



Laboratory of Microsensor Structures and Electronics
 University of Ljubljana, Faculty of Electrical Engineering, Ljubljana, Slovenia
<http://lms.fe.uni-lj.si/>

Main topics of interest

Laboratory of Microsensor Structures (LMS) is involved in research and development of silicon devices, sensors and microelectromechanical systems (MEMS). Internal properties and external characteristics of semiconductor devices are studied using analytical and computer modeling. Semiconductor process technology available in LMS allows investigations of basic semiconductor processes (mask design and fabrication, photolithography, diffusion, depositions, cleaning, etching, micromachining etc.) and development of active and passive discrete semiconductor devices (photosensors, pressure sensors, temperature sensors, radiation sensors, sensors for nuclear physics, 3D structures etc.). Technological research is supported by measurement equipment and characterization techniques, aided by process and device modeling. LMS offers complete research and development services in the field of silicon semiconductor devices and MEMS, from theoretical analysis to development of test structures and devices, their characterization and optimization. Partial R&D services are also available such as modeling (process & device simulation), characterization (various measurements and testing), single semiconductor processing steps development (lithography, diffusion, metallization, depositions, micromachining etc.) and similar.

The main research fields include:

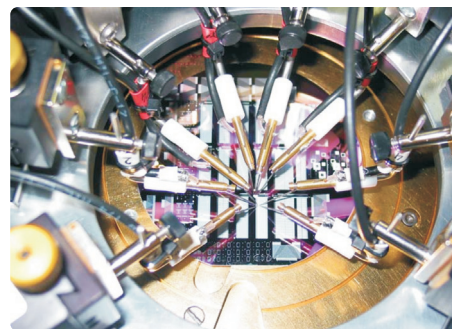
- semiconductor physics & device modelling;
- semiconductor technologies & devices;
- micromachining;
- material and device characterization;

LMS offers complete research and development services in the field of silicon semiconductor devices and MEMS, from theoretical analysis to development of test structures and devices, their characterization and optimization.

Contact: Prof. dr. **Slavko Amon**, head of the department; slavko.amon@fe.uni-lj.si



Silicon monocrystalline cantilevers of different shape, 15µm thick.



MIDEM

Society for Microelectronics, Electronic Components and Materials

<http://www.midem-drustvo.si/>



Main topics of interest: Society for Microelectronics, Electronic Components and Materials - MIDEM - located in Ljubljana, Slovenia is an international society integrating EXPERTS from all over the world, working in the field of microelectronics, electronic components and materials.

The main activities of MIDEM are :

1. Publishing of scientific " Informacije MIDEM ".

<http://www.midem-drustvo.si/journal2004.htm>

2. Organization of International Conference on Microelectronics, Devices and Materials - MIDEM Conference
 3. Organization of professional seminars, workshops and colloquia and publishing activity covering the field.
- Personnel: All experts in the field of microelectronics, electronic components and materials are invited.

Contact person: Prof. **Slavko Amon** slavko.amon@fe.uni-lj.si

Electronic ceramics department

Jozef Stefan Institute, Ljubljana; Slovenia

<http://dolomit.ijs.si/k5/>

Main topics of interest:

The Electronic Ceramics Department is involved in basic and applied research and education in the field of materials that are closely related to applications in electronics. The department is actively involved in ferroelectric ceramics, conductive oxides, materials for fuel cells and materials for thick-film technologies. The department's research staff have experience in a wide range of processing techniques and many other ceramic technologies.

The main research fields of the Electronic Ceramics Department include: Materials; bulk ceramics; thick films; thin films; nanopowders; ceramic technologies; thick-film hybrid circuits; characterization

Education activities:

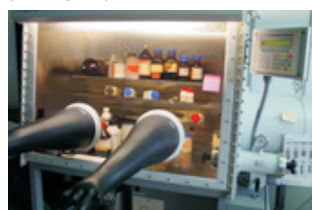
SICER - Centre of Excellence

<http://dolomit.ijs.si/k5/ANG/Projects/Sicer.htm>

CERAMOS - Marie Curie Training Site

<http://dolomit.ijs.si/k5/ANG/Projects/Ceramos.htm>

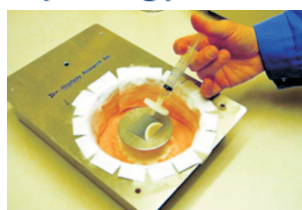
Thin Films and Nanopowders by Solution Synthesis - Equipment (examples):



DryBox: Braun Labmaster 130.
 For handling sensitive powders in an oxygen-free, moisture-free atmosphere



Laboratory glass equipment for work in inert atmosphere (manifold for inert gas, adapted standard glassware)



Spin coater: Headway Research LS510-PCR, Chemat technology KW-4A; Rotation speed: 1000 - 8000 rpm



Sputtering system 5Pascal:
 For magnetron sputtering of conductive materials (Au, Pt, Cr, Cu, Ti etc.) and glow discharge plasma cleaning of surface.