

Preface

This issue of the Supplement to Journal of the Physical Society of Japan collects invited and contributed papers from the 1st International Symposium on Advanced Science Research (ASR-2000) “Advances in Neutron Scattering Research” held in Tokai, Japan from October 31 to November 2, 2000.

Advanced Science Research Center, Japan Atomic Energy Research Institute develops its research activity in the interdisciplinary area between basic natural sciences and atomic energy research, which includes the physics and chemistry of actinide compounds etc. At the gateway to the 21st century, the Center considers that the internationalization of the research activity is of vital importance by transmitting as well as by receiving the messages on those research fields on worldwide basis. As one of such efforts, the Center has decided to organize a series of international symposia to be held once a year on various topics related to the fields being developed in the Center. The International Symposium on Advanced Science Research in the field of neutron scattering has been organized as the first symposium of the planned series of ASR Symposia.

One of the reasons to take up this particular research field is that this year of 2000 is just one decade after the JRR-3M reactor had completed its modification as a dedicated machine for beam experiments. Since then, the research activities on neutron scattering, especially through the cooperation with university researchers, have made a sort of ‘quantum jump’ both in quantity as well as in quality of research. It would be timely to summarize recent research activities in this field. On the other hand, to look forward, this year is remarkable in that the future plan to construct a large scale research center for neutron science promoted as the joint project with KEK is going to be funded, which will promise another quantum jump in this research field in the near future.

Upon organizing this 1st ASR Symposium, we put emphasis on the researches on neutron scattering which are currently performed in this Center. The fields include physics and chemistry of actinides, strongly correlated electron systems, structural biology and their related fields as well as elastomechanical properties of materials aiming at industrial applications. Total of 209 contributions were presented including 5 plenary lectures and 20 invited talks. Active discussions filled the conference room and poster session floors with lively atmosphere. Through these discussions and also through social events, we succeeded in providing the forum of friendships between the 262 participants, which may give rise to important international collaborative studies in the future. In all, we believe that the first ASR symposium succeeded in fulfilling the original aim planned by the Institute.

We would like to express our sincere thanks to the bodies who gave us supports to organize this Symposium : The Physical Society of Japan, The Biophysical Society of Japan, The Atomic Energy Society of Japan, The Society of Materials Science, Japan, and Neutron Scattering Association of Japan.

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The 1st International Symposium on
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