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The Pennsylvania State University
University Park, Pennsylvania

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PREFACE

The proceedings of the Twenty-First University Conference on Ceramic Science held at The Pennsylvania State University, University Park, PA on July 17, 18 and 19, 1985 are compiled in this volume "Tailoring Multiphase and Composite Ceramics".

This Conference emphasized the discussion and analysis of the properties of multiphase ceramic materials in which the microstructure is deliberately tailored for specific applications or properties. Internationally recognized authorities presented keynote and invited lectures on topics dealing with processing and fabrication of multiphase and composite electroceramics, fiber reinforced composites and high temperature multiphase ceramics. Results of recent research were presented in oral and poster sessions by leading researchers from several countries. This collection of papers represents the state of the art in our understanding of the processing-structure-property interrelationships for these materials which possess unique and useful electrical, magnetic, optical, mechanical and thermal properties as a result of their multiphase nature.

We are grateful for the financial support of the National Science Foundation, the Office of Naval Research, the Air Force Office of Scientific Research, and the Defense Advanced Research Projects Agency for this conference. We gratefully acknowledge Prof. Robert Davis' leadership role in steering and expanding this university conference series on ceramic science. We thank Ron Avillion and Linda Rose for their expert assistance in planning and coordinating the meeting. Thanks are due to Ms. Marian Reed, Ms. Judy Bell and Ms. Linda Decker for timely secretarial assistance in organizing the program and bringing the proceedings to press.

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Gary L. Messing
Carlo G. Pantano
Robert E. Newnham
University Park PA
October 1985

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