

ANDREW ALAN WERESZCZAK

PUBLICATIONS 183

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JOURNALS** 65

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“Exclusivity of Strength-Limiting Intrinsic and Hybrid Flaws,” *29th Annual Conference on Composites and Advanced Ceramics*, Cocoa Beach, FL, Jan. 25, 2005.

“Evaluation of Ceramic Deformation Processes Through Instrumented Hertzian Indentation,” Saint-Gobain, Worcester, MA, Aug. 3, 2004.

“Evaluation of Ceramic Deformation Processes Through Instrumented Hertzian Indentation,” *2004 Interagency Coordinating Committee on Structural Ceramics*, National Science Foundation, Arlington, VA, Apr. 14, 2004.

“Strength of a Sectored Flexure Specimen,” *28th Annual Conference on Composites and Advanced Ceramics*, Cocoa Beach, FL, Jan. 27, 2004.

“Strength-Size-Scaling in Zirconia Laminates,” *28th Annual Conference on Composites and Advanced Ceramics*, Cocoa Beach, FL, Jan. 29, 2004.

“Effect of Surface Condition on Hot-Pressed SiC Equibiaxial Flexure Strength,” *105th Meeting of the American Ceramic Society*, Nashville, TN, Apr. 30, 2003.

“Flexural and Torsional Resonances of Ceramic Tiles via Impulse Excitation of Vibration,” *27th Annual Conference on Composites and Advanced Ceramics*, Cocoa Beach, FL, Jan. 30, 2003.

“C-Ring Strength of Advanced Monolithic Ceramics,” *27th Annual Conference on Composites and Advanced Ceramics*, Cocoa Beach, FL, Jan. 31, 2003.

“Ceramic Gun Barrel Technology,” Report to ARL Technical Assessment Board Panel on Armor and Armaments, Aberdeen, MD, Jun. 4, 2002.

“Hertzian Indentation Techniques on Silicon Carbide Ceramics,” US/Swedish DEA-A-SW-62-0004 Meeting, Aberdeen, MD, May 14, 2002.

“Ceramic Gun Barrel Technology,” *104^d Meeting of the American Ceramic Society*, St. Louis, MO, Apr. 29, 2002.

“Instrumented Hertzian Indentation of Armor Ceramics,” *Graduate Materials Engineering Seminar, Rutgers University*, Apr. 9, 2002.

“Ceramic Gun Barrel Technology,” *Graduate Materials Engineering Seminar, University of Dayton Research Institute*, Jan. 31, 2002.

“Instrumented Hertzian Indentation of Armor Ceramics,” *26th Annual Conference on Composites and Advanced Ceramics*, Cocoa Beach, FL, Jan. 17, 2002.

“Instrumented Hertzian Indentation of Armor Ceramics,” *Graduate Materials Engineering Seminar, University of Delaware*, Oct. 17, 2002.

“Ceramic Gun Barrel Technology STO,” *WTC Review*, Arlington, VA, May 29, 2001.

“Ceramic Gun Barrel Technology STO,” *Benet Laboratories, Watervliet Arsenal, Watervliet, NY*, Apr. 9, 2001.

“Ceramic Gun Barrel Technology STO,” *AMC Headquarters, Fairfax, VA*, Mar. 16, 2001.

“Ceramic Gun Barrel Technology STO,” *ARL Headquarters*, Adelphi, MD, Feb. 15, 2001.

“Creep of CaO/SiO₂-Containing MgO Refractories,” *103rd Meeting of the American Ceramic Society*, Indianapolis, IN, Apr. 23, 2001.

“High Strain Rate Testing of Structural Ceramics,” *103rd Annual Meeting of the American Ceramic Society*, Indianapolis, IN, Apr. 24, 2001.

“Mechanical and Thermal Properties of Power Electronic Ceramic Multilayer Capacitors,” *102nd Annual Meeting of The American Ceramic Society*, St. Louis, MO, May 2, 2000.

