



## Seminar

**Mike Whangbo**

Department of Chemistry,  
North Carolina State University

**Time: 2:30pm, June 17, 2013 (Monday)**

**2013 6 17**

**2:30**

**Venue: Room 607, Conference Room A, Science Building 5  
607**

### Abstract

This talk is concerned with apparently puzzling properties of several magnetic insulators, which include (a) the single ion anisotropy of  $S=1/2$  systems, (b) the competition between high-spin and low-spin states in a ferromagnet  $\text{YSr}_3\text{Co}_4\text{O}_{10+}$  and an antiferromagnet  $\text{LaCoO}_3$ , (c) the interaction between rare-earth and transition-metal ions in  $\text{Ce}_2\text{O}_2\text{FeSe}_2$ , and (d) the idle spin of  $\text{Cu}_3(\text{OH})_4\text{SO}_4$ . These problems were examined on the basis of density functional calculations as well as energy mapping and perturbation-theory analyses.

### About the Speaker

Mike Whangbo got his B.S. and M.S. in Chemistry, Seoul National University in 1968 and 1970. He got his Ph.D in Queen's University in 1974. From 1975 to 1976, he had been the Postdoctoral fellow in Queen's University. He had been the Postdoctoral Associate, Cornell University from 1976 to 1977. He became an Assistant Professor of Chemistry, North Carolina State University in 1978. Since 2010, he has been the Distinguished Professor of Chemistry, North Carolina State University. He has over 600 publications.

Visiting Professorship:

Laboratoire de Chimie Theorique, Univ. de Paris-Sud (Summer 1987, 1989-1993)

Materials Research Center, Albert-Ludwigs Univ. (Summer 1994-1996, 1998)

Institut des Materiaux Jean Rouxel, Univ. de Nantes (Summer 1984, 2000-2011)

ICMCB, Université de Bordeaux 1 (Summer 2001-2006)

Max-Planck-Institut für Festkörperforschung, Stuttgart (Summer 2004-2011)

Honors and Awards:

Docteur Honoris Causa, Université de Nantes, France, 2006

The Ho-Am Prize for Basic Science, The Ho-Am Foundation, 1999

Alexander von Humboldt Research Award for Senior US Scientists, 1994

Camille and Henry Dreyfus Teacher-Scholar Award, Dreyfus Foundation, 1980-1985