

PHASE CONTRAST IMAGING OF CARBON MATERIAL

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Phase contrast imaging is recently developed and applied to analysis of biological and medical objects¹⁾. By this method the fine structure of specimen, that could not be obtained on the pictures by using the conventional absorption x-ray radiography, can be taken. We applied this method to the imaging of several materials, that are used for electronic devices.

Experiment was carried out at experimental station C of BL24XU (Hyogo beamline) equipped with 8 figure undulator. This undulator provides the x-rays of first order, 1.5th order, second order and so on,

and both of vertical and horizontal polarization. We used the vertical polarized x-ray with energy of 15keV (0.83 Å) selected by silicon (111) double crystal monochromator. Silicon (100) crystals used for enlargers using asymmetric 511 diffraction.

The obtained pictures for the carbon dominant material show the structure reflecting on inner structures of sample.

References

- 1) T.J. Davis et al., Phys. Rev. Lett. **74**(1995) 3173.