

SEMINARIUM Z MAGNETYZMU I NADPRZEWODNICTWA

Uprzejmie zawiadamiamy, że w **środe**

15 stycznia 2020 r., o godz.10:00

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

Prof. Victor Nizhankovskiy

Instytut Niskich Temperatur i Badań Strukturalnych PAN, Wrocław

wygłosi referat na temat:

„Magnetic properties of $\text{YBa}_2\text{Cu}_3\text{O}_7$ single crystal in small magnetic fields”

**Magnetic properties of $\text{YBa}_2\text{Cu}_3\text{O}_7$ single crystal in small magnetic fields
V. Nizhankovskiy and K. Rogacki**

Huge number of experimental works was published since discovering the high-temperature superconductivity (HTSC). It seems impossible to find a new field of study or a new method of investigations.

Surprisingly, magnetic properties of HTSC were not investigated in small (less than 1 Oe) magnetic field. This was the first aim of our work. We show that superconductivity in *ab*-plane arises several tenth of K above transition along *c*-axis and obtain the effective thickness of superconducting Cu-O layers.

Many controversial results were obtained in search for the BKT transition in HTSC films and bulk single crystals. We have used a new method - simultaneous measurements of resistivity in *ab*-plane and along *c*-axis. As a result, the existence of BKT state in a narrow temperature interval below T_c was unambiguously established.

This research was published in PHYSICAL REVIEW B 100, 104510 (2019).

Serdecznie zapraszamy
Roman Puźniak / Henryk Szymczak / Andrzej Szewczyk