

T_CSUH Special Seminar

Texas Center for Superconductivity at the University of Houston

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The Synthesis, Properties and Chemistry of Layered Solids

Friday, March 30, 2007

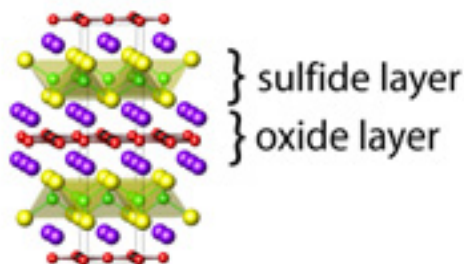
Room 102, University of Houston Science Center
11:00 a.m. – 12:00 p.m.

Abstract

New solid state compounds will be described which are composed of alternating transition metal oxide layers and metal sulfide or selenide layers. These compounds show a wide range of electronic, magnetic and structural features which can often be tuned by making substitutions of the cations or anions in the structures.

The lecture will focus firstly on the crystal structures and electronic and magnetic properties of compounds containing titanium, manganese, cobalt or nickel oxide layers separated by copper sulfide or selenide layers. The second part of the lecture will describe the chemical reactivity of these compounds, in particular the reversible room-temperature lithiation of many of these compounds.

A wide range of investigations will be described including diffraction, magnetometry and NMR studies. The properties will be related to the general chemistry of the elements.



Persons with disabilities who require special accommodations in attending this lecture should call (713) 743-8210 as soon as possible.



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