Coherent x-ray scattering beamline at PLS-II: Techniques and Applications

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Abstract

Coherent x-ray scattering (9C) beamline at PLS-II is dedicated to the coherent x-ray diffraction imaging (CDI) techniques. Recently, the beamline has been upgraded to achieve experimental environments better suited for CDI. Coherent flux of the x-ray beam was enhanced more than 80-fold compared to the previous system by introducing the KB mirror. In addition, sample environments such as diffractometer and CDI sample chamber were improved to enable imaging samples sensitive to radiation damage. KB mirror focused microbeam also provided the time-resolved microbeam diffraction capability. In this presentation, specifications and available techniques of the beamline will be introduced, and recent results will be briefly summarized.

Keywords: *Synchrotron hard x-ray, coherent diffraction imaging, micro-beam diffraction*

Biography

Su Yong Lee received his Ph. D. degree in 2013 in School of Materials Science and Engineering, Gwangju Institute of Science and Technology, South Korea. He is working at Pohang Accelerator Laboratory as a beamline scientist since 2016. His research interest includes synthesis of nanomaterials and their analysis using coherent x-ray diffraction imaging techniques.