



UMR7647

Palaiseau, December 2018

Post-doc position at LPICM, Ecole polytechnique

“Epitaxial growth of GaAs by PECVD”

Mission

Qualification of a new prototype system design for the PECVD of III-V materials

Activities

- Participation in the installation of the deposition system in cooperation with the engineers and technicians of the laboratory.
- Conformity testing of the system
- First trials of homoepitaxial deposition of thin films of III-V semiconductors on crystalline wafer substrates
- Characterization of thin films to guide subsequent process refinement
- Basic numerical simulation of system (CFD) for fluid dynamics and heat transfer

Expected skills

- Hands-on use of vacuum process tools employing reactive plasmas, notably PECVD and/or etching systems
- Material and thin film characterization using various techniques (eg. XRD, ellipsometry, conductivity, SIMS, ..)

Context

Project involving an industrial partner in the framework of a joint research team (PROSPEXT) between Total and the LPICM (CNRS - Ecole Polytechnique).

The use of a plasma reactor with dangerous gases obliges all the necessary safety precautions for systems of this type. The primary language of scientific communication in laboratory is English

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