

## CLEAN ROOM

- ❑ 500 m<sup>2</sup>, ISO 5-8
- ❑ 100 mm (4") Wafer line
- ❑ Devices, materials and processes for
  - ✓ Microelectronics
  - ✓ Sensors and microsystems
  - ✓ Photovoltaic and optoelectronic devices
  - ✓ Graphene technology

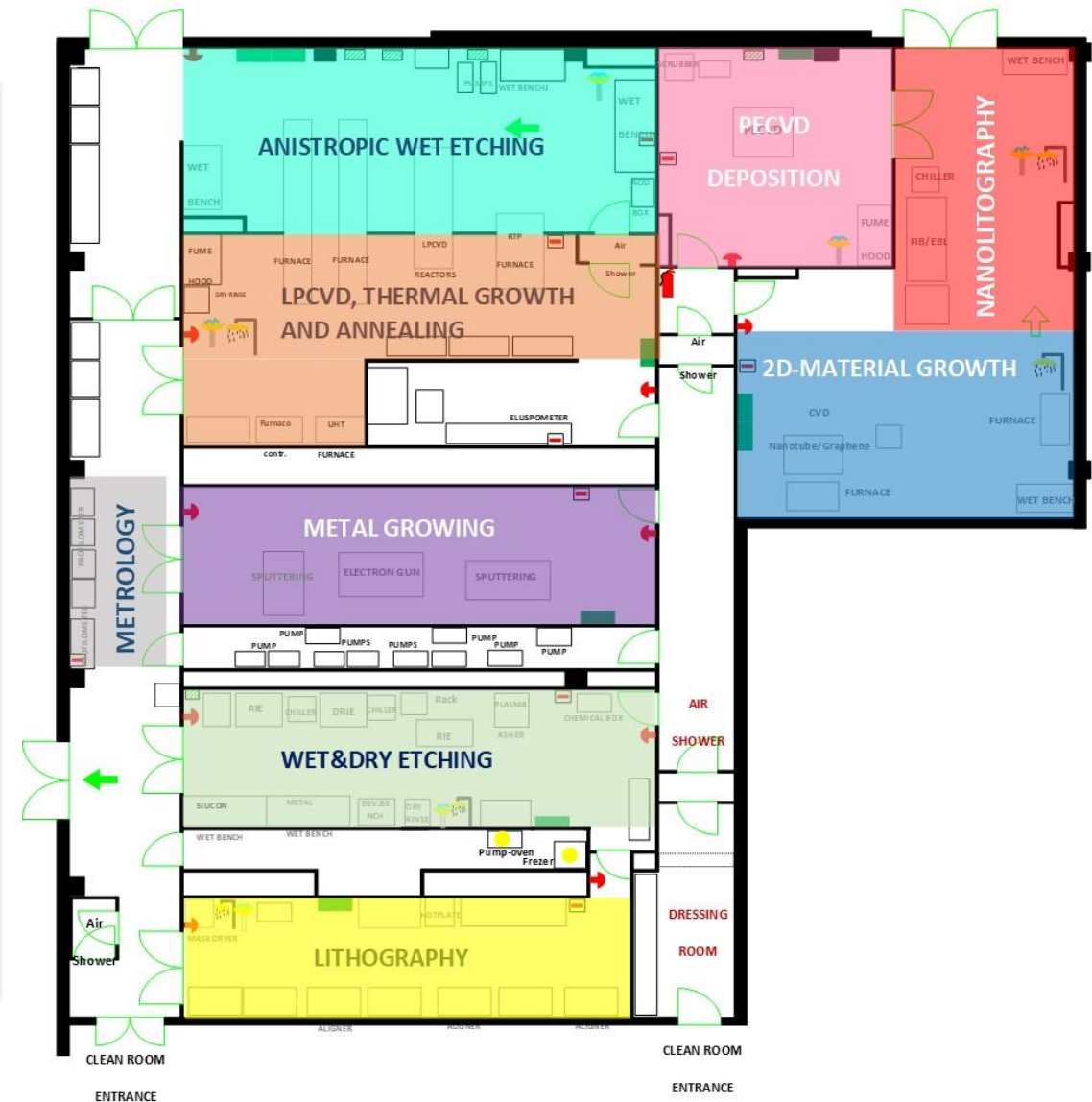


## CLEAN ROOM LAYOUT

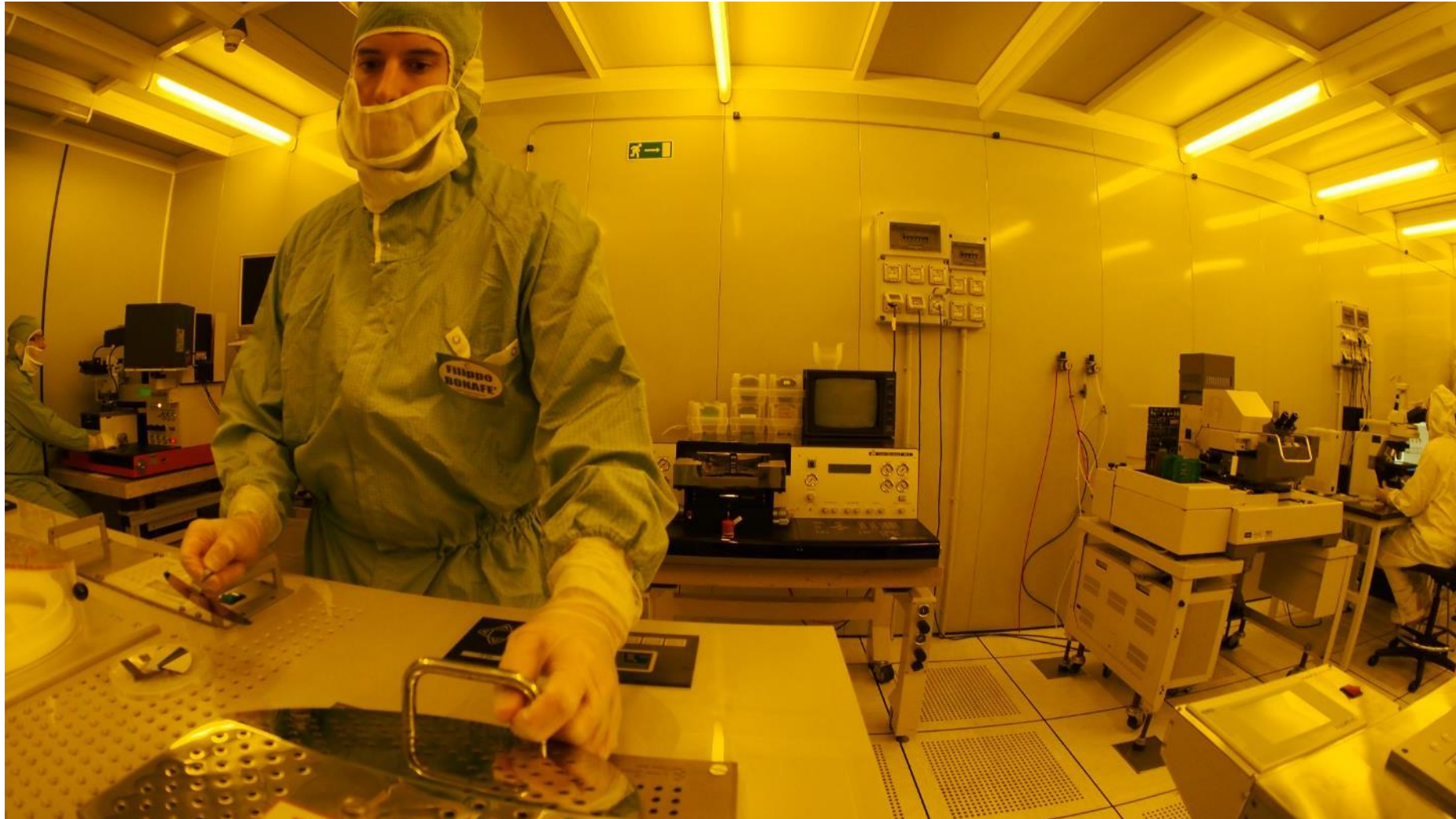
### CLEAN-ROOM FACILITIES

- Si and SiC thermal processes
- LPCVD and multichamber PECVD reactors
- Hot-wall and cold-wall CVD reactors
- Sputtering and evaporators
- Reactive Ion Etchers (RIE) and Deep RIE for Si and Silicon oxide
- Medium and high energy ion implanters
- Rapid Thermal Process systems
- Front and front-to-back side mask aligner
- Soft nanoimprint system and replication tools
- Wet anisotropic silicon etching (KOH, TMAH)
- Wafer bonder (anodic, fusion, SU-8, and glass frit)
- Wafer dicing and wire bonding system
- ZEISS CrossBeam 340 FIB/SEM with Raith EBL

