

# Nina Orlovskaya, Assistant Professor Department of Mechanical, Materials, and Aerospace Engineering University of Central Florida, Orlando, FL 32816



#### **Research:**

- Hard and Tough Ceramic Laminates
- Boron Rich Solids
- Electrochemically Active Ceramics Oxides
- Ferroelasticity and Time Dependent Properties of Mixed Ionic Electronic Conducting Perovskites

e-mail: norlovsk@mail.ucf.edu

• Solid Oxide Fuel Cells and Oxygen Separation Membranes

## **Teaching:**

Introduction to Ceramics, Science and Technology of Fuel Cells, Experimental Techniques in Mechanics and Materials, Senior Design, Selection and Design of Materials, Fundamentals of Materials Science and Engineering.

#### **Laboratory of Ceramic Materials:**

Micro-Raman Spectrometer, Probostat, Potentiostat, Tape Casting, Screen Printing, Uniaxial Press, Three Roll Mill, Cold Isostatic Press, Viscometer, HIP, Powder Mixing, Air Presureless Furnaces (up to 1800°C)

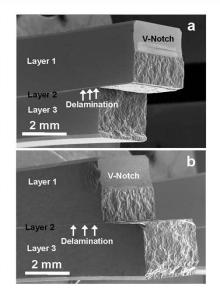
### **Research Group - 2011:**

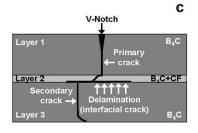
<u>PhD Students</u>: Yan Chen, Zhilin Xie, Jonathan Torres, Maximo Navaro, Amjit Aman, Richard Stadelmann

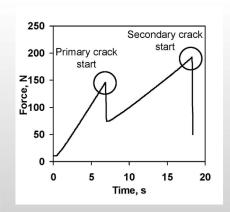
MS Students: Kyle Mueller, Zichao Xia

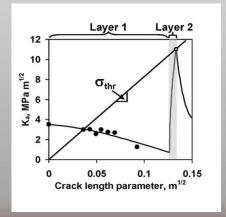
<u>Undergraduate Students</u>: Nathan Fist, Connie Griemester

**CAREER:** Hard and Tough Boron Rich Ceramic Laminates Designed to Contain Thermal Residual Stresses - DMR- 0748364









B<sub>4</sub>C/B<sub>4</sub>C – Carbon Nanofibers Three Layered Hot Pressed Composite – Failure Behavior and Apparent Fracture Toughness