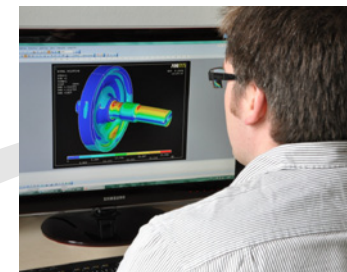


The aim of the Institute of Physics of Materials of the Academy of Sciences of the Czech Republic (IPM) is to elucidate the relation between the behaviour and properties of materials and their structural and microstructural characteristics. Particular emphasis is placed upon research into advanced metallic materials and composites with a metal base in relation to their microstructure and production technique.

The Institute was established in 1955 as a part of the newly founded Czechoslovak Academy of Sciences. Since that time it has been continuously developed to the present day.

The Institute has more than 120 employees at present. More than one third of the staff are scientists (i.e. with a Ph.D. or equivalent degree). A number of Ph.D. students who perform their study at IPM is important. The Institute is divided into three scientific departments and a service department. The scientific departments consist of nine working groups.

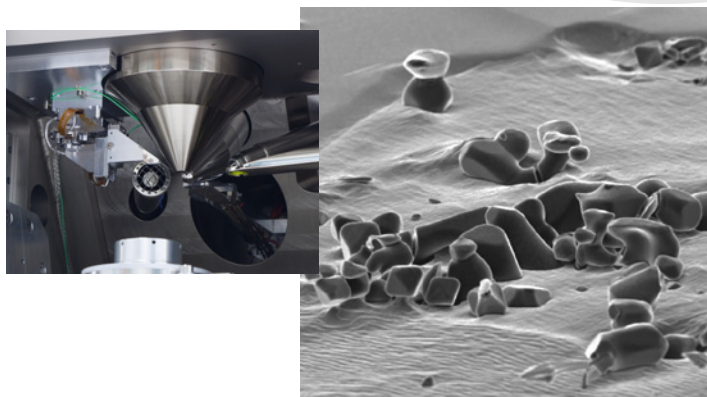
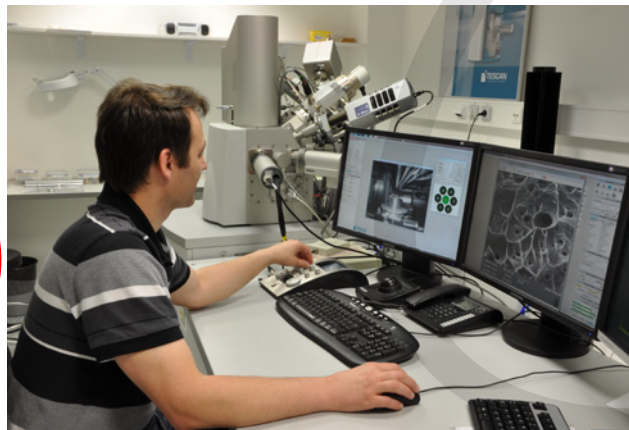
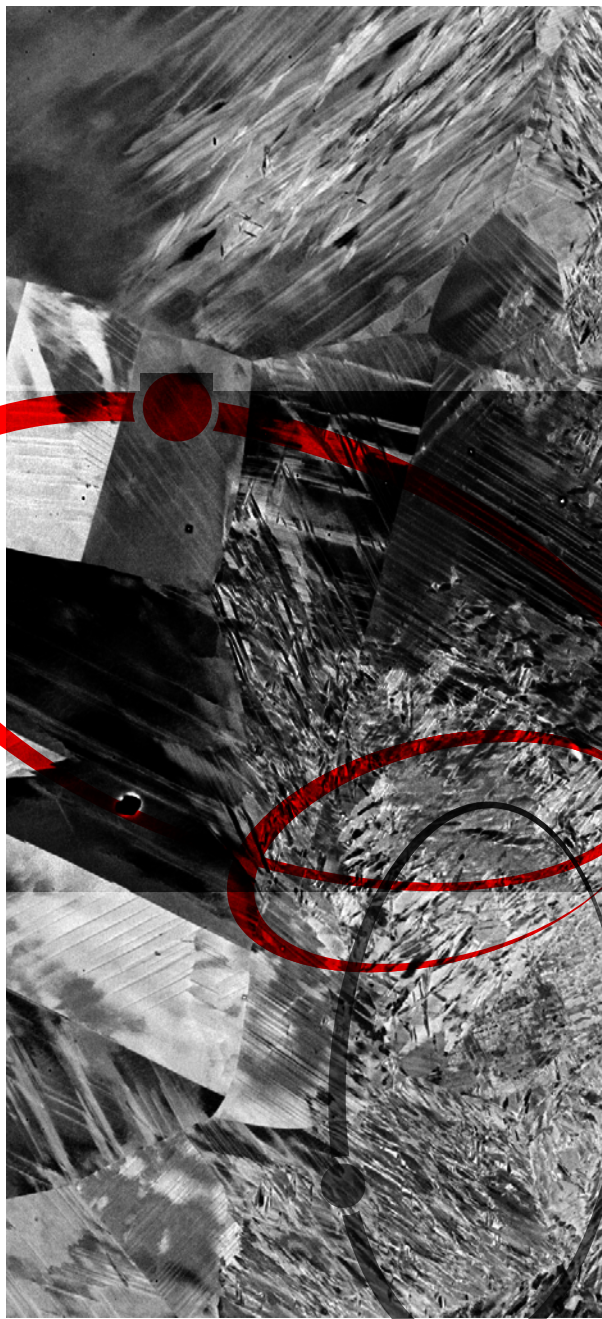


- *Department of Mechanical Properties*  
focuses on the physical nature of processes which occur in metallic materials during creep, fatigue, creep/fatigue, brittle fracture and their combinations in relation to the evolution of microstructure and structure.