“Strength and its Dependence on Secondary Phase Softening in Silicon Nitrides,” *102nd Annual Meeting of The American Ceramic Society*, St. Louis, MO, May 2, 2000.

“Creep Measurement and Analysis of Refractories,” *102nd Annual Meeting of The American Ceramic Society*, St. Louis, MO, May 1, 2000.

“In-Situ Mechanical Property Evaluation of Dielectric Ceramics in Ceramic Multilayer Capacitors,” *2000 Future Car Congress*, Arlington, VA, Apr. 4, 2000.

“High Temperature Inert Strength and Dynamic Fatigue of Candidate Silicon Nitrides for Diesel Exhaust Valves,” *24th Annual Conference on Composites and Advanced Ceramics*, Cocoa Beach, FL, Jan. 27, 2000.

“Microstructural Changes in Glass Tank Refractory Silica and Their Effect on Its Thermal Conductivity,” *American Ceramic Society’s Glass and Optical Materials Division Fall Meeting*, Cleveland, OH, Oct. 5, 1999.

“Mechanical Characterization and Reliability Analysis of Ceramic MLCs,” *Power Electronics Passive Components Workshop*, Naval Research Laboratory, Washington, DC, Jun. 11, 1999.

“Specimen Size Effect on the Creep of Si₃N₄,” *23rd Annual Conference on Composites and Advanced Ceramics*, Cocoa Beach, FL Jan. 28, 1999.

“Probabilistic Thermal Shock Strength Testing Using Infrared Imaging,” *Corning Glass Incorporated*, Corning, NY Sep. 17, 1998.

“Life Prediction of Ceramic Valves,” *Saint-Gobain/Norton Industrial Ceramic Company*, Northboro, MA Sep. 16, 1998.

“Recommended Materials Specifications for NT551 Silicon Nitride Components,” *Caterpillar Technical Center*, Peoria, IL Aug. 28, 1998.

"Strength Distribution Changes in a Silicon Nitride as a Function of Stressing Rate and Temperature," *43rd ASME Gas Turbine and Aeroengine Technical Congress*, Stockholm, Sweden, Jun. 3, 1998.

"Stress Relaxation of MCrAlY Bond Coat Alloys as a Function of Temperature and Strain," *43rd ASME Gas Turbine and Aeroengine Technical Congress*, Stockholm, Sweden, Jun. 3, 1998.

"Failure Probability Prediction of AlN and Al₂O₃ Substrates," *100th Annual Meeting of The American Ceramic Society*, Cincinnati, OH May 5, 1998.

"Failure Probability Prediction of Dielectric Ceramics in Multilayer Capacitors," *100th Annual Meeting of The American Ceramic Society*, Cincinnati, OH May 4, 1998.

"Probabilistic Life Design of Refractories for Steel Casting," *34th Annual Symposium on Refractories, St. Louis Section of the American Ceramic Society*, University of Missouri-Rolla, Rolla, MO, Mar. 19, 1998.

"Life Prediction of Automotive Electronic Substrates," *Annual Automotive Technology Development Contractors' Coordination Meeting*, Dearborn, MI, Oct. 29, 1997.

"Compressive Creep Resistance of Magnesia Refractories at Temperatures $\geq 1400^{\circ}\text{C}$ (2550 $^{\circ}\text{F}$)," *Advances in the Fusion and Processing of Glass*, Toronto, Jul. 30, 1997.

"Compressive Creep Behavior of Fusion-Cast Alumina Refractories," *Advances in the Fusion and Processing of Glass*, Toronto, Jul. 30, 1997.

"High Temperature Deformation of an AZS Refractory," *Advances in the Fusion and Processing of Glass*, Toronto, Jul. 30, 1997.

"Development of Improved Refractories," *2nd Annual OIT/AIM Program Review*, Albuquerque, NM, Jun. 18, 1997.

"Failure Probability Prediction of Fast-Fractured NT451 SiAlON Diesel Valves," *ASME Turbo Expo '97*, Orlando, FL, Jun. 4, 1997.

