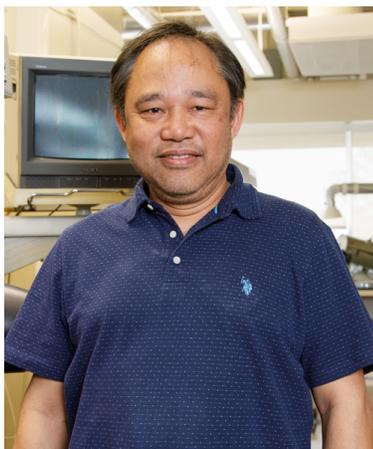

TcSUH Bi-Weekly Seminar

Exploratory Synthesis in Metal-Rich Solids: New Curiosities in Chemical Bonding, Synthesis and Reactivity



Prof. Arnold M. Guloy

Moore Professor of Chemistry and Associate Department Chair, Department of Chemistry, and the Texas Center for Superconductivity (TcUH PI)

Thursday, April 25, 2019

Room 102, Houston Science Center
12:00 p.m. – 1:00 p.m.

ABSTRACT: This talk provides an overview of our recent work on complex polar intermetallics phases. These studies are motivated by the desire to explore the structural and mild oxidation chemistry of ‘salt-like’ intermetallics along the Zintl border. A general goal of this work is to discover unusual crystal structures and novel chemical bonding. This work presents the results of structural, characterization and chemical bonding studies on Group IV (Ge) Zintl phases and metal-rich tetrelides (Ge) oxides derived from polar intermetallics. The chemical bonding description of this class of main-group anion network and clusters will be related to their chemical reactivity and electronic properties. New insights to the chemical behavior and electronic structures of these materials and related compounds will be presented.

BIO: Arnold M. Guloy earned a B.S. in Chemistry from the University of the Philippines in Diliman, and a Ph.D. from Iowa State University. After a postdoctoral stint at the IBM T.J. Watson Research Center in Yorktown Heights, Dr. Guloy joined the UH Department of Chemistry where he is currently a Moore Professor of Chemistry and Associate Department Chair. Professor Guloy is recognized world-wide for his pioneering and creative research in the field of inorganic solid state chemistry. He is well known for his breakthrough work into organic-based metal-halide perovskites, unique synthetic forms of the element germanium, and chemical bonding description of Zintl phases, complex polar intermetallic compounds and superconductors.

RSVP by Wednesday at Noon to bdherndo@central.uh.edu for sandwiches.

Persons with disabilities who require special accommodations to attend this lecture should call (713) 743-8213.
