

Thursday, 21 May 2015

11:00 AM

Ruttan Room



Prof. Kunio Awaga

Director of Research Centre for Materials Science, Nagoya University

**Organic Electronics and Molecular Magnetism Controlled by
Solid-State Electrochemistry**

Solid-state electrochemistry (SSE) is a comprehensive discipline which covers various topics from fundamental sciences to practical applications. In conventional SSE, the potential difference between the working and counter electrodes makes electric-double-layers (EDLs) on the surface of solid-state redox-active materials on the working electrode, and then induces their redox reactions. In other words, the band fillings and redox states of these materials can be controlled by the electrochemical potential of the cathode in SSE. This automatically realize controllable properties in conductivity, magnetism, etc. In the present talk, we will report the application of SSE to organic electronics and molecular magnetism. We will describe our works on EDL transistors, EDL optoelectronic conversion, molecule-based rechargeable batteries, and electrochemical magnets.

Everyone is welcome!