

Preface

This special issue is devoted to the field of solid state amorphizing transformations (SSAT). It contains papers presented at the Symposium on Solid State Amorphizing Transformations, held during the Fall Meeting of the Metallurgical Society of AIME, Cincinnati, October, 1991, as well as papers independently submitted. This issue, intended to be a review of the current state of the field, follows a previous special issue of this journal devoted to the same topic edited by Dr. Ricardo B. Schwarz and Prof. William L. Johnson (*Journal of the Less-Common Metals*, Vol. 140, 1988). Since the publication of that issue, our understanding of SSAT has expanded considerably. Exciting results are continually being produced by a small, but active cadre of researchers worldwide. The field can now be considered as a vibrant subset of the larger field of metastable phase formation in the solid state.

The current issue contains papers on SSAT by a variety of processing routes. Papers on solid-state reactions in multilayers are followed by papers on the compaction of amorphous powders, amorphization driven by hydrogenation and the possibilities of spontaneous amorphization during thermal processing at ambient and high pressures. Several papers on amorphization reactions during mechanical milling and their product phases are followed by a section on experimental studies of irradiation induced amorphization. The issue is completed with several papers on molecular dynamics simulations of amorphization, an area of investigation which has blossomed since the publication of the previous special issue. Each of the papers in this issue was reviewed. This process led to a lengthening of the publication schedule but was worthwhile in terms of overall quality.

I would like to thank the authors and reviewers for their efforts in ensuring the quality of the manuscripts. Special thanks are due to Professor Michael Meshii who co-chaired the TMS Symposium with me as well as the session chairmen. Finally, I would like to express my deepest appreciation to my wife, Marla Abelardo-Luzzi, for her patience and understanding during this lengthy process.

David E. Luzzi
Guest Editor
University of Pennsylvania
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