



# The Nano-Fabrication Center

## Dr. Erez Golan

Head of the Nano-Fabrication Center

The Nano-Fabrication Center at Ben-Gurion University of the Negev is a facility serving the academy, industry, and government. The Nano-Fabrication Center has been operating since February 2005, when Fab1 was opened. Today it includes three fabrication areas and two nanolabs.

The Nano-Fabrication complex incorporates state-of-the-art R&D and prototype fabrication infrastructure for Nano/Microelectronics, BioMEMS, BioChip, Microfluidics, Multielectrode array, Nanophotonics and Optoelectronics and Nano/Micro systems (MEMS).

## Equipment and Infrastructure

The Nano-Fabrication Center consists of three independent clean room sub-areas (Fab1, Fab2, Fab3) with class 100 to 10000 and two Nanolabs: the Electrical and Optical Characterization of Devices NanoLab and the Packaging NanoLab (including wafer/chip bonding, wire bonding, die saw and more).

The advanced cutting-edge nano-fabrication equipment used in all our labs and Fabs, enables us to offer comprehensive services, including: Thin film deposition; etching; lithography; bonding; baking; dicing and polishing; mask fabrication and wafers cleaning; and devices analysis and characterization.

The Nano-Fabrication Center also provides the unique possibility of HAR etching on sapphire, glass, silicone and other substrates; making line/space and holes with a diameter less than 10nm; producing nanowires; design and fabrication of reflective and antireflective surface structures and coating, blazed grating and plasmonic structures, and high quality optical micro disk/ring structures; precision nanolithography, and more.



## Our Services

- Process design
- Process development
- Process integration
- Process characterization
- Full high-resolution litho service (with resolution of less than 10nm)
- Small volume production service (from concept to final product)
- Optic, thermal, and electrical simulations and tolerance analysis

## Advantages and added value of working with BGU Nano-Fabrication

- **Accumulated knowledge and experience:** We have the know-how, accumulated through experience and many successful projects in multidisciplinary fields
- **Flexibility:** Operational flexibility and variability in the development and fabrication process
- **Time-to-Market:** Short cycle timeframe from concept to production
- **Interactivity:** A collaborative and transparent working process at all stages

## Selected clients

**Defense:** Elbit Systems – Elop, Rafael Defense Systems

**Semiconductors:** Applied Materials, Orbotech, KLA-Tencor, Jordan Valley Semiconductors, Nova Measuring Instruments

**Other:** Qlight Nanotech, SanDisk, Thales CMT Medical Technologies, KiloLambda, Acktar