

Preface

The 6th International Conference on Synchrotron Radiation Instrumentation (SRI'97) was held in Himeji, Japan, on 4–8 August 1997, with the JAERI (Japan Atomic Energy Research Institute)–RIKEN (The Institute of Physical and Chemical Research) SPring-8 Project Team acting as host for the meeting. This year marked the 50th anniversary of the first observation of synchrotron radiation. This anniversary provided a fitting opportunity to look back at past achievements and forward to an exciting future. The pace of change in synchrotron radiation research is truly impressive and many remarkable achievements have emerged during the time since the last international conference at Stony Brook, USA, in 1994. Moreover, the progress in machine technology is being exploited in third-generation sources. For example, the latest undulators are creating coherent X-rays and microbeams that will add a further dimension to synchrotron radiation research. The conference was held just after the commissioning of SPring-8.

The conference had 602 registered participants from 21 different countries with delegates from Japan (372), USA (52), France (35), Germany (26), the UK (24), Korea (12), Russia (9), Taiwan (7), People's Republic of China (6), Australia (6), Brazil (6), Italy (5), Denmark (4), Thailand (3), Sweden (3), Czech Republic (1), Austria (1), Finland (1), Switzerland (1), The Netherlands (1) and Bulgaria (1). There were 51 invited talks, 67 contributed talks, 341 poster presentations and 24 facility reports. Four Satellite Meetings were held before and after the conference. The meetings were Crystallographic Applications of Synchrotron Radiation (at the Photon Factory, KEK, 1–2 August), an International Workshop to Study the Function of Small Storage Rings and Free-Electron Lasers of the Future (at the Institute for Molecular Science, Okazaki, 8–10 August), Compact Synchrotron Light Sources in the New Age (at Ritsumei University, Kusatsu, 2 August) and the 1997 Haga International Workshop on Medical Applications Using Synchrotron Radiation (at Haga, 9–10 August).

The scientific program of the conference concentrated on discussions concerning the research and development of synchrotron radiation instrumentation. The topics of the conference were accelerators, insertion devices, beam-position monitors, optics, detectors, diffraction and scattering, spectroscopy, imaging, medical imaging and industrial applications. After welcoming addresses by the

chairperson of the organizing committee of SRI'97, Dr Hiromichi Kamitsubo, and the governor of Hyogo Prefecture, Mr Toshitami Kaihara, the opening lectures were presented by Professor Herman Winick (SSRL, Stanford University, USA) and Professor Ian Munro (Daresbury Laboratory, UK). Special lectures for 50 years of synchrotron radiation were presented by Dr John Blewett (USA), Professor Kenneth C. Holmes (MPI, Germany), Dr Robert Madden (NIST, USA) and Professor Taizo Sasaki (Japan). Professor Ruprecht Haensel (Universität Kiel, Germany) summarized the conference.

The proceedings have been compiled under the headings given to abstracts submitted to the Conference. The proceedings commence with three special lectures for 50 years of synchrotron radiation, which are followed by 31 invited papers and 282 contributed papers. The papers included in the proceedings were reviewed according to the standard procedures of the *Journal of Synchrotron Radiation*. We wish to thank Mr Peter Strickland, Dr Tony Weight and other members of the Editorial Office of the *Journal of Synchrotron Radiation* for handling papers through the refereeing process to final publication. We also greatly appreciate the contribution of Mr Wataru Matsumoto in the preparation of the abstracts of the SRI'97 conference.

Finally, we would like to express sincere thanks to all the members of an International Advisory Committee, the Organizing and Program Committees, and, in particular, to the SPring-8 staff and to Dr Hiromichi Kamitsubo, all of whose untiring efforts enabled this meeting to run so smoothly. We acknowledge support from the Japan Atomic Energy Research Institute (JAERI), The Institute of Physical and Chemical Research (RIKEN), Hyogo Prefecture and Himeji City. The conference was partly supported by a Grant-in-Aid for Scientific Research from the Ministry of Education, Science, Sports and Culture of Japan.

The International Advisory Committee has decided that the next SRI conference will be held in Berlin, Germany, in August 2000, and will be hosted by BESSY.

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