Title, Name and surname

Dr hab. Łukasz Gondek

Faculty and Department

Faculty of Physics and Applied Computer Science, Department of Solid State Physics.

Keywords.

Structure of solids, Metal-hydrogen systems, Hydrogen storage, Synthesis of functional materials, Thermal stability of alloys and compounds, Corrosion resistance, Magnetism.

Scientific profile.

Research interest of my team covers: synthesis of novel materials (metallic, ceramic, composites); structural characterization by X-ray diffraction (also in low and high temperatures, inert or corrosive atmospheres); investigations of thermal stability of materials including structural phase transitions; synthesis and research of metallic alloys for hydrogen storage and purification; judging potential of hydrogen-storage materials for applications; magnetism and superconductivity.

Further info (eg. equipment): https://www.researchgate.net/lab/Lukasz-Gondek-Lab

Exemplary thesis titles

- Novel materials for solid state hydrogen storage
- Structural stability of amorphous Ti-based alloys
- Magnetocaloric effect in Gd-based compounds
- Hydrogen storage system for marine applications

The form of conducting master's theses

The work on master theses will be based on involvement in research along group members. Then analysis of the acquired data and consolidation of gathered results will take place on regular (weekly) meeting basis. Afterwards, the research will be ready to be presented in form of thesis.

