SEMINARIUM Z MAGNETYZMU I NADPRZEWODNICTWA

Uprzejmie zawiadamiamy, że w **środę**

09 czerwca 2021 r., o godz.10:00

odbędzie się seminarium **on-line (link podany jest na stronie IF PAN)**,

na którym

mgr Sameh Altanany

(Instytut Fizyki PAN)

wygłosi referat na temat:

"Magnetotransport Properties of Nb Films"

We investigate the nature of superconducting (SC) state in thin niobium films, of thickness d ranging from 3.5 nm to 50 nm, sandwiched between amorphous silicon layers to prevent oxidation. Structural evaluation shows that thicker films are polycrystalline, but the thinnest film shows signatures of mixed polycrystalline/amorphous phase. Various properties of the SC state are measured on the films patterned into Hall bar structures, using quantum design measurement system, with perpendicular magnetic field. In particular, we extract activation energy for vortex pinning, the upper critical field, and the point of crossing of resistance isotherms, which may be identified with the transition from superconductor to metallic, normal phase. Negative magnetoresistance is observed at the highest magnetic field for some of the films, while it is absent for others.

Serdecznie zapraszamy

Roman Puźniak
Andrzej Szewczyk
Henryk Szymczak