

Reaction Synthesis of Materials (Part II)
(Part I appeared in Volume 23A, January 1992)

Foreword

Interest in the field of reaction synthesis of materials by self-sustaining (SHS-type) combustion reactions and shock-induced chemical reactions has grown markedly over the last 5 years. The number of articles published in these two areas, as well as the number of planned and held symposia, has been increasing since the International Symposium on Combustion and Plasma Synthesis of High Temperature Materials held in San Francisco in October 1988 and the APS Topical Meeting on Shock Waves in Condensed Matter held in Pullman, WA in June 1985. These activities underscore not only the growing interest in materials processing fields, but also the need to have a forum for the exchange of ideas on the many aspects of these topics. In recognition of this need, and in the interest of promoting scientific exchanges between those actively involved in combustion and shock synthesis, we organized this symposium as part of the Annual Meeting of TMS in New Orleans.

The papers presented at this symposium represented a wide variety of fundamental and technological activities dealing with solid-state synthesis and materials processing by combustion and shock compression methods. Articles included in this issue deal with mathematical theories, mechanisms, kinetic modeling, and application-oriented studies for processing of intermetallic compounds, ceramics, and composites. We trust that this collection of articles will serve a dual purpose; introducing and attracting this topic to those not currently involved in it and, more importantly, reporting on the latest accomplishments in the field.

Naresh N. Thadhani
New Mexico Institute of Mining and Technology

Zuhair A. Munir
University of California at Davis

Symposium Coordinators