitive in the future many Australian manufacturing enterprises will need to exploit nano-space. These manufacturers of advanced products containing nano-structured materials will be reliant on sophisticated characterisation techniques in order to maintain a competitive edge. This project will place Australia at the forefront of the application of one such technique, Positron Annihilation Lifetime Spectroscopy (PALS), to ordered nano-structured amphiphile self-assembly materials. Australian post-graduate students and post-doctoral fellows will also be trained in the creation and characterisation of molecular self-assembly materials which underpin the bottom-up approach in nanotechnology.