

EDITOR'S NOTE

SPring-8 Research Frontiers 2014 covers outstanding scientific outcomes of SPring-8 made mainly in the last two consecutive research periods, the second half of 2013 (2013B) and the first half of 2014 (2014A). Scientific achievements at SPring-8 and SACLA in a wide range of basic and applied sciences including industrial applications are described. The development of accelerators, beamlines and experimental apparatus, and the present status of the SPring-8 and SACLA facilities are also presented. In addition, the activities using NewSUBARU, which forms an integral part of the SPring-8 research complex, are included.

This volume of SPring-8 Research Frontiers has some different features from the previous ones. There are two review articles at the first part of the volume, which are on Earth Science and Cardiovascular Medicine. Advances in these fields made by using SPring-8 in the last few years are summarized. It is planned to have such reviews for next several years to cover a variety of scientific activities at SPring-8. I hope these reviews make clear the current position of SPring-8 in each scientific field.

SACLA has been operating for three years now. In this volume, as was the case in last year, two outstanding scientific reports are included in Chemical Sciences. On top of these, the SACLA Accelerators & Beamlines Frontiers section of this volume contains twelve notable developments that have been made since SACLA became operational. As usual in a new facility, many new techniques have been developed and reported for SACLA, but these have not been included in the previous issues of SPring-8 Research Frontiers. Thus, they are all included in this volume. These techniques have been developed for user experiments, so that, I would expect, there will be less articles in this section and more in the Scientific Frontiers sections in future. A similar transition from a technical development phase to an application phase indeed happened in the early days of SPring-8, leading to a vast number of scientific outputs, as partly described in the two opening reviews. A similar course of development is anticipated in SACLA.

Some of the detailed information on the current and historical status of SPring-8, such as the numbers of submitted and conducted proposals, budget, and publications, is available at the SPring-8 website. (http://www.spring8.or.jp/en/about_us/spring8data/)

Copies of SPring-8 Research Frontiers will be sent on request. The full text is also available on the SPring-8 website (<http://www.spring8.or.jp/>). For the list of publications produced by SPring-8 users and staff, please visit the publication database at http://www.spring8.or.jp/en/science/publication_database/.

We extend our appreciation to those who have recommended excellent research results suitable for publication in SPring-8 Research Frontiers. We would also like to express our sincere gratitude to the users and staff of SPring-8 for contributing their reports to this issue.

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