

## Optical Fiber Systems and Methods

### Description:

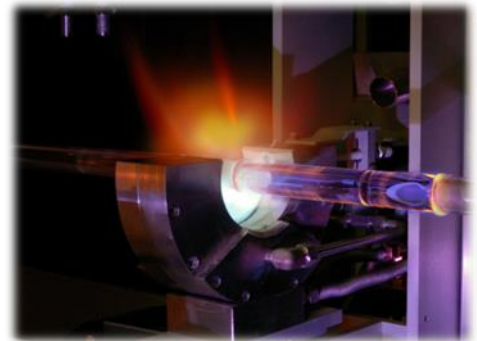
This technology features a composite perform having a core material rod that comprises single crystal silicon and a cladding material perform surrounding the core rod. These optical fibers provide better removal of dissipated heat from the beam in comparison to a nonlinear optical device fabricated from a traditional bulk crystal which promises higher operating power levels, better thermal stability and improved control of phase matching if required. This technology could enable short fibers for reduced nonlinear effects such as SBS and SRS when desired and could significantly reduce the cost of diode pumped crystal host lasers.

### Applications:

- Lasers for Defense Applications
- Lasers for Biomedical Applications

### Benefits:

- Excellent thermal properties
- One-step fabrication of fiber
- Good continuity over the length of the fiber
- Utilizes conventional and commercially-available draw methods



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**Protection Status:** Patent application filed  
**Licensing Status:** Available for licensing  
**CURF Ref No:** 08-029