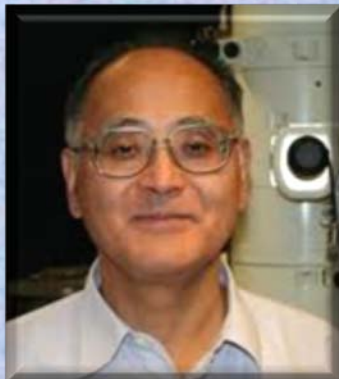


# The 190<sup>th</sup> MANA Special Seminar



**Structural characterisation of nano-porous materials  
by diffraction and imaging** Chair: Dr. Yusuke Yamauchi (MANA IS)

**Prof. Osamu Terasaki**

*(Graduate School of EEWS (WCU), Korea Advanced Institute of  
Science and Technology, Korea)*

Nanoporous materials such as zeolites and mesoporous silica crystals have continuously attracted a lot of attention for various applications. We are studying their fine structures and crystal growth mechanisms in order to understand a structure-function relationship.

[1]: Using low voltage HRSEM we can obtain surface selective information through precise tuning of both electron landing and emitted electron energies as well as of detector position.

[2, 3]: Using TEM we study (a) nano-sheets of zeolite MFI and an architecture of the nano-sheets supported by silica pillars, and (b, c) modulated structures including “12-fold quasicrystal” in silica mesoporous crystals.

1. a) S Sam et al: JEOL News, 60th Anniv Issue, 2009; b) K. Choi et al. To appear in Solid State Sciences.

2. a) M Choi et al: Nature 461, 2009, 246; b) K Na et al: JACS 132, 2010, 4169.

3. a) Y. Sakamoto et al., Chem. Mater., 21, 2009, 223; b) Lu Han et al., Chem. Eur. J., 15, 2009, 2818; c) C. Xiao et al., in preparation.

**Venue: Seminar Room #431, MANA Bldg.**

**Date: December 22<sup>nd</sup> (Wed) Time: 16:30-17:15**

Contact: International Center for Materials Nanoarchitectonics (MANA), Nakata (ex. 8806)

