

Patents

1. S.C. Zhang, G.E. Hilmas, and W.G. Fahrenholtz, "Reactive Sintering of ZrC/W Composites and Method for Producing the Same," U.S. Patent 7,648,675, Issued January 19, 2010.
2. S.C. Zhang, G.E. Hilmas, and W.G. Fahrenholtz, "Pressurelessly Sintered Zirconium Diboride/Silicon Carbide Bodies and a Method for Producing the Same," U.S. Patent 7,723,247, Issued May 25, 2010.
3. G.E. Hilmas, W.G. Fahrenholtz, and J. Watts, "A Method for Toughening Via the Production of Spiral Architectures Through Powder Loaded Polymeric Extrusion and Toughened Material Formed Thereby," U.S. Provisional Patent Application 60/972,493, filed September 14, 2007.

Publications and Other Scholarly Contributions

Peer-Reviewed Journal Articles (93 published)

1. M.J. Thompson, W.G. Fahrenholtz, and G.E. Hilmas, "Elevated Temperature Thermal Properties of ZrB₂ with Carbon Additions," accepted for publication in the Journal of the American Ceramic Society, November 30, 2011.
2. T. Zhang, R.K. Brow, W.G. Fahrenholtz, and S.T. Ries, "Chromate Formation at the Interface Between a Solid Oxide Fuel Cell Sealing Glass and Interconnect Alloy," accepted for publication in the Journal of Power Sources, January 2, 2012.
3. J. Marschall, D.A. Pejakovic, W.G. Fahrenholtz, G.E. Hilmas, F. Panerai, and O. Chazot, "Temperature Jump Phenomenon During Plasmatron Testing of ZrB₂-SiC Ultra-High Temperature Ceramics," submitted to the Journal of Thermophysics and Heat Transfer, August 10, 2011.
4. H.J. Brown-Shaklee, W.G. Fahrenholtz, and G.E. Hilmas, "Densification Behavior and Thermal Properties of Hafnium Diboride With Additions of Boron Carbide," submitted to the Journal of the American Ceramic Society, June 22, 2011.
5. H.J. Brown-Shaklee, W.G. Fahrenholtz, and G.E. Hilmas, "Optical Characterization of Heavily Faulted Boron Carbide Powders," submitted to the Journal of the American Ceramic Society, June 16, 2011.
6. S. Joshi, W.G. Fahrenholtz, and M.J. O'Keefe, "Dissolution of Cerium from Cerium-based Conversion Coatings in 0.1 M NaCl Solutions," submitted to Corrosion Science, December 2010.
7. B.L. Treu, W.R. Pinc, W.G. Fahrenholtz, M.J. O'Keefe, E. Morris, and R. Albers, "Electrochemical Response and Transport Processes in a Praseodymium-Containing Primer Coating," submitted to the Journal of the Electrochemical Society, October 19, 2010.
8. W.G. Fahrenholtz and G.E. Hilmas, "Oxidation of Ultra-High Temperature Transition Metal Diboride Ceramics," International Materials Reviews, 57(1) 61-72 (2012).
9. J. Watts, G.E. Hilmas, and W.G. Fahrenholtz, "Mechanical Characterization of ZrB₂-SiC Composites with Varying SiC Particle Sizes," Journal of the American Ceramic Society, 94(12) 4410-4418 (2011).
10. D.K. Heller, W.G. Fahrenholtz, and M.J. O'Keefe, "Chemical and Structural Analysis of Subsurface Crevices Formed During Spontaneous Spray Deposition of Cerium-Based Conversion Coatings," Materials Characterization, 62(11) 1071-1075 (2011).

11. A.C. Elmore, W.G. Fahrenholtz, L. Glauber, and A.N. Sperber, "Calculation of Ceramic Pot Filter Hydraulic Conductivity using Falling-Head Data," *Journal of Water Science and Technology: Water Supply*, 11(3) 358-363 (2011).
12. S. Joshi, W.G. Fahrenholtz, and M.J. O'Keefe, "Electrochemical Characterization of Al 7075-T6 Surface Oxide after Alkaline Treatments," *Journal of the Electrochemical Society*, 158(9) C296-C301 (2011).
13. B.L. Treu, W.G. Fahrenholtz, and M.J. O'Keefe, "Characterization of the Thermal Decomposition Products of Praseodymium and Oxygen Based Oxides, Hydroxides, and Carbonates," *Inorganic Materials*, 47(9) 974-978 (2011).
14. S. Joshi, W.G. Fahrenholtz, and M.J. O'Keefe, "Alkaline Activation of Al 7075-T6 for Deposition of Cerium-Based Conversion Coatings," *Surface and Coatings Technology*, 205(17-18) 4312-4319 (2011).
15. J. Watts, G. Hilmas, W.G. Fahrenholtz, D. Brown, and B. Clausen, "Measurement of Thermal Residual Stresses in ZrB₂-SiC Composites," *Journal of the European Ceramic Society*, 31(9) 1811-1820 (2011).
16. S.C. Zhang, G.E. Hilmas, and W.G. Fahrenholtz, "Oxidation of Zirconium Diboride Ceramics With Tungsten Carbide Additions," *Journal of the American Ceramic Society*, 94(4) 1198-1205 (2011).
17. M.J. Thompson, W.G. Fahrenholtz, and G.E. Hilmas, "Effect of Starting Particle Size and Oxygen Content on the Densification of ZrB₂," *Journal of the American Ceramic Society*, 94(2) 429-435 (2011).
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20. D.D. Jayaseelan, Y. Wang, G.E. Hilmas, W. Fahrenholtz, P. Brown, and W.E. Lee, "TEM Investigation of Hot Pressed 10 vol% SiC/ZrB₂ Composite," *Advances in Applied Ceramics: Structural, Functional, and Bioceramics*, 110(1) 1-7 (2011).
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Refereed Conference Proceedings (45 published)

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