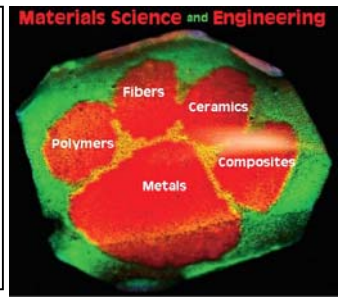


Seminar Series

Sponsored by
School of Materials Science and Engineering
Thursday, November 9, 2006
12:30 PM – Room 200 Olin Hall



Materials: Enabling Solid-State Laser Sources

F. Kenneth Hopkins
Air Force Research Laboratory
Materials & Manufacturing Directorate (AFRL/ML)
Wright-Patterson Air Force Base OH 45433-7707

ABSTRACT

The building blocks available to the laser source designer for various applications such as laser radar are continuing to progress, and as a result, laser performance across the spectrum continues to improve in terms of power, energy per pulse, efficiency, size, ruggedness, and maintenance requirements. In the presentation, the Air Force's materials program to enable this continuing evolution of laser sources will be described, and the direction of future efforts in this area will be forecast. A broader vision of the Air Force's pursuit of materials for electronics and photonics will also be discussed.

F. Kenneth Hopkins earned MS degrees in both electrical engineering and physics and a PhD degree in electrical engineering, all from the University of Cincinnati. His professional career comprises several years of university teaching, experience in industry including 2-1/2 years as a principal member of a start-up company concerned with machine vision, and 20 years of federal service during which he has been part of the leadership team for electronic and optical materials development at the Air Force Research Laboratory, Materials & Manufacturing Directorate, Wright-Patterson Air Force Base, OH. His special interest has continued to be the investigation and development of numerous photonic materials for both lasers and optoelectronic components, many of which have been successfully transitioned into commercial and military systems. As a result, his team under his leadership was awarded the Federal Laboratory Consortium Award for Excellence in Technology Transfer in 1996, and he received the prestigious 'Meritorious Civilian Service Award' during 2005. Dr. Hopkins is a senior member of IEEE as well as a member of the Association of Old Crows and the Directed Energy Professional Society.