GEMaC

Groupe d'Étude
de la Matière Condensée

DIAMOND PLASMA CVD

The DIAM team owns two reactors for thin layer diamond fabrication. The growth method is chemical vapor deposition (CVD) assisted by microwave plasma.

View on the clean room and the PLASSYS and MATERIA reactors - room of the DIAM team

Reactor 1

- CVD reactor assisted by microwave plasma (MPCVD) from the MATERIA company
- Gas pannel INSTRUFLUID for phosphorus and arsenic doping in metalorganic vapour phase (MOCVD) and deuteration

Specifications :
- temperature range: 450-1300 °C
- pressure: 10-100 mbar
- growth speed: 0.01 à 4 µm/h

Reactor 2

- Industrial reactor PLASSYS BJS 150 CVD assisted by microwave plasma (MPCVD)
- Dedicated to phosphorus doping of diamond in metalorganic phase (MOCVD)

Specifications :
- temperature range: 600-1100 °C
- Pressure: 10-300 mbar
- Growth speed: > 5 µm/h