

SEMINARIUM Z MAGNETYZMU I NADPRZEWODNICTWA

Uprzejmie zawiadamiamy, że w **środe**

18 listopada 2015 r., o godz. 10:00

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

mgr Nadeem Tahir

University of Białystok, Faculty of Physics, Department of Physics of Magnetism

wyłosi referat na temat:

"Statics and Dynamics of Magnetization in: Patterned Permalloy and Ion-Irradiated Co and FeAl Nanostructures"

The study of tailoring magnetic properties through patterning (removal of magnetic material) in permalloy (Py) and ion driven modifications in $\text{Fe}_{60}\text{Al}_{40}$ and cobalt (Co) thin films employed by magneto-optical Kerr effect microscopy (MOKE), Brillouin light scattering (BLS), X-band ferromagnetic resonance (FMR) and vector network analyzer ferromagnetic resonance (VNA-FMR) will be presented. Effect of Ne^+ ions energies on evolution of magnetic domain structures, magnetization reversal mechanisms, and spin wave excitation will be demonstrated [1-3]. Influence of Py nanostructures complexity from square antidot lattice to wavelike patterns on the magnetization reversal mechanism, magnetic anisotropies, and spin wave excitations spectra will also be presented [5-6]. Experimental results are well reproduced by MuMax calculations. Finally, role of Ga^+ (30 keV) ions's fluence on magnetic anisotropy and spin wave excitations in ultrathin Pt/Co/Pt films will be shown [4].

1. **N. Tahir**, et.al, "Tailoring dynamic magnetic characteristics of $\text{Fe}_{60}\text{Al}_{40}$ films through ion irradiation" (Accepted for publication in Phys. Rev. B, 2015, <https://journals.aps.org/prb/accepted/b507eO60S851ee2a98b089d8c4ed28dcffbe1d9e4>)
2. **N. Tahir**, et.al, "Evolution of magnetic domain structure formed by ion-irradiation of $\text{B}_2\text{-Fe}_{0.6}\text{Al}_{0.4}$ ", **Optics Express**, 23, 1675-1681 (2015).
3. **N. Tahir**, et.al, "Magnetization reversal of disorder-induced ferromagnetic regions in $\text{Fe}_{60}\text{Al}_{40}$ thin films", **IEEE Trans. Magn.** 50, 11 (2014).
4. **N. Tahir**, et.al, BLS and Kerr effect studies of Ga^+ irradiated Pt/Co/Pt trilayers. Joint European Magnetic Symposia (JEMS 2013), Rhodes, Greece, August 25-30, 2013. (poster)
5. **N. Tahir**, et.al, Collective spin wave excitations in the square lattice magnonic Wave-like Py Structures. 22th International Colloquium on Magnetic Films and Surfaces (ICMFS2015) July 12-17, Krakow, Poland. (poster)
6. **N. Tahir**, et.al, Spin wave excitations in periodic arrays of wave-like Py structures, 4th International workshop on Magnonics: From Fundamentals to Applications, August 02-06, Seon, Germany. (Oral).

Serdecznie zapraszamy

Roman Puźniak
Henryk Szymczak
Andrzej Wiśniewski