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Solid-State Chemistry of Inorganic Materials VIII

Edited by P. Shiv Halasyamani, Simon J. Clarke, David G. Mandrus and Kyoung-Shin Choi

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**MATERIALS RESEARCH SOCIETY
SYMPOSIUM PROCEEDINGS VOLUME 1309**

Solid-State Chemistry of Inorganic Materials VIII

Symposium held November 29–December 3, Boston, Massachusetts, U.S.A.

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PREFACE

Symposium EE, “Solid-State Chemistry of Inorganic Materials VIII,” was held Nov. 29–Dec. 3 at the 2010 MRS Fall Meeting in Boston, Massachusetts. Solid-state chemistry is a truly interdisciplinary field, attracting investigators from chemistry, condensed-matter physics, materials science engineering, ceramics, metallurgy, chemical engineering, and mineralogy/geology, to name but a few. Solid-state chemistry encompasses synthesis of new materials, preparation of materials in new forms (nanocrystalline, thin-film heterostructures, porous, etc.), investigations of the relationships between composition, structure and properties, as well as the application of cutting-edge characterization methods. The scope and importance of solid-state chemistry has grown not only with the discovery of new materials but also through the advancement of techniques for preparing and studying them, and in advanced computational predictions for structures and properties. Our knowledge of the diverse properties of solids continues to expand. The intent of the symposium was to provide researchers from academics, government, and industrial laboratories an interdisciplinary forum for interaction, discussion, and exchange of ideas on recent fundamental advances in Solid-State Chemistry and their impact on the development and application of inorganic materials.

Important topics that were covered in this symposium included:

- Synthetic methods for new and novel materials.
- Structure-property-theory relationships
- Crystal chemistry, including incommensurate structures
- New computational and theoretical methods in solid-state materials
- Battery, fuel cell, and materials for energy
- Dielectric and multiferroic materials
- Microporous and nanostructural materials
- Novel magnetic, optical and electronic properties

The organizers thank the National Science Foundation – Division of Materials Research (DMR-1041307), The University of Houston, and Materials Research Society for financial support.

P. Shiv Halasyamani
Simon J. Clarke
David G. Mandrus
Kyoung-Shin Choi

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