"Dynamic Fatigue Characteristics of Electronic Ceramic Films," *99th Annual Meeting of The American Ceramic Society*, Cincinnati, OH May 5-7, 1997.

"High Temperature Mechanical Properties and Corrosion Resistance of Refractories," *2nd Industrial Energy Efficiency Expo*, Arlington, VA, Feb. 27, 1997.

"Tensile Creep Performance of a Developmental, In-Situ Reinforced Silicon Nitride," *21st Annual Conference on Composites and Advanced Ceramics*, Cocoa Beach, FL Jan. 12-16, 1997.

“Prediction of SiAlON Diesel Valve Failure Probability Using AlliedSignal's CERAMIC and ERICA Life Prediction Codes,” *21st Annual Conference on Composites and Advanced Ceramics*, Cocoa Beach, FL Jan. 12-16, 1997.

“Life Prediction and Reliability Analysis of Load-Bearing Ceramics,” *Lehigh University*, Bethlehem, PA, Oct. 23, 1996.

“Compressive Creep Performance of Glass Furnace Crown Refractories,” *University of Missouri-Rolla Ceramic Engineering Department Seminar Series*, Rolla, MO, Oct. 10, 1996. (Invited)

“High Temperature Deformation,” a lecture given at the *University of Missouri-Rolla to the "Behavior of Materials - Mechanical" graduate-level class in their Ceramic Engineering Department*, Rolla, MO, Oct. 10, 1996. (Invited)

“Creep Rate of Fusion-Cast Refractories,” *Pittsburgh Plate Glass Incorporated, Glass Technology Center Seminar Series*, Pittsburgh, PA, May 2, 1996. (Invited)

“Reliability Prediction of Thin Alumina Plates Using AlliedSignal's CERAMIC and ERICA Life Prediction Codes,” *98th Annual Meeting of The American Ceramic Society*, Indianapolis, IN Apr. 14-17, 1996.

“Mechanical Performance of a Candidate SiAlON Ceramic for Diesel Engine Applications,” *98th Annual Meeting of The American Ceramic Society*, Indianapolis, IN Apr. 14-17, 1996.

“Compression Creep Performance of Fusion-Cast Alumina Refractories,” *98th Annual Meeting of The American Ceramic Society*, Indianapolis, IN Apr. 14-17, 1996.

“Verification of Life Prediction Methodology as Applied to a Ceramic Valve,” *Annual Automotive Technology Development Contractors' Coordination Meeting*, Dearborn, MI, Oct. 26, 1995.

“Issues Pertinent to the Compression Creep Testing of Refractories,” *1995 Refractory Ceramics Division Meeting*, Huron, OH, Oct. 6, 1995.

“Compression Creep Testing of Refractories at the HTML,” *NSF Industry - University Center for Glass Research, Semiannual Research Meeting*, Alfred University, Alfred, NY, Jul. 26, 1995.

“Effect of Cyclic Loading on the Creep Performance of Silicon Nitride,” *ASME Turbo Expo '95*, Houston, TX, Jun. 6, 1995.

“Stress Relaxation of SN88, SN253, and NCX-5102 Silicon Nitrides at 1300°C,” *Graduate Materials Engineering Seminar, University of Dayton Research Institute*, Dayton, OH, Apr. 10, 1995. (Invited)

“Stress Relaxation of Silicon Nitride at Elevated Temperatures,” *19th Annual Conference on Composites and Advanced Ceramics*, Cocoa Beach, FL Jan. 8-12, 1995.

“Differences in Creep Performance of a HIPed Silicon Nitride in Ambient Air and Inert Environments,” *19th Annual Conference on Composites and Advanced Ceramics*, Cocoa Beach, FL Jan. 8-12, 1995.

