

# SEMINAR

## ***Electron microscopy studies of nanoporous materials on the micro- and meso-scale***

**Yasuhiro SAKAMOTO, Ph.D**

**Nanostructure Physics Laboratory,  
Department of Physics,  
Osaka University**

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11am – 12noon  
Science Lecture Theatre S10  
16 Rainforest Walk (prev. Building 25)

### **Abstract**

Nanoporous materials such as zeolites and mesoporous silicas have attracted much attention from a variety of fields in chemistry, materials science, physics and bioscience. In order to understand their unique properties, it is crucial to clarify their structures on different length scales, from sub-Å to several hundreds of nanometers. Electron microscopy has been one of the most important characterization techniques for nanoporous materials and revealed their hierarchical structures although those materials are usually very beam-sensitive and easily damaged under electron beam irradiation. In my presentation, I will show several examples of structural characterization of nanoporous materials by electron microscopy. Some of the topics are as follows; (i) three-dimensional reconstruction of mesoporous silicas by electron crystallography and electron tomography, and (ii) direct observation of zeolite frameworks by aberration corrected scanning electron microscopy.

Convenor: Assoc Professor Laure Bourgeois  
Email: [mcem@monash.edu](mailto:mcem@monash.edu)  
Tel: 9905 5563

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