

Laboratory of Nanofibre Production Machines

Principal goals and activities

- Research, development and optimisation of novel structures for nanofibre production machines.
- Research and development of novel machines and operating lines for production of linear, planar and spatial nanofibrous structures.

General focus of laboratory

- Design of machines for production of nanofibres and nanofibrous structures.
- Theoretical and experimental analyses of the fibre spinning process.
- Simulation of electrostatic field during the fibre spinning process.
- Simulation of machine behaviour using appropriate mathematical models.
- Investigation of the fibre spinning process using a high-speed camera.

Specific instruments and outcomes

- Prototypes and functional models of machines for production of nanofibre and nanofibre structures.
- Equipment for manufacturing of core/shell nanofibres.
- Equipment for manufacturing of core nanofibrous yarn.
- Electrodes for DC and AC fibre spinning process.
- Filters with nanofibre layers.

Offer of technology and expertise

- Research and development of machines and equipment for production of nanofibre and nanofibrous structures.
- Analyses and optimisation of electrostatic field strength during the fibre spinning process.
- Consultancy and assistance in the field of design of machines for production of nanofibre and nanofibrous structures.
- Development of electrodes for DC and AC fibre spinning process.

