

# PREFACE

SPring-8 has been enjoying one of its most successful years in terms of achieving scientific accomplishments, that have been celebrated both abroad and at home.

Internationally, the journal *Science* selected two scientific achievements using SPring-8 facilities among the top ten 2011 Breakthroughs of the Year. One is the HAYABUSA asteroid sample analysis by Professor Tsuchiyama (Kyoto University) and the other is the crystal structure determination of a membrane-protein complex, Photosystem II, led by Professor Shen (Okayama University) and Professor Kamiya (Osaka City University).



Domestically, the Japan Academy conferred the Imperial Prize and the Japan Academy Prize upon two prominent scientists using SPring-8 in two consecutive years. In 2011, Professor Hirose (Tokyo Institute of Technology) was awarded the Japan Academy Prize for his remarkable discovery of the structure of the Earth's deep interior, and in 2012, Professor Namba (Osaka University) was awarded both the Imperial Prize and the Japan Academy Prize for his invaluable contribution to the crystal structure analysis of a macromolecular complex. These prizes are highly esteemed because the award ceremony is graced by the presence of His Majesty the Emperor and Her Majesty the Empress of Japan.

These scientific and technological achievements at SPring-8 were also acknowledged by JIAC 2011 (JASRI International Advisory Committee), the report of which is summarized in Research Frontiers 2011 along with its valuable recommendations.

SACLA (SPring-8 Angstrom Compact free electron LAser) started its user operation in March 2012, and we are very much looking forward to witnessing world-class research outcomes from SACLA in the very near future, which will hopefully be reported in Research Frontiers 2012.

As I announced in the last year's Preface, the former editor-in-chief, Prof. Kikuta, has retired, and we would like to welcome the new editor-in-chief, Dr. Ohno, who was the former executive managing director of JASRI.

白川 哲久

Tetsuhisa Shirakawa  
President  
SPring-8/JASRI