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An Application of Synchrotron-based X-ray Absorption Spectroscopy Study on Advanced Functional Materials

Monday 28 November 2016 14:00 (30 minutes)

The investigation of the local geometric and electronic structure of probing element in bulk samples is the most extensive field of application in X-ray Absorption Spectroscopy (XAS). XAS consists of two main regions which are X-ray Absorption Near Edge Structure (XANES) and Extended X-ray Absorption Fine Structure (EXAFS). The former region is used to explain the local geometry and oxidation states of selected element in a sample whilst the latter one is used to address the local structure around probing element in samples. In my talk, the introduction of XAS, the XAS beamlines at the Synchrotron Light Research Institute, THAILAND, and applications of synchrotron-based XAS on advanced functional materials such as carbon-ferrite composite nanofibers [1] and thermoelectric materials will be introduced in order to obtain the accuracy of their locally structural information which cause different properties in these materials.

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