

HIGH TEMPERATURE PHYSICAL CHEMISTRY OF DISORDERED MATERIALS

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## Preface

This special issue contains thirteen articles which were selected from works presented during the Symposium on "High Temperature Physical Chemistry of Disordered Materials and Solid Fast Ion Conductors" held in Sendai, Japan, July 10 and 11, 1997. The symposium was sponsored by the Institute for Materials Research and the Institute for Advanced Materials Processing, Tohoku University in Sendai. Part of this symposium was also supported by a Grant-in-Aid for Scientific Research on Priority Area (No. 257 of Complex Liquids, Leader: Professor F. Yonezawa) from the Ministry of Education, Science and Culture of Japan.

There is a vast amount of research on new materials going on today and this includes the physics and chemistry of disordered materials such as liquids, amorphous solids and solid fast ion conductors. The particular atomic transport properties of solid fast ion conductors imply that their cations are in the liquid-like disordered state, although they are macroscopically still in the solid state. The evolution of our understanding of the interesting properties of such new materials is known to rely heavily upon their structure at a microscopic level, because of the novelty of the physics related to the particular non-periodicity in their atomic arrangements.

For this reason, the topics of the symposium focus attention on the structure-properties relationships of disordered materials and solid fast ion conductors at a microscopic level. This collection presents current problems and suggests future directions to readers who wish to become acquainted with these subjects.

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