

POLYTEKNIK 



FLEXTURA® PVD PLATFORM

WHEN THIN FILM MATTERS

POLYTEKNIK 

FLEXTURA® PVD PLATFORM

MOST FLEXIBLE 300mm PLATFORM

DRIVEN BY UNIQUE PROCESSES

- High temperature deposition (1000°C)
- Epitaxial growth
- Highly ionised sputtering
- Glancing angle deposition
- Combined evaporation and sputtering
- Integrated advanced thin film analysis
- Single wafer and batch processing
- Manual or fully automated loading cassette-to-cassette
- ESC with backside gas

FLEXIBILITY AND RELIABILITY IS THE KEY

- Scalable capacity from medium to high volume production
- Safe and reliable handling of wafers/carriers up to 300mm
- Strong reliable 24/7 production tools
- Fully automated process control with advanced data logging
- SECS/GEM, MES integration optional
- CMOS compatible



CHOOSE SUBSTRATE LOADING MODULARITY OF THE FLEXTURA®

BATCH SYSTEM



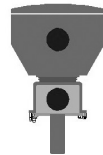
Start from a highly flexible standalone system

SINGLE SUBSTRATE LOAD LOCK



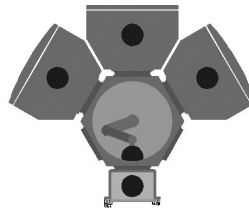
Add additional processes and analytics

CASSETTE LOAD LOCK



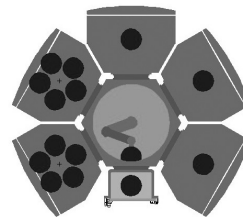
Automate your deposition process

CLUSTER SYSTEM



Save valuable clean room space

ADD PROCESS MODULES WITH INCREASING CAPACITY



Without compromising flexibility!

PROCESS MODULES

FLEXIBLE PRODUCTION

FLEXTURA® SPUTTER

The **Flextura® Sputter** modules can be equipped with single or multiple magnetrons for direct planar or confocal sputtering.

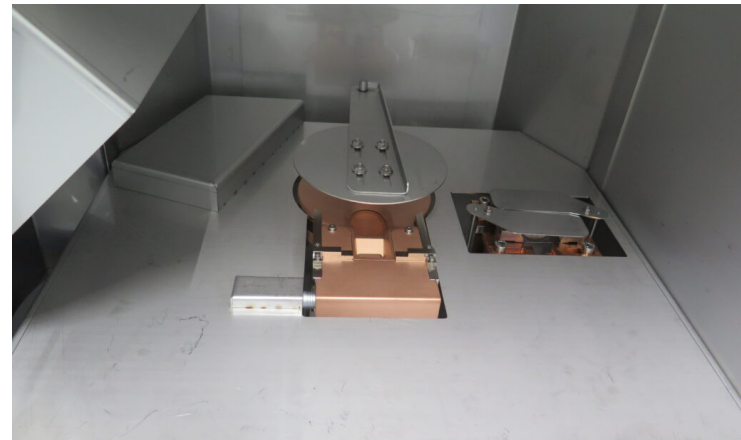
- Direct planar sputter module
- Confocal sputtering
 - Multiple magnetrons
 - Multilayers in one module
 - Co-sputtering
- Linear sputtering
 - Single or dual magnetrons
 - Planar or rotatable setup
- HiPIMS sputtering module
 - High aspect ratio metallisation
 - Layer property tuning
- DC, pDC, RF, and bipolar magnetron sputtering
- Reactive and non-reactive sputtering

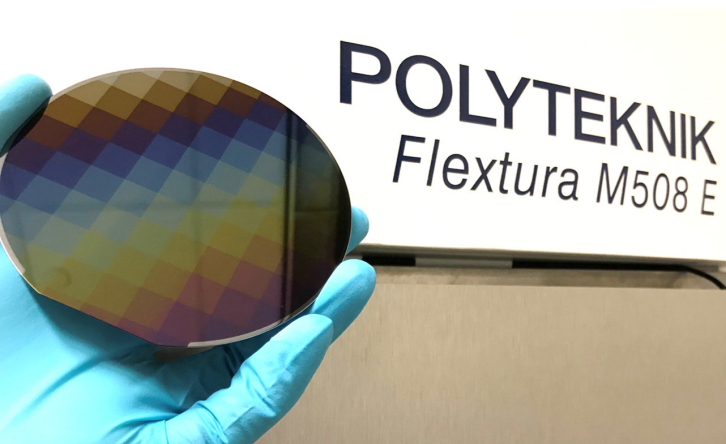
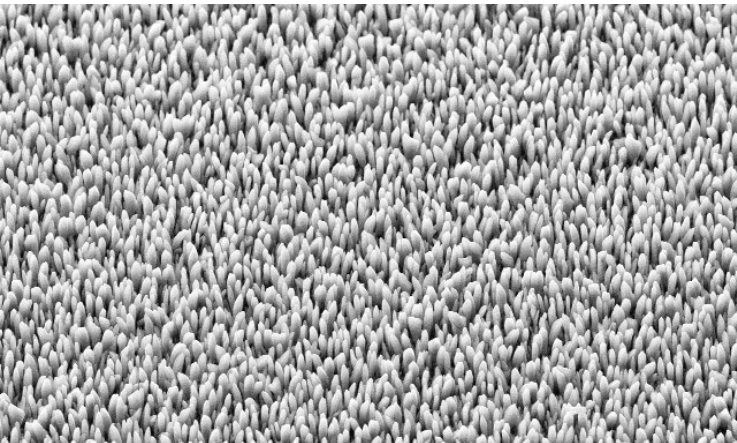


