

**UNIVERSITY OF SOUTH FLORIDA
DEPARTMENT OF PHYSICS**

Spring 2006 Research Colloquium

Friday, April 28, 2006

in

PHY 130 at 4:00 PM

Skutterudites are for Real

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ABSTRACT

Filled skutterudites have been extremely exciting and technologically important materials since the discovery of their potential as high efficiency thermoelectric materials in 1994. These materials exhibit a rich spectrum of physical phenomena including electron-crystal-phonon-glass, superconductivity, heavy-fermion behavior, magnetic ordering, and large thermoelectric figure of merit at elevated temperatures. In this talk I will attempt to explain why they remain a very active focus for researchers from academia, industry, and national laboratories worldwide after a decade of effort, nearly 400 papers, and over 100 patents; and convey the excitement the thermoelectricians enjoy, by highlighting some of our recent work on these materials.