

SEMINARIUM Z MAGNETYZMU I NADPRZEWODNICTWA

Uprzejmie zawiadamiamy, że w **środę**
2 czerwca 2021 r., o godz.10:00

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

Dr hab. inż. Wojciech Wróbel, prof. PW
Instytut Fizyki Politechniki Warszawskiej

wyłosi referat na temat:

“Oxide ion conductors - from structure to long range transport”

Solid state materials with high ionic conductivity are widely studied as a critical components of various electrochemical devices. Ceramic oxide ion conductors are currently applied in SOFC fuel cells, gas sensors, electrolyzers or oxygen pumps. The long-range transport of oxygen ions in the solid state depends predominantly on the oxide ion vacancy concentration, but also on the distribution of vacancies in the crystal structure, including their ordering and interaction with the cationic and anionic sublattice. In this presentation, I will present research studies on bismuth oxide based compounds, which show both highest known oxide ion conductivity, but at the same time face undesirable phase transitions and instabilities. Wide range of advanced experimental methods and computer modelling were used to study both the long- and short-range ordering of the structure. Changes in the distribution of oxygen ions and the concentration of defects and their influence on ionic transport as well as the mentioned instabilities and phase transitions will be discussed.

Serdecznie zapraszamy

Roman Puźniak
Andrzej Szewczyk
Henryk Szymczak