500 m<sup>2</sup> (250 m<sup>2</sup> ISO 5) MEMS and CMOS Clean-Room

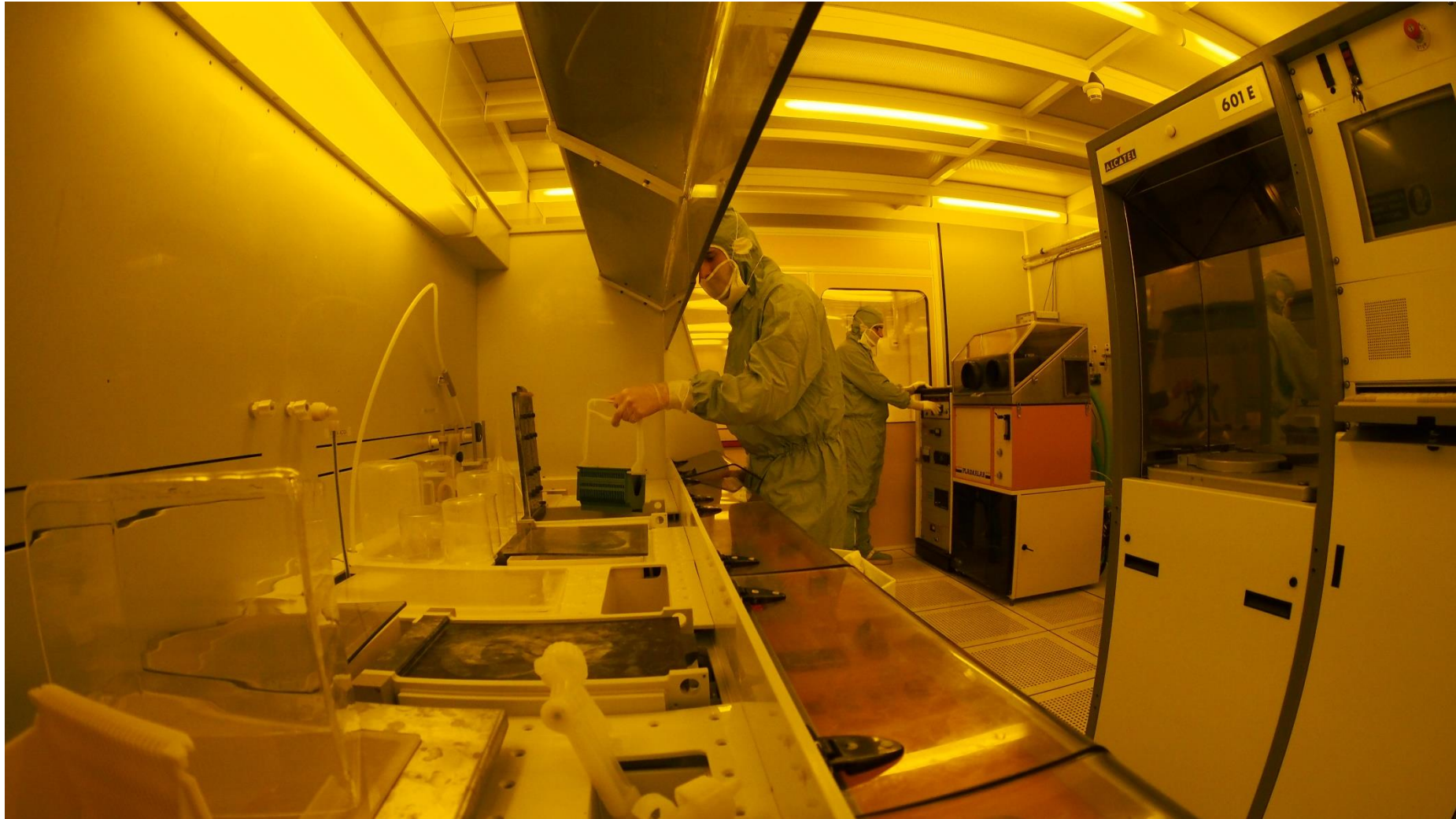


## CLEAN ROOM - LITHOGRAPHY





## CLEAN ROOM – WET AND DRY ETCHING



## CLEAN ROOM – METAL DEPOSITION





## CLEAN ROOM – GROWTH AND ANNEALING





## CLEAN ROOM – PECVD DEPOSITION





## CLEAN ROOM – GRAPHENE GROWTH





## CLEAN ROOM – NANOLITHOGRAPHY

