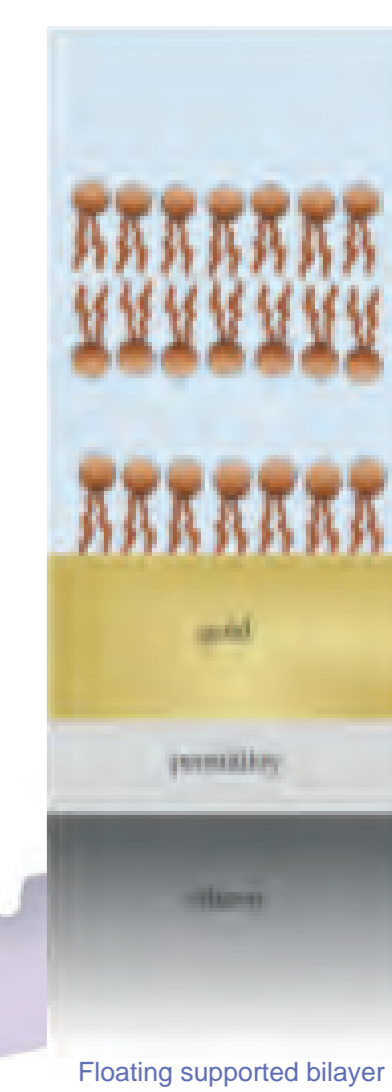
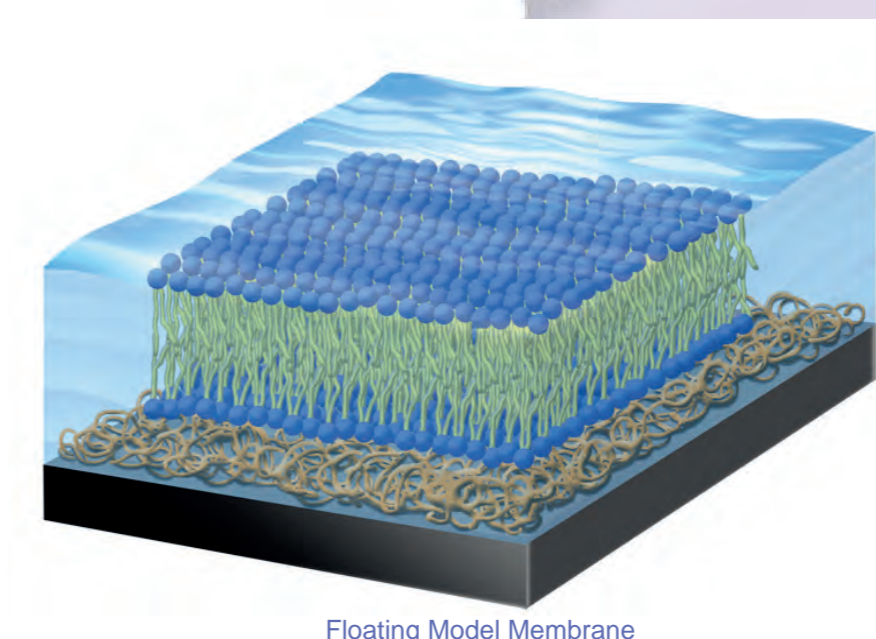


Objectives

1. Create a platform for model bio-membranes
2. Develop new sample environments for soft and bio materials, and improve existing equipments

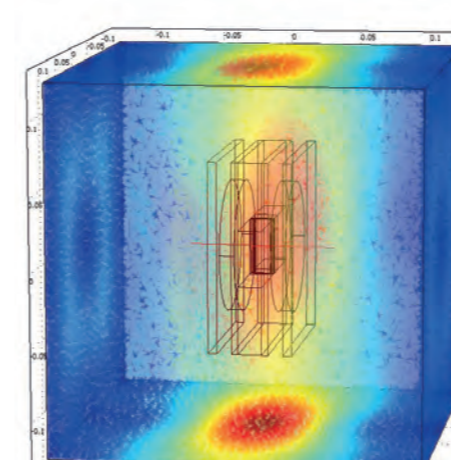
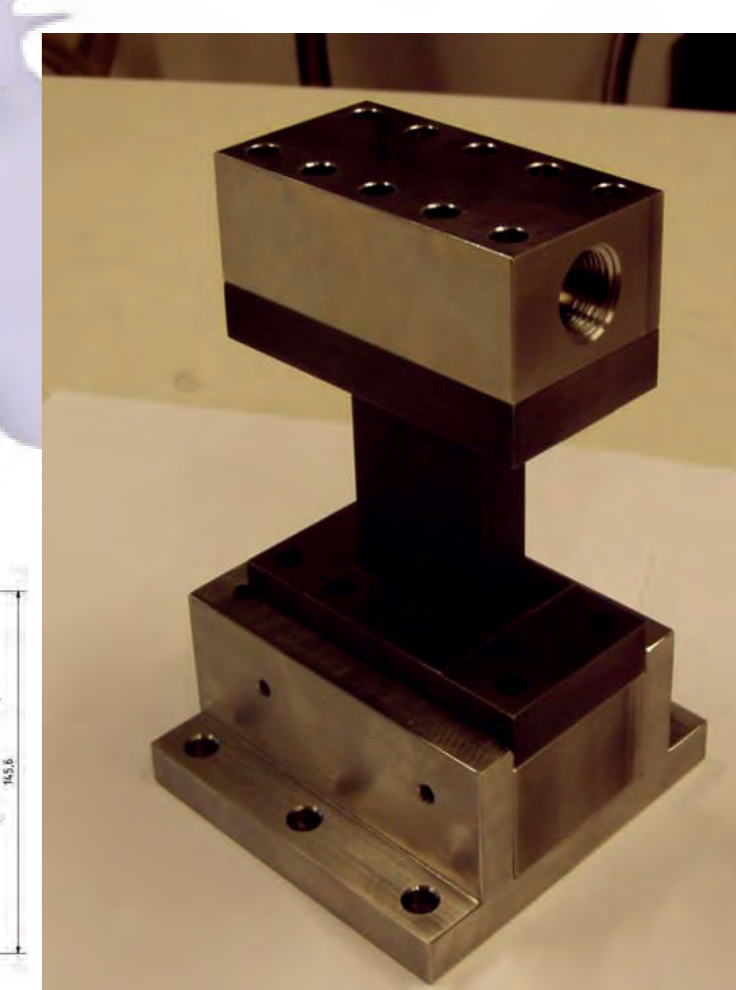
