

# Seminar

**Topic:** Post Combustion Capture R&D at CSIRO

**Speaker:** Prof. Paul Feron, Prof. Hai Yu, Prof. Jewel Huang

**Date & Time:** 3:00-4:30 (pm) Dec, 13, 2012 (Friday)

**Venue:** Multifunctional Hall, IPE Mansion

## Introduction

Dr. Feron is a research program leader in CSIRO's division of Energy Technology. He obtained his first degree in applied physics from Eindhoven Technical University in the Netherlands and his PhD in mass transfer and fluid flow from Cranfield University in the United Kingdom. He has been leading CSIRO's post combustion capture (PCC) research program since June 2007. He was a lead-author of the IPCC Special Report on Carbon Dioxide Capture and Storage, which formed part of the Nobel Peace Prize winning team in 2007. He has contributed extensively to the development and execution of large multi-party, multinational CCS R&D programs, in Europe, Australia and China. His technical expertise and professional interest are in the area of energy technology, transport processes and separation technology. He holds 10 patents/applications and (co-) authored 90 publications and more than 100 internal reports.

Dr Hai Yu is a research scientist at CSIRO. He received BE in Chemical Engineering from Wuhan Institutes of Chemical Technologies in 1993, ME in Chemical Engineering from Dalian University of Technology in 1996, and PhD in Chemical Engineering from the University of Newcastle, Australia in 2004. He was a lecturer in the school of chemical engineering at Ocean University of Qingdao from 1996-1999 and joined CSIRO in 2008. His research focuses on the development of technologies for utilization of synthetic greenhouse gases and post combustion CO<sub>2</sub> capture (PCC). His research has led to publication of more than 60 papers in the international journals and conference proceedings. He was the lead researcher for the pilot plant trials of aqueous ammonia based PCC technologies at Munmorah Power Station in NSW, Australia. He has been actively involved in the bilateral collaboration on post combustion capture between Australian and Chinese research organizations and participated in a number of collaborative projects between CSIRO and Huaneng Clean Energy Research institute including the first PCC pilot plant demonstration project in China. He has been collaborating with Zhejiang University and Tsinghua University on PCC since 2009 and is co supervising a number of PhD students from Chinese and Australian universities.

Junhua Huang finished her PhD study in 2002 on solid phases of ionic liquids under the supervision of Professor MacFarlane at Monash University. She then studied biomimetic catalysis as a postdoctoral fellow at CSIRO Molecular and Health Technologies. In 2004, she joined CSIRO Energy Technology to research ionic liquids in energy application. Since 2007 she has been leading several research projects in post combustion capture and energy storage devices, reporting to ANLEC R&D, ATSE and CSIRO research flagships. She has published more than 40 journal papers, book chapters, government reports and patents including one paper in Nature. She has been invited to a plenary lecture (ILSEPT, Spain 2011) and a number of international conferences in the last five years. Her research interests are materials development in energy area (especially gas separation and batteries) and related physical chemistry, electrochemistry and organic chemistry.