

SEMINARIUM Z MAGNETYZMU I NADPRZEWODNICTWA

Uprzejmie zawiadamiamy, że w **PONIEDZIAŁEK**

14 października 2013 r. o godz. 11:00, w sali 203 odbędzie się seminarium, na którym

Prof. Koki Takanashi

Institute for Materials Research (IMR), Tohoku University, Japan

IEEE 2013 Distinguished Lecturer

wyłosi referat na temat:

Advanced spintronic materials for generation and control of spin current

"Spin current", i.e., the flow of spin angular momentum, in magnetic nanostructures has emerged as a fascinating physical concept during the recent development of spintronics. In magnetic nanostructures, magnetism correlates strongly with electronic transport and also other physical properties, leading to the mutual control of magnetic, transport, and other physical properties. Spin current is the most basic concept relevant to the mutual control, and efficient generation and precise control of spin current in magnetic nanostructures are key technologies for the further development of spintronics. There are two kinds of spin current: one is accompanied by an electric current, and the other is not. Spin current without an electric current is called pure spin current, which is actually generated by several experimental methods such as non-local spin injection, spin Hall effect, spin pumping, spin Seebeck effect, and so on. For recent years spin current has been extensively investigated, and particularly the understanding of pure spin current has dramatically developed.

In this lecture, the concept, historical background, and recent progress in research of spin current will be reviewed, and then some topics on advanced materials for the generation and control of spin current will be introduced, with a focus on magnetic ordered alloys: half-metallic Heusler alloys as a highly efficient spin injector/detector and L10-ordered alloys with high magnetic anisotropy as a perpendicularly polarized spin injector/detector.

Serdecznie zapraszamy

Roman Puźniak
Henryk Szymczak
Andrzej Wiśniewski