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Proceedings of the
21st Annual Conference on
Composites, Advanced Ceramics,
Materials, and Structures—A

January 12-16, 1997
Cocoa Beach, FL

J.P. Singh
Program Chair

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Each issue of *Ceramic Engineering and Science Proceedings*, ISSN 0196-6219, includes a collection of technical articles in a general area of interest. These articles are of practical value for the ceramic industries and the general public. The issues are based on the proceedings of a conference. Both American Ceramic Society and non-Society conferences provide these technical articles. Each issue is organized by an editor who selects and edits material from the conference proceedings. The opinions expressed are entirely those of the presentors. There is no other review prior to publication.

Foreword

The 21st Annual Conference and Exposition on Composites, Advanced Ceramics, Materials, and Structures was held January 12–16, 1997, in Cocoa Beach, Florida. The meeting was open to all (that is, totally nonrestricted), integrating an international audience of more than 450 that represented all sectors of the materials community. This conference featured an International Symposium on Advanced Synthesis and Processing, chaired by Kathryn V. Logan, Zuhair A. Munir, and Richard M. Spriggs, which was jointly sponsored by the U.S. Army Research Office, the Office of Naval Research, the Air Force Office of Scientific Research, the Engineering Ceramics Division, and the National Institute of Ceramic Engineers. Two hundred fifty-five papers, including invited talks, oral presentations, and posters, were presented by conference attendees from 15 countries. The speakers represented universities, industry, government, and research laboratories. In the proceedings, their papers are organized by the session topics as they appeared in the program.

The James I. Mueller Lecture on “High Temperature Structural Silicides” was presented by John J. Petrovic of Los Alamos National Laboratory. This lecture was followed by a plenary session that featured presentations from the U.S. Army Research Office, the Air Force Office of Scientific Research, the Office of Naval Research, the National Institute of Standards and Technology, and Kyocera Industrial Ceramics Corporation. A panel discussion titled “Global Commercialization of Advanced Ceramics: Industry Perspective on Commercialization, Current and Future,” and a highly successful industrial exposition also were featured during the conference.

The NICE Student Congress, chaired by Holly Hutchason, took place at Cocoa Beach immediately preceding the conference. The student members contributed significantly to the conference’s success with their enthusiastic participation.

I would like to express my gratitude to all participants, session chairs, and student pages for their time and effort, to authors for their timely submissions and revisions of manuscripts, and to reviewers for their valuable comments and suggestions. Thanks also are due to the many people who contributed to the success of the 21st Annual Cocoa Beach Conference. The 1997 Cocoa Beach Program Committee included Victor Greenhut (Plenary Session and Division Chair), Donald J. Bray (Division Vice Chair/Treasurer), Jane W. Adams (Division Secretary, Poster Session Chair), Woo Y. Lee (Awards Chair), Kathryn V. Logan (Division Counselor, International Symposium Chair), Glenn N. Pfendt (Division Counselor), and John J. Petrovic (Division Trustee). My thanks are also to the American Ceramic Society staff: Paul Holbrook (Executive Director), Bill Douglas (Director of Meetings and Exposition Services), Jackie Davis (meeting administration), Nadeen Askew (exposition), Sarah Godby (manuscript review and proceedings), Mary Cassells (product manager), and Janie Diebler (award certificates). Finally, special thanks are extended to Katie Pierucci, Manish Sutaria, N. Vasanthamohan, and Sylvia Hagamann for their invaluable help during the organization of this conference and preparation of the proceedings.

J.P. Singh

Program Chair, Engineering Ceramics Division

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