

## **AINSE Gold Medal Award - 2003 Associate Professor Brendan Kennedy**



Associate Professor Brendan Kennedy (Right) receives his award from Professor Hans Coster (AINSE President) (Left)

Associate Professor Brendan Kennedy is a world leader in the application of high-resolution powder diffraction methods in the study of functional materials and metal oxides. He has particular interest in the study of structural phase transitions in metal oxides and how these impact upon their use. He played a pivotal role in establishing the powder diffractometer at the Australian National Beamline Facility at Photon Factory, Tsukuba as one of the worlds leading synchrotron powder diffractometers.

Dr Kennedy and his students have been heavy users of the neutron powder diffractometers, especially the high resolution diffractometer at Lucas Heights for over 10 years. He now follows in the footsteps of his former student Ismunandar who was awarded the AINSE Student Gold Medal in 1998.

Of the 150 referred journal publications in materials chemistry, over 40 have acknowledged AINSE support and he has spent periods at a number of leading laboratories including Oxford University, Brookhaven National Laboratory (BNL) and the Institut Laue-Langevin (ILL).

His collaboration with Dr Chris Howard, ANSTO, in which group theoretical methods have been combined with high resolution powder diffraction methods to study the phase transitions in perovskites. His current PhD student Leqing Li and post doc Dr Qingdi Zhou are conducting studies of the structural origins of ferroelectric behaviour and structural phase transitions in layered bismuth oxides.

Structural studies of pyrochlore oxides, structural studies of the metal to semiconductor behaviour in ruthenium oxides and identification of the importance of oxygen vacancies in the transition to metallic behaviour is work that was commenced by his PhD Ismunandar and is continued by Rene Macquart, who submitted thesis early in 2003.

Over the last five years he has contributed to the running of AINSE as follows

1999 - 2002	Member of AINSE Neutron Scattering Specialist Committee
2002 - present	Chair of AINSE Materials - Structures and Dynamics specialist committee
2002 - present	AINSE Councillor for the University of Sydney