



Contribution ID : 0

Type : **not specified**

## High-Resolution X-ray crystallography of nanoporous molecular materials using radiation facility

*Thursday, 5 May 2011 15:30 (0:30)*

### Abstract content

Light weight nanoporous solids of coordination polymers type, among them metal-organic frameworks, are receiving an increasing attention because of their promising properties for hydrogen and methane storage, carbon dioxide sequestering, separation capability for mixtures of gases and vapors, catalysis, etc. The porous structure of these materials can be tailored according to the application requirement. Related to the nature of their framework usually it shows a flexible behavior on temperature, pressure and chemical potential changes. In this contribution examples on such behavior are discussed from high-resolution x-ray diffraction (XRD) data recorded using XRD-10B radiation facility at LNLS (Brazil). The results herein discussed illustrate the potentiality of a high-resolution XRD station with facility to record XRD data in the 4.2 to 450 K temperature range.

### Summary

**Primary author(s) :** Dr. REGUERA, Edilso (CICATA-IPN, México)

**Co-author(s) :** Dr. RODRÍGUEZ-HERNÁNDEZ, Joelis (University of Havana, Cuba); Dr. AVILA-SANTOS, Manuel (CICATA-IPN, Mexico)

**Presenter(s) :** Dr. REGUERA, Edilso (CICATA-IPN, México)