



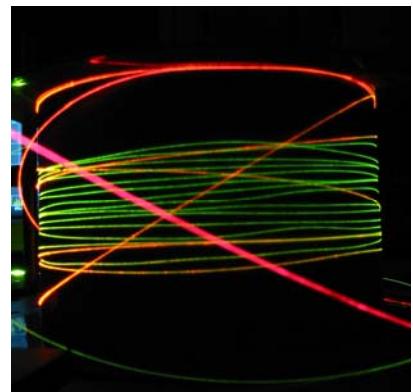
Optics and Molecular Materials Laboratory

Department of Electrical and Communications Engineering

Department of Engineering Physics and Mathematics

Laboratory of Optics and Molecular Materials was founded in its present form in 2005 as a joint collaboration between the departments of Electrical and Communications Engineering and Engineering Physics and Mathematics. The laboratory is located in the Campus of Otaniemi at the MICRONOVA research centre and in the Physics building.

The laboratory hosts four research groups: Academy professor Olli Ikkala's group on *Nanopolymers* which is a partner in the *Bio- and nanopolymers* consortium, one of the Centres of Excellence in Research of the Academy of Finland, professor Matti Kaivola's *Nano-optics and Laser Physics Group*, professor Ilkka Tittonen's *Microsystems and Atom Optics Group*, and docent Hanne Ludvigsen's *Fiber-Optics Group*.



The laboratory participates in the teaching of micro- and nanotechnology, optics and undergraduate physics. It is also one of the founders of the international Master's Program on Micro- and Nanotechnology at TKK.

RESEARCH AND EXPERTISE

The research topics of the laboratory include Nanostructured polymers and self-assembly, Electron microscopy, Nano-optics, Optical coherence theory, Atom optics, Laser physics and applied photonics, Fiber optics, Microacoustic devices, and Microsystems.

STAFF

The staff includes 3(2) professors, 4(2) senior researchers, 7(3) post-doctoral researchers and 31(20) postgraduate students. The numbers in parentheses refer to persons working in Micronova building.

ACADEMIC DEGREES IN 2005:

In 2005: 3 Doctoral degrees, 2 Licentiate's and 3 Master's degrees were completed.

MAJOR FACILITIES AND EQUIPMENT

Transmission electron microscope for soft materials, Scanning optical microscopes, Femtosecond laser system, Tuneable Ti:Sapphire laser system, Scanning optical interferometers for imaging surface acoustic waves, Rf-electronics characterization equipment.

CONTACT PERSON(S):

Acad. prof Olli Ikkala (olli.ikkala@tkk.fi) tel: +358-9-451-3154
Prof. Matti Kaivola (matti.kaivola@tkk.fi) tel:+358-9-451-3151
Prof. Ilkka Tittonen (ilkka.tittonen@tkk.fi) tel:+358-9-451-2287
Doc. Hanne Ludvigsen (hanne.ludvigsen@tkk.fi) tel:+358-9-451-2282

MORE INFORMATION: <http://omm.tkk.fi>