

# **Evaluating Fracture Toughness of Polymers**

**Seth Cannon and Dr. Judy Schneider**

*Mississippi State University*

## **EXTENDED ABSTRACT**

The use of polymeric materials is increasing in many engineering applications. For an engineer to design with these materials, the mechanical behavior must be understood with regards to processing and environment. Of particular interest is the ability of a material to withstand impact loads, or fracture toughness, as a function of temperature. A drop tower is currently being used to evaluate the fracture toughness of polymers at ambient and cryogenic conditions. This gives the flexibility to test flat panels, in addition to traditional Charpy and Izod specimens.