Symposium III
“Multinary materials in the next generation”

Preface

New candidate materials have been proposed in the past ICTMC to achieve new functional applications such as low-power dissipative, spin-oriented, and novel memory devices. The objective of Symposium III which is entitled “*Multinary materials in the next generation*” is to provide an increased understanding of the basic science and applications of future advanced materials including the promise that they offer and the challenges ahead for further advancement of technology. Symposium III covers three topics related to the advanced spintronic materials, new superconductors, and newly proposed phase change materials.

K. Takanashi: Advanced spintronic materials based on ordered alloys,
J. Akimitsu: The new superconductor recently discovered by our group,
Y. Sutou: Phase change characteristics of Cu-Ge-Te ternary film and its application to PCRAM

We also cordially appreciate the cooperation and willingness of Prof. Tiginyanu, Prof. Hosono, Prof. Arima, and Prof. Maekawa to deliver their invited presentations related to this symposium.

M. Tiginyanu: Nanostructuring of Semiconductor Compounds by Design
T. Arima: Toward the electric-field control of magnetization in matter
S. Maekawa: Spin Current and Spin Seebeck Effect
H. Hosono: Hydrogen-bearing iron-based superconductors

Also, we would like to thank all the participants for their contributions. Finally, we hope that the symposium will encourage innovative research on multinary materials and their applications in the next generation.

Symposium chairs
K.Sato, Japan Science and Technology Agency, Japan
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