- *Department of Structure of Materials*  
studies the structure of materials and selected thermodynamic, diffusion and magnetic properties. The term structure is understood in a broad sense, ranging from atomic bonds, through crystal lattice and its imperfections, the size of crystallites in materials, to the macroscopic dimensions of loaded bodies.

- *Department CEITEC IPM*  
is one of six organization units of the Central European Institute of Technology (CEITEC). The department is focused mainly on study of mechanical, transport and magnetic properties of advanced materials.

The IPM cooperates with many Czech and international industrial companies, research institutions and universities.

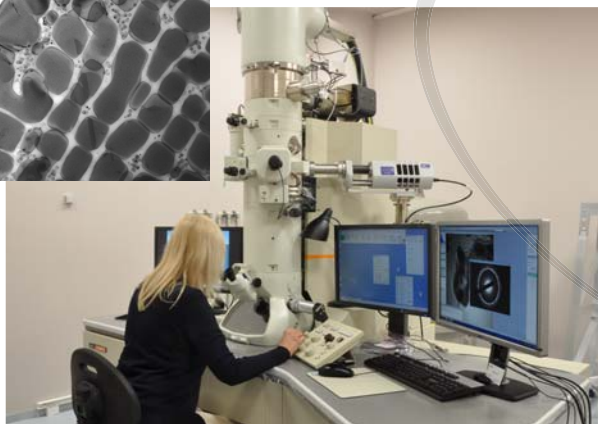
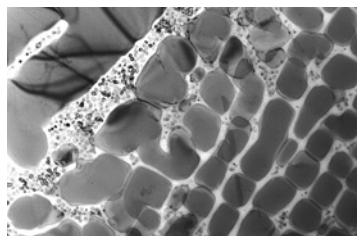




The basic mission of the Institute is to contribute to the understanding of the relation between microstructure of materials in bulk, as well as at surface-level or interfaces and material properties. On this basis it is possible to optimise both the microstructure and material properties and to design advanced materials.

Particularly, the research is focused on microcrystalline, ultrafine-grained materials, nanocrystalline and amorphous materials, intermetallics, superalloy single crystals and polycrystals, advanced steels, advanced magnesium alloys, advanced iron and nickel alloys, shape memory alloys, composite and nanocomposite materials, metal laminates, lead-free solder materials, magnetic semiconductors and half-metallic magnets, magnetic multilayers and transition-metal silicides. The investigated physical properties include relevant mechanical properties (creep, fatigue, brittle fracture) and transport electrical or magnetic properties.

Hi-tech experimental machines, laboratory equipment, and computer and software facilities from world-class producers are available at the Institute. These, together with modern experimental techniques and advanced computational modelling of those studied phenomena, are used for high-level research on up-to-date materials.



## Director

prof. RNDr. Ludvík Kunz, CSc., dr. h. c.

## Deputy Director

RNDr. Milan Svoboda, CSc.

## Department of Mechanical Properties

doc. RNDr. Karel Obrtlík, CSc.

- Advanced High-temperature Materials Group  
prof. RNDr. Antonín Dlouhý, CSc.
- High Cycle Fatigue Group  
doc. Ing. Pavel Hutař, Ph.D.
- Low Cycle Fatigue Group  
Ing. Jiří Man, Ph.D.
- Brittle Fracture Group  
prof. Ing. Ivo Dlouhý, CSc.

## Department of Structure of Materials

Ing. Oldřich Schneeweiss, DrSc.

- Structure of Phases and Thermodynamics Group  
RNDr. Aleš Kroupa, CSc.
- Electrical and Magnetic Properties Group  
Mgr. Martin Friák, Ph.D.

## Department CEITEC IPM

doc. Ing. Luboš Náhlík, Ph.D.

- Multiscale Modelling and Measurements of Physical Properties  
doc. Ing. Roman Gröger, Ph.D.
- Advanced Metallic Materials and Metal Based Composites  
doc. Ing. Jan Klusák, Ph.D.
- Project Team  
Ing. Ondřej Bureš



## address:

Institute of Physics of Materials AS CR  
Žižkova 22  
616 62 Brno  
Czech Republic

## secretariat:

phone: +420 541 212 286  
e-mail: [secretar@ipm.cz](mailto:secretar@ipm.cz)  
web: [www.ipm.cz](http://www.ipm.cz)  
data box ID: h33nsbv

## GPS:

49°12'26.633"N  
16°35'22.942"E