“Creep and Oxidation Effects in Silicon Nitride,” Ceramic Technology Project Quarterly Management Meeting, Washington, D.C., Sep. 8, 1994. (Invited)

“Evolution of Oxidation and Creep Damage Mechanisms in HIPed Silicon Nitride Materials,” *Plastic Deformation of Ceramics*, Snowbird, UT, Aug. 10, 1994.

“Fracture Evolution in HIPed Silicon Nitride at Elevated Temperatures,” *96th Annual Meeting of The American Ceramic Society*, Indianapolis, IN Apr. 25-28, 1994.

“Effects of Oxidation and Creep Damage Mechanisms on Creep Behavior in HIPed Silicon Nitrides,” *18th Annual Conference on Composites and Advanced Ceramics*, Cocoa Beach, FL Jan. 9-14, 1994.

“The Effect of Oxidation in Yttrium Silicate Grain Boundaries in HIPed Silicon Nitride and Its Role in Dictating Creep Lifetime,” NEDO Invitee Participation Program, The Mechanical Engineering Laboratory, Tsukuba, Japan, Nov. 11, 1993 and the Japan Fine Ceramics Center, Nagoya, Japan, Nov. 2, 1993. (Invited)

“Environmental Effects on the Flexure Strength of HIPed Silicon Nitride at Elevated Temperatures,” *184th Meeting of the Electrochemical Society*, New Orleans, LA, Oct. 12, 1993.

“Dynamic Fatigue Behavior at a HIPed Silicon Nitride in Air and Inert Environments at 1370°C,” *95th Annual Meeting of The American Ceramic Society*, Cincinnati, OH Apr. 18-22, 1993.

“Development of an Interfacial Test System for the Determination of Interfacial Properties in Fiber Reinforced Ceramic Composites,” *17th Annual Conference on Composites and Advanced Ceramics*, Cocoa Beach, FL Jan. 10-15, 1993.

“Fracture Toughness (K_{Ic} and g_{wof}) of a HIPed Si_3N_4 at Elevated Temperatures,” *17th Annual Conference on Composites and Advanced Ceramics*, Cocoa Beach, FL Jan. 10-15, 1993.

“Fracture Toughness of a SiC_w/Al_2O_3 Composite at Elevated Temperatures,” *Third HTML User Group Meeting*, Oak Ridge National Laboratory, Oak Ridge, TN Sep. 25, 1992.

“Crack-Wake Toughening Mechanisms at High Temperatures in an Extruded Alumina Short Fiber/Cordierite Matrix Composite,” *94th Annual Meeting of The American Ceramic Society*, Minneapolis, MN Apr. 12-16, 1992.

“Alumina Short Fiber Reinforced Cordierite Model Composites for the Study of Interphase Effect on Toughness,” *1991 TMS Fall Meeting*, Cincinnati, OH, Oct. 8-11, 1991.

“High Temperature Whisker Pullout in Ceramic Composites,” *93rd Annual Meeting of The American Ceramic Society*, Cincinnati, OH, Apr. 28-May 2, 1991.

“High Temperature Fracture Mechanisms in Short-Fiber Reinforced Ceramic Matrix Composites,” *12th Annual University-Industry Research Symposium*, Center for Composite Materials, Univ. of Delaware, Newark, DE, Sep. 11-13, 1990.

“Effect of Fracture Temperature and Relative Crack Propagation Rate on The Fracture Behavior of Whisker Reinforced Ceramic Matrix Composites,” *14th Annual Conference on Composites and Advanced Ceramics*, Cocoa Beach, FL, Jan. 14-17, 1990.

“Elevated Temperature Fracture Behavior of Whisker-Reinforced Ceramic Composites,” *11th Annual University-Industry Research Symposium*, Center for Composite Materials, Univ. of Delaware, Newark, DE, Sep. 19-21, 1989.

“Fracture Behavior of Whisker-Reinforced Ceramic Composites,” *10th Annual University-Industry Research Symposium*, Center for Composite Materials, Univ. of Delaware, Newark, DE, Sep. 19-21, 1988.