Biological Application of Synchrotron Radiation

Sung-Sik Han, Jong-Yeon Lim and Hwa-Shik Youn¹

Graduate School of Biotechnology, Korea University,

¹Pohang Accelerator Laboratory,

Pohang University of Science and Technilogy

In several decades, many biological research instruments have developed. Especially, light and electron microscopy have played vital roles in biological research as important tools for analyzing cellular structure, function, and physiology. Although this tools offers superb resolution of structural details, It suffers from fixation and sectioning artifacts. In addition, these provide static two-dimensional image that are difficult to reconstruct three-dimensional structure. In this view, X-ray offers advantages to observe natural three-dimensional structure for their penetrating capacity. And X-ray provide higher resolution than visible light. So in this experiment, we introduce the potential capacity of synchrotron radiation in observing biological structure.