Frontiers in Material Sciences Seminar Series Presents

Membrane Materials Optimization for the Vanadium Redox Flow Battery

Speaker: **Professor Maria Skyllas-Kazacos**

University of New South Wales,
School of Chemical Sciences
and Engineering

Date: Tuesday, May 26, 2009
Time: 9:00-10:00 a.m.
Place: EMSL 1075
Contact: Susie McGuire at 375-2526 or susan.mcguire@pnl.gov

The All-Vanadium Redox Battery (V-VRB) was pioneered at the University of NSW in the 1980's and the technology has already been successfully implemented in renewable energy storage applications Japan, USA and Australia. While the technology has been technically proven in systems up to 6MWh, its more widespread commercialization in large grid-connected applications has required further cost reduction in order to compete with fossil fuel power generation options. New materials, stack designs and control systems have now being developed to achieve the cost structure that will be needed in many of the larger-scale grid connected renewable energy storage applications that are emerging around the world. Significant improvements in membranes and electrode materials have been made by V-Fuel Pty Ltd, the new start-up company established to commercialize the UNSW vanadium battery technology and these promise to achieve the necessary cost and performance figures required for large-scale commercialization of the VRB in large wind-farms and distributed power systems around the world.