



# DTU Danchip



DTU Danchip is the National Center for Micro- and Nanofabrication in Denmark and is owned by and located at the Technical University of Denmark (DTU). DTU Danchip operates and maintains advanced processing equipment within 1350 m<sup>2</sup>, class 10-100, ISO 9001-certified, open access, pay-per-use cleanroom facilities.

DTU Danchip has built a versatile micro- and nanofabrication platform in order to shape a wide range of materials with structures down below 20 nanometers on substrates up to 8" in size. We provide a comprehensive and expanding selection of state-of-the-art process equipment for lithography, etching, thermal processing, thin film deposition, wafer cleaning, advanced packaging and characterization.

DTU Danchip has currently over 250 registered users active in education, research, development, prototyping and small scale production. More than 40 staff members are dedicated to quality and service. We offer know-how and services within all aspects of cleanroom process technology and device fabrication.

DTU Danchip is located on the campus of the Technical University of Denmark in Lyngby which includes Center for Electron Nanoscopy (CEN) with advanced characterization equipment such as Transmission Electron Microscope (TEM), Scanning Electron Microscope Focused Ion-Beam (SEM-FIB) and dual beam Electron Back-Scatter Diffraction Microscope.

DTU Danchip is in Lyngby just north of Copenhagen, 30 minutes from Copenhagen Airport Kastrup.

To access our cleanroom facility, contact us for further information at [sales@danchip.dtu.dk](mailto:sales@danchip.dtu.dk).

## Equipment

### Substrates

Single chips  
2" (50 mm)  
3" (75 mm)  
4" (100 mm)  
6" (150 mm)  
8" (200 mm)

### Lithography

Electron beam lithography (20 nm)  
Deep Ultraviolet Stepper technology (220 nm)  
Nano-imprint lithography (50 nm)  
UV lithography (1  $\mu$ m).

### Material Deposition

Plasma-enhanced, e-beam evaporated and sputtering of: metals, dielectrics, III-V alloys, polymers, magnetic materials, graphene and carbon nanotubes. Electroplating, polymer injection moulding.

### Etching

Dry and wet-etching of metals, dielectrics, III-V alloys, polymers.

### Thermal processing

Annealing, doping, oxidation

### Characterisation

Scanning Electron Microscopy  
Atomic Force Microscopy  
Ellipsometry  
Dektak Stylus Profilometry  
3D Optical Profilometry  
Secondary Ion Mass Spectroscopy  
X-ray Photoelectron Spectroscopy  
Photoluminescence mapping  
Drop-Shape analyzing  
Probe stations

### Back-End processing

Wire and die bonding  
Dicing, sawing  
Packaging

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