Advanced Ceramic Coatings and Materials for Extreme Environments
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Advanced Ceramic Coatings and Materials for Extreme Environments
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## Contents

Preface ix  
Introduction xi  

### ADVANCED COATING CHARACTERIZATION METHODS AND NON-DESTRUCTIVE EVALUATION

Monitoring Delamination of Thermal Barrier Coatings during Interrupted High-Heat-Flux Laser Testing using Upconversion Luminescence Imaging
   Jeffrey I. Eldridge and Dongming Zhu, and Douglas E. Wolfe  
Thermal Imaging Measurement Accuracy for Thermal Properties of Thermal Barrier Coatings
   J. G. Sun  

### ADVANCED COATING PROCESSING AND NANOSTRUCTURED COATING SYSTEMS

High Velocity Suspension Flame Sprayed (HVSFS) Hydroxyapatite Coatings for Biomedical Applications
   N. Stiegler, R. Gadow, and A. Killinger  

### COATINGS TO RESIST WEAR, EROSION, AND TRIBOLOGICAL LOADINGS

Ceramic/Metal-Polymer Multilayered Coatings for Tribological Applications Under Dry Sliding Conditions
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Preface

The Symposium on Advanced Ceramic Coatings for Structural, Environmental and Functional Applications and the Materials for Extreme Environments: Ultrahigh Temperature Ceramics and Nanolaminated Ternary Carbides and Nitrides (MAX Phases) Symposium were held at the 35th International Conference on Advanced Ceramics and Composites in Daytona Beach, Florida, January 23–28, 2011. The 16 papers presented in this issue include papers from these two symposia.

We are greatly in debt to the members of the symposium organizing committees, for their assistance in developing and organizing this vibrant and cutting-edge symposium. We also would like to express our sincere thanks to manuscript authors and reviewers, all the symposium participants and session chairs for their contributions to a successful meeting. Finally, we are also grateful to the staff of The American Ceramic Society for their efforts in ensuring an enjoyable conference and the high-quality publication of the proceeding volume.

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Introduction

This CESP issue represents papers that were submitted and approved for the proceedings of the 35th International Conference on Advanced Ceramics and Composites (ICACC), held January 23-28, 2011 in Daytona Beach, Florida. ICACC is the most prominent international meeting in the area of advanced structural, functional, and nanoscopic ceramics, composites, and other emerging ceramic materials and technologies. This prestigious conference has been organized by The American Ceramic Society’s (ACerS) Engineering Ceramics Division (ECD) since 1977.

The conference was organized into the following symposia and focused sessions:

Symposium 1  Mechanical Behavior and Performance of Ceramics and Composites
Symposium 2  Advanced Ceramic Coatings for Structural, Environmental, and Functional Applications
Symposium 3  8th International Symposium on Solid Oxide Fuel Cells (SOFC): Materials, Science, and Technology
Symposium 4  Armor Ceramics
Symposium 5  Next Generation Bioceramics
Symposium 6  International Symposium on Ceramics for Electric Energy Generation, Storage, and Distribution
Symposium 7  5th International Symposium on Nanostructured Materials and Nanocomposites: Development and Applications
Symposium 8  5th International Symposium on Advanced Processing & Manufacturing Technologies (APMT) for Structural & Multifunctional Materials and Systems
Symposium 9  Porous Ceramics: Novel Developments and Applications
Symposium 10  Thermal Management Materials and Technologies  
Symposium 11  Advanced Sensor Technology, Developments and Applications  
Symposium 12  Materials for Extreme Environments: Ultrahigh Temperature Ceramics (UHTCs) and Nanolaminated Ternary Carbides and Nitrides (MAX Phases)  
Symposium 13  Advanced Ceramics and Composites for Nuclear and Fusion Applications  
Symposium 14  Advanced Materials and Technologies for Rechargeable Batteries  
Focused Session 1  Geopolymers and other Inorganic Polymers  
Focused Session 2  Computational Design, Modeling, Simulation and Characterization of Ceramics and Composites  
Special Session  Pacific Rim Engineering Ceramics Summit

The conference proceedings are published into 9 issues of the 2011 Ceramic Engineering & Science Proceedings (CESP); Volume 32, Issues 2-10, 2011 as outlined below:

- Mechanical Properties and Performance of Engineering Ceramics and Composites VI, CESP Volume 32, Issue 2 (includes papers from Symposium 1)
- Advanced Ceramic Coatings and Materials for Extreme Environments, Volume 32, Issue 3 (includes papers from Symposia 2 and 12)
- Advances in Solid Oxide Fuel Cells VI, CESP Volume 32, Issue 4 (includes papers from Symposium 3)
- Advances in Ceramic Armor VII, CESP Volume 32, Issue 5 (includes papers from Symposium 4)
- Advances in Bioceramics and Porous Ceramics IV, CESP Volume 32, Issue 6 (includes papers from Symposia 5 and 9)
- Nanostructured Materials and Nanotechnology V, CESP Volume 32, Issue 7 (includes papers from Symposium 7)
- Advanced Processing and Manufacturing Technologies for Structural and Multifunctional Materials V, CESP Volume 32, Issue 8 (includes papers from Symposium 8)
- Ceramic Materials for Energy Applications, CESP Volume 32, Issue 9 (includes papers from Symposia 6, 13, and 14)
- Developments in Strategic Materials and Computational Design II, CESP Volume 32, Issue 10 (includes papers from Symposium 10 and 11 and from Focused Sessions 1, and 2)

The organization of the Daytona Beach meeting and the publication of these proceedings were possible thanks to the professional staff of ACerS and the tireless dedication of many ECD members. We would especially like to express our sincere thanks to the symposia organizers, session chairs, presenters and conference atten-
dees, for their efforts and enthusiastic participation in the vibrant and cutting-edge conference.

ACerS and the ECD invite you to attend the 36th International Conference on Advanced Ceramics and Composites (http://www.ceramics.org/daytona2012) January 22-27, 2012 in Daytona Beach, Florida.

SUJANTO WIDJAJA AND DILEEP SINGH
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