

The logo for GEMaC features the text 'GEMaC' in a bold, sans-serif font. The letters are dark grey. Behind the text, there are several thin, light grey lines that curve and sweep across the page, creating a sense of motion or a stylized background. The lines are more dense around the letters and become sparser towards the edges.

# 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

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- CVD reactor assisted by microwave plasma (MPCVD) from the MATERIA company
- Gas panel 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  $\mu\text{m}/\text{h}$

## Reactor 2

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- 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  $\mu\text{m}/\text{h}$

