

PLENARY SPEAKER IV



Wantana Klysubun

Synchrotron Light Research Institute, 111 Moo 6, University Ave., Muang, Nakhon Ratchasima, 30000, Thailand

XAS capabilities and applications at Thailand synchrotron

X-ray absorption spectroscopy (XAS) in Thailand has been developed for growing Thai and ASEAN synchrotron-user community since the operation of the first XAS beamline (BL8) at the Synchrotron Light Research Institute (SLRI) in 2006. Currently, there are 4 XAS beamlines (BL1.1, BL2.2, BL5.2 and BL8) covering a very wide photon energy range from 1 keV to 18 keV. In this presentation, the status of the Siam Photon Source (SPS) and the XAS beamlines will be updated. The BL1.1 uses hard X-rays from a 2.2T multipole wiggler, the others use medium-energy X-rays from 1.44T bending magnets. Varieties of experimental set-ups enable sample measurements in conventional and in-situ transmission, fluorescence- and electron-yield modes. Outstanding XAS applications at those beamlines carried out over the past three years will be discussed for the following active areas: novel catalysis, energy storage, soil geochemistry, contaminated environments, and advanced material functions. Lastly, the first outlook in XAS facilities at the new 3 GeV synchrotron machine will be disclosed.