

FM
Heg/Jac

AMIC PRODUCT DEVELOPMENT AND COMMERCIALIZATION

VOLUME 11 | ISSUE 6

NOVEMBER/DECEMBER 2014

International Journal of

Applied Ceramic TECHNOLOGY

Topical Focus

Refractory Ceramics



WILEY

Contents

ISSN 1546-542X

Volume 11, Number 6 (2014)

Journal Editor

Hua-Tay Lin

*Guangdong University of Technology, China***Associate Editors**

Bikramjit Basu

Indian Institute of Science, Bangalore, India

Eldon Case

Michigan State University, MI

Michael Halbig

NASA-Glenn Research Center, OH

Soshi Kirihara

Osaka University, JAPAN

Sean Li

The University of New South Wales, Australia

Sanjay Mathur

University of Cologne, GERMANY

Tatsuki Ohji

Advanced Industrial Science and Technology (AIST), JAPAN

Tohru Sekino

Tohoku University, JAPAN

Dileep Singh

Argonne National Laboratory, IL

Tseung-Yuen Tseng

National Chiao Tung University, TAIWAN

Yanchun Zhou

*Aerospace Research Institute of Materials and Processing Technology, CHINA***Executive Director & Publisher**

Charles Spahr

Director, Technical Publications and Meetings

Mark J. Mecklenborg

Committee on PublicationsDoreen Edwards, *Chair*

Helen Chan

Darryl Butt

Winnie Wong-Ng

Greg Rohrer

Amit Bandyopadhyay

Paolo Colombo

Yanchun Zhou

Kevin Fox

Mark Mecklenborg (*ex officio*)Charles Spahr (*ex officio*)**Topical Section: Refractory Ceramics****Guest Editor: James Hemrick**

| | |
|--|------|
| Properties of Self-Glazing Al_2O_3 -C Refractories Influenced by the Graphite Content and Nanoscaled Additives | 961 |
| <i>S. Ludwig, V. Rounos, and C. G. Aneziris</i> | |
| Low-Carbon Magnesia-Carbon Refractory: Use of N220 Nanocarbon Black | 968 |
| <i>S. Behera and R. Sarkar</i> | |
| High-Alumina Boron-Containing Refractory Castables | 977 |
| <i>A. P. Luz, T. Santos Jr, V. C. Pandolfelli, and J. Medeiros</i> | |
| Thermal Expansion Mismatch Analysis of Nano-Bonded Refractory Castables | 984 |
| <i>E. Prestes, T. Souza, V. Pandolfelli, and D. Gomes</i> | |
| Effect of Spinel Kinds on Properties of Alumina—Spinel Castables | 993 |
| <i>W. Qiu, G. Ruan, J. Ouyang, Y. Zhao, and G. Xu</i> | |
| Interaction of BN-ZrO ₂ -SiC Ceramics with Inclusions in Si-Killed Steel | 1001 |
| <i>A. Kumar, V. Thapliyal, and J. Smith</i> | |
| Effect of MgO Grain Size on Thermal Expansion Behavior of Alumina-Magnesia-Carbon Refractory | 1012 |
| <i>S. Mukhopadhyay, A. K. Chattopadhyay, G. C. Das, and S. Maitra</i> | |
| Metastability in the MgAl_2O_4 - Al_2O_3 System | 1020 |
| <i>K. R. Wilkerson, J. D. Smith, and J. G. Hemrick</i> | |
| Characterization of the Mechanical Behavior of Magnesia Spinel Refractories Using Image Correlation | 1025 |
| <i>Y. Belhitti, M. Huger, T. Chotard, O. Pop, A. Germaneau, P. Doumalin, and J. C. Dupré</i> | |

General Section

| | |
|---|------|
| Processing and Properties of BioCeramic Coatings onto 3D Ti-Mesh by Dip Casting Method | 1030 |
| <i>W. Yi, X. Hu, X. Sun, P. Ichim, and A. Suvorova</i> | |
| Aqueous Gelcasting and Pressureless Sintering of Zirconium Diboride Ceramics | 1039 |
| <i>J. Yin, Z. Zhang, Z. Huang, H. Zhang, Y. Yan, X. Liu, Y. Liu, and D. Jiang</i> | |
| Effect of Binder Content on the Erosive Wear of Ti(C,N)-Based Cermet in SiO_2 Particle-Containing Simulated Seawater | 1045 |
| <i>Z. Guo, J. Xiong, W. Wan, G. Dong, and M. Yang</i> | |
| A Comparative Study of Densification of Sol-Gel-Derived Nano-Mullite due to the Influence of Iron, Nickel and Copper Ions | 1054 |
| <i>D. Roy, B. Bagchi, A. Bhattacharya, S. Das, and P. Nandy</i> | |
| Alumina Heat Insulator Through Composite Poring Mechanisms | 1061 |
| <i>H. Wu, Z. Huang, D. Jiang, G. Wang, and H. Li</i> | |