

	Nobuhiro Yasuda
	Research Scientist Japan Synchrotron Radiation Research Institute (JASRI)
	nyasuda@spring8.or.jp
	http://rud.spring8.or.jp/member/0004977.html

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The research field is the chemical crystallography. In particular, the chemical reactions in single crystal are my research interest. For realizing my target research, the structure analysis of sub-micrometer size small crystals [1, 2] and the sub-millisecond rapid measurement [3] have been developing using the synchrotron radiation of SPring-8.

The public beamlines in SPring-8, BL02B1 and BL40XU, are available for the single crystal structure analysis of small molecules. I support the beamline users for achievement of their experiments as a beamline scientist at both beamlines.

In the former collaboration, I have carried out the structure analyses of micro- and sub-micrometer sized polyoxometalate and other metal oxide crystals [4-7]. The crystal structure analysis of before and after reaction are useful for not only determination of the chemical structure but also elucidation of the mechanism of catalysis. I will collaborate with the members who want to analyze the crystal/molecular structure of the single crystals which are difficult to measure in the laboratory system. Furthermore, the structure analysis and the other experiments using the synchrotron radiation (powder XRD, X-ray spectroscopy and so on) will be supported.

References.

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