

SEMINARIUM Z MAGNETYZMU I NADPRZEWODNICTWA

Uprzejmie zawiadamiamy, że w **czwartek**

14 marca 2013 r., o godz. 10:00

w sali 203 (bud. 1) odbędzie się seminarium, na którym

Prof. dr Bogdan Dąbrowski

Department of Physics, Northern Illinois University, DeKalb, IL, USA

wyłosi referat na temat:

Conceiving Complex Oxides with Favorable Properties

Transition metal oxides have been studied for several decades because of their intriguing properties resulting from strong coupling among crystal lattice and electron's orbital, charge and spin. Much has been learned about optimizing synthesis conditions and controlling structure-property relationships, for example, the magnetism, conductivity and ferroelectricity. In this talk I will describe our recent attempts to utilize this vast knowledge to design new perovskites and related materials with new characteristics such as multi-ferroelectricity and enhanced thermoelectric power. In addition, oxides exhibit unique oxygen non-stoichiometry, which was used extensively to vary the valence state of transition metals and, as such, control the properties, for example T_c in high-temperature superconducting copper oxides. However, oxygen non-stoichiometry itself can be regarded as a useful property. I will show how the remarkable oxygen intake-release capability can be controlled in hexagonal manganites to devise new oxygen separation and storage materials.

Serdecznie zapraszamy

Roman Puźniak
Henryk Szymczak
Andrzej Wiśniewski