

VU PHYSICS AND ASTRONOMY COLLOQUIUM

Friday, October 23, 2009. Join us in NSC 231 at 3:05 for refreshments. Talks start at 3:20 in NSC 224.

The Use of Silicon Carbide-Based Power Electronics in High-Performance Applications

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Power electronic engineers continue their search for the definitive power semiconductor device material for use in systems and sub-systems for high-performance applications. These applications are generally found within the military, space, industrial, and commercial sectors where designs are constrained by inherently hostile environments. In these cases, power electronic designers seek controllable power semiconductor devices composed of materials having desirable electrical, thermal, mechanical, physical, and chemical properties. Silicon carbide, SiC, is one such candidate material.

In this colloquium, the advantages of SiC-based power electronics will be presented. In addition, the presenter will describe the evolution of a small Arkansas-based company that has become one of the leaders in the world in high-temperature, SiC-based power electronic packaging.

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