

## TENSILE AND FATIGUE BEHAVIOR OF HIGH PERFORMANCE FIBERS

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### **Abstract**

High performance fibers are ubiquitous in our everyday lives. In a variety of structural applications, fibers and fiber reinforced composites are subjected to static and cyclic mechanical loading. We have conducted extensive work on single fiber tensile and fatigue testing using a microforce testing system. In this talk we review our work on the tensile and fatigue behavior of some common high performance fibers such as ceramic, metal, and natural fibers. Tensile and fatigue mechanisms unique to each type of fiber are identified and a description of damage and fracture is provided.

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