

TESELA (Biofilms at high pressure)

Objectives

Testing instruments and devices in vacuum. The aim of TESELA is to obtain graphene layers directly on the non-conductive substrate using novel precursor molecules and evaporation techniques. TESELA is the evolution of IE3C vacuum system.

Environmental conditions

- Sample temperature range: from 300K to 1000K in sample holder computer controlled.
- Atmosphere: vacuum base pressure 10^{-10} mbar by serial turbo pumps.
- TESELA have two possible orientations for different experiments. In figure top are in horizontal with TMP to up. Down are in vertical with TMP to down.

Analytical Techniques

- **TPD** (Thermal Programmed Desorption), in real time with QMS 200uma.
- **ALI** (Atomic Layer Injection), liquid organic samples injection in UHV.
- Membrane and Scroll pump and two serial TMP (Turbo Molecular Pump).
- Sample size: should fit on a 10x10mm, and 50x50mm with ceramic oven. Possibility of ad-hoc sample holders.
- Molecular evaporators in 45° and 25°.
- QMB (Quartz Micro Balance), for testing outgassing and coating at different angles.

