

## **Dynamic features of ion guiding by insulator multi-capillaries**

**Y. Kanai**

**RIKEN**

We have studied the properties of guiding of  $\text{Ne}^{7+}$  ions through nanocapillaries in insulating PET polymers for incident energies from 3.5 to 7 keV with a two-dimensional position sensitive detector. During the intensity evolution of transmitted ions, the deflection angle of the transmitted  $\text{Ne}^{7+}$  ions shows a few oscillations before approaching an equilibrium value. The experimental results are interpreted in terms of a scenario where the deflection angles of transmitted ions are governed by charge patches formed on the inner wall of the capillary. In addition, the memory effect of charge patches retained from previous irradiation are studied.