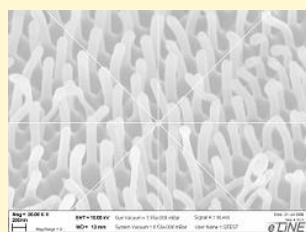


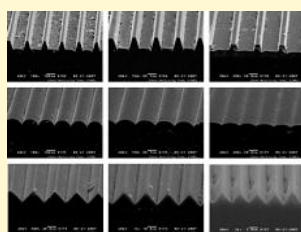
**Staff:** 8 researchers, professors, engineers and technicians  
13 Students, post-docs & temporary staff

## Research topics in Micro and NanoSystems

- Injection molding and packaging for the articles adapting nano/micro features
- Continuous forming process for plastic films with nano/micro surface reliefs
- Micro patterned mold machining technology
- Laser applications for micro-nano machining/patterning



*Injection molded nano surface reliefs with high aspect ratio*



*Injection molded substrate with micro surface reliefs*



*Ultra-precision roll mold machining system*



*Micromachining system using femtosecond and UV laser*

## Technology

- Injection molding of articles larger than 4" size patterns: less than 1um, aspect ratio: higher than 3
- Continuous forming of wide film over 2m surface reliefs: less than 10um
- Development of Micro Patterned Mold Machining Technology for Display Industry
- Sub-micron patterning on length of above 100 mm with laser application

## Design, simulation & characterization tools

- Femtosecond Laser Machining System
- Beam Profile Measuring Device
- Microscopy, SEM, Confocal
- Electrical injection molding machine (50, 550 ton)
- Optical lens design, ZEMAX
- Optical simulation, SPEOS
- Injection molding analysis, SIMPOE MOLD
- CFD, FIDAP

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