

CHEMICAL



"Hosobaunran" - Yellow toadflax



"Jaketsuibara" - Yellow bird of paradise

SCIENCE

The needs of SPring-8 for studies in Chemical Science have been steadily extending from diffraction and scattering experiments for structure characterization to spectroscopy as well as inelastic scattering. The work "Exiton properties of organic molecules revealed by inelastic X-ray scattering" by Dr. K. Yang *et al.* is the epoch-making and first successful application of inelastic X-ray scattering (IXS) to an organic molecular crystal. Up to now, IXS has been mainly applied to solid state physics and condensed matter. Thus, Yang's achievement will open the door to various uses of IXS in chemical science.

A wide range of materials are of interest in chemical science, such as organic crystals, polymers, fibers, Langmuir-Blodgett films, etc. Among them, the study by Prof. M. Hasegawa "Correlation between molecular arrangement and emission mechanism of Melem on Langmuir-Blodgett films of lanthanide(III) complex with stearic acid" revealed the role of lanthanide in an innovative use of existing film technology for new type of thin film display. Her achievement was reported in major newspapers and has attracted considerable attention from industrial companies in Japan.

The discovery of a peculiar quasiperiodic structure in polymeric materials by Prof. Y. Matsushita's group, reported in "Mesoscopic tiling pattern of ABC star-shaped terpolymers studied by microbeam small-angle X-ray scattering" generated intense public interest and was reported in newspapers as a fresh reminder of chemistry in nature.

In addition, seven other papers reporting distinguished attainments were selected this year. There is growing recognition that the highly parallel and high brilliance characteristics of synchrotron beam are powerful tools in advanced chemical science.

Masaki Takata