FLEXTURA® EVAPORATOR

PolytechnikAS has delivered variously sized evaporation systems for both high-end industry and university R&D. A combination of highly skilled process, software and mechanical engineers secures you the most optimum evaporation solution, including:

- E-beam evaporation
- Thermal evaporation
- Glancing angle deposition (GLAD)
- Ion beam assisted deposition (IBAD)





FLEXTURA® GLAD

The **Flextura® GLAD** module is a production proven glancing angle evaporation module for industry scale volumes with fully automated substrate handling from cassette. Fully compatible with standard top-down processing ensuring fast and direct integration with complementary processes like degas, etch or sputtering.

- Proven up to 200mm diameter substrates
- Rotation: 0-40 rpm, tilt: 0-180°, resolution 0.1°
- GLAD stage with water cooling, ESC, or pneumatic chuck
- Special ebeam crucible with 12x60cc pockets
- Automatic pellet feeder option
- Low base pressure <5E-8 mbar
- SECS/GEM, MES direct SQL server logging
- CMOS compatible

PLATFORM HIGHLIGHTS

- Process frame for epitaxial growth of thin films at elevated temperatures up to 1000°C
- Glancing angle deposition at wafers in mass production scale
- Dynamic in-situ feedback control by PEM or RGA in reactive sputtering
- Electrostatic chuck (ESC) with backside gas for substrate cooling or heating, RF/DC bias option
- Remote plasma sputtering
- Plasma etch or pre-clean
- Market leading process software technology for accurate real time control of deposition

IN-SYSTEM DEPOSITION AND CHARACTERISATION

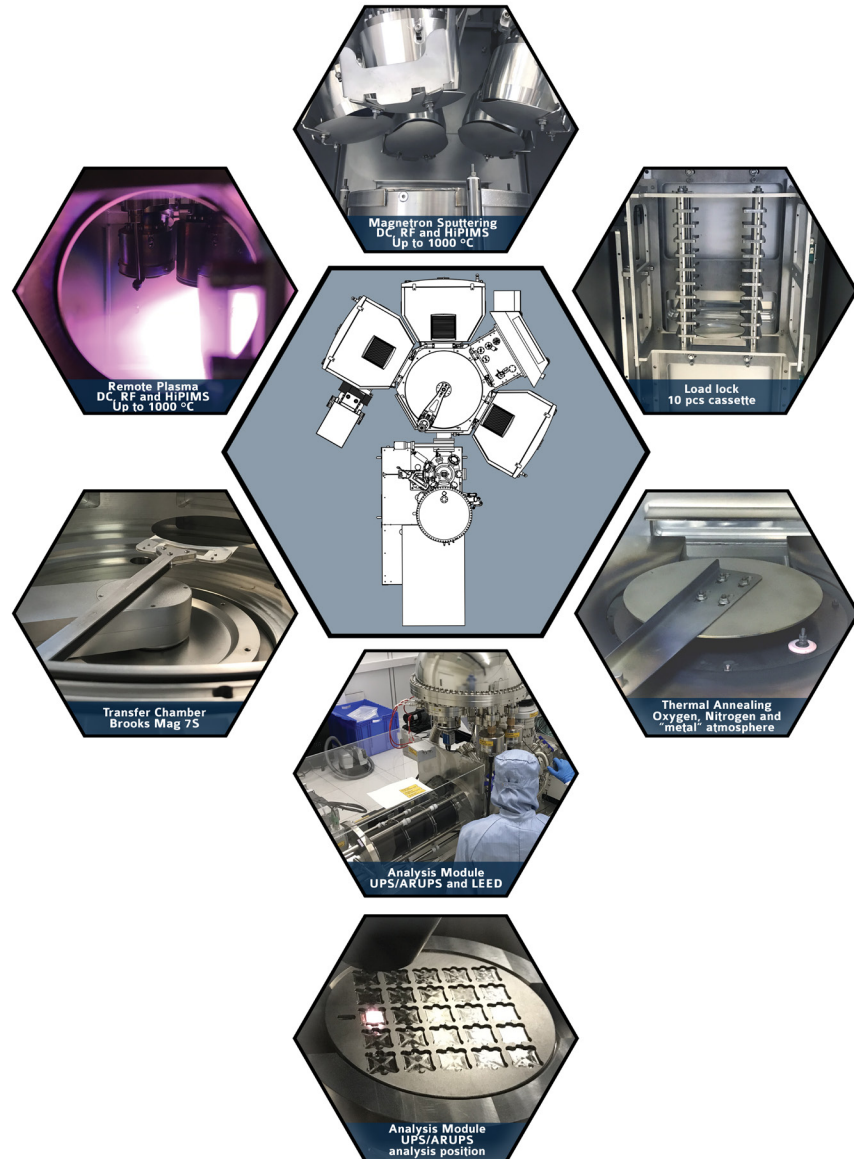
FASTER FROM DEVELOPMENT TO PRODUCTION

Connect in-system analysis to your Flextura® PVD Cluster, load your cassette, set the process flow and let the system handle deposition and analysis automatically. The Flextura® platform combined with the experience, flexibility, and collaborative approach of Polyteknik AS makes it happen – latest confirmed in an application driven research tool delivered to University of Oslo investigating new and existing wide bandgap materials.

