

**Studentenseminar Mikrosystemtechnik und Nanotechnologie # 2218**

**Topics:**

- (3) Current problems in the proceeding of electronic circuit integration
- (5) Moore's law: a trend without any limit?
- (6) Mounting of laser devices: self-aligning versus fine-placing techniques
- (11) Technological implementation of buried semiconductor DFB lasers
- (14) Macro-, micro- and nanospectrometers: fundamentals, fabrication, comparison
- (18) Foundations and fabrication of fibre Bragg gratings
- (26) Design aspects of vertical cavity 1.55 $\mu$ m filters (relation to practicum Opto I)
- (35) Nanotechnology: fabrication - characterization and perspectives (see difference to no. 59)
- (39) Yield aspects in the fabrication of optoelectronic devices
- (54) Flip Chip technology in Optics
- (55) Comparison of different lithography techniques: resolution, processing speed and costs
- (56) The LIGA technique: technological details, examples and perspectives
- (57) MEMs and MOEMs for sensing applications
- (58) Amorphous and crystalline thin-film technology: fabrication and characterization
- (59) Nanotechnology: foundations and applications (see difference to no. 35)
- (60) From MEMS to NEMS
- (61) Flip Chip technology in Electronics
- (63) Laser facets: Cleaving versus fabrication by dry etching
- (64) Basics of anisotropic etching of crystalline semiconductor materials
- (65) Mounting of semiconductor lasers devices: the role of the heat sink
- (66) Packaging of optical Microsystems: foundations and fabrication technologies
- (67) Micro and Nano fibrils: foundations, fabrication processes and applications
- (68) Smart personal environments: potential of nanosensors and nano actuators
- (69) Air bag sensors: foundations, fabrication processes and applications
- (70) Introduction into motion and orientation sensors
- (71) Nanoimprinted Fabry Pérot Filter arrays for Nanospectrometers
- (72) Why wet-chemical etching strongly depends on the crystal orientation?
- (73) Introduction into cryoetching technologies
- (74) Similarities and differences in LIGA and Nanoimprint Technologies
- (75) Macro-, Micro- and Nanofilters for fluids: Size and Species dependencies (particles, bacteria, virus, ions)
- (76) Desalination technologies on the basis of nanotechnologies
- (77) Nanotechnology against water stress
- (78) Comparison of different intelligent windows: electrochrome vs. micromirror array technologies
- (79) Overview of different imprint technologies
- (108) Direct laser writing