CHARACTERISATION MODULE EXAMPLES

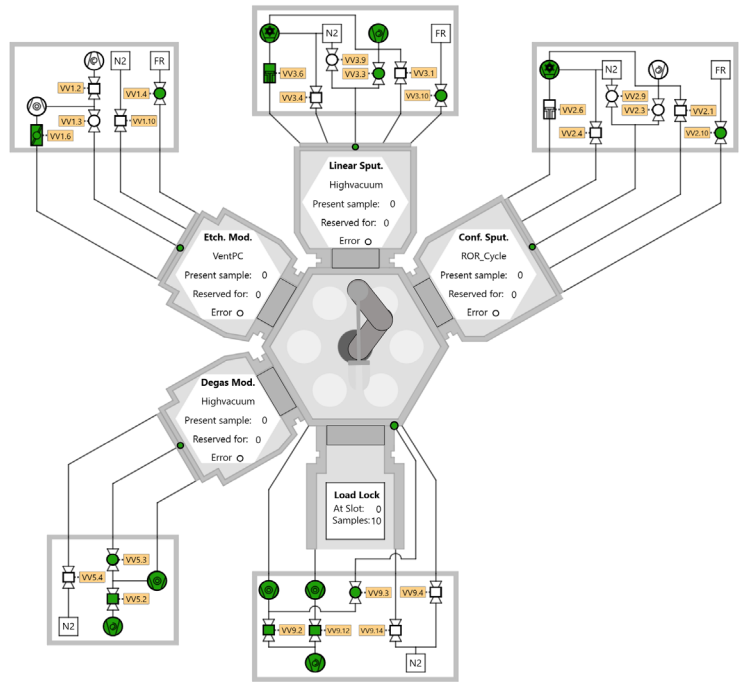
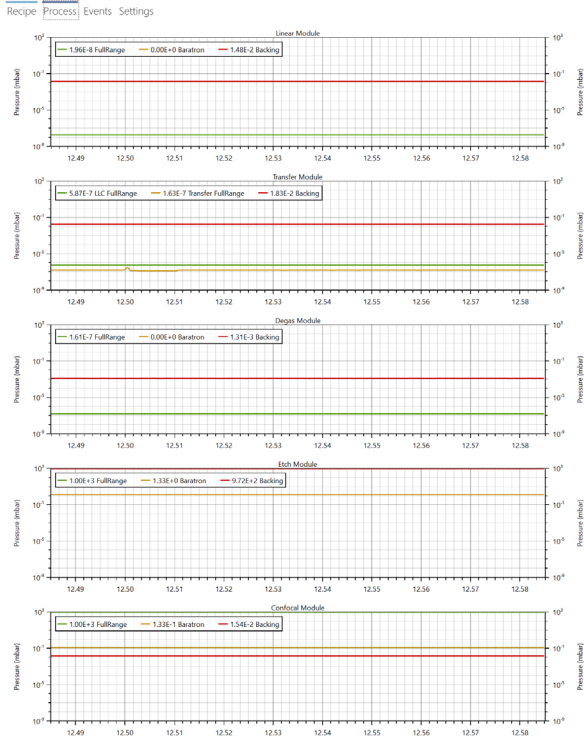
XPS/UPS - SEM - EDX - XRD - RHEED

- Smarter and faster research development
- Increased R&D throughput, reliability, and quality
- Fast process optimisation by parameter scanning and tuning
- More reliable and repeatable experiments
- More time to plan, analyse, discuss, and collaborate
- Bridging process development to volume production



MODULAR SOFTWARE PLATFORM

UNIQUE PROCESS CONTROL WITH CRYOSOFT



Generic in-house developed software

Recipe based processing

Save, load, and edit recipes

Multilayer or multiprocesses

Individual or batch recipe

Multiple user levels

Fully automatic or semi-automatic mode

Advanced datalogging of all parameters

Remote system monitoring or operation



WHO ARE WE

Polyteknik AS is a PVD equipment manufacturer with an innovative and best service approach. With more than 25 years in business, a global reference list, and an excellent platform of technology, Polyteknik AS has turned to be an appreciated partner in the thin film industry.

WHAT DO WE DO

The portfolio of platform systems ranges from small scale R&D to high volume or large area deposition systems. Polyteknik AS covers several deposition processes including sputtering, evaporation, and varieties of these. At Polyteknik AS you will meet a dedicated team interested in a strong co-operation towards the best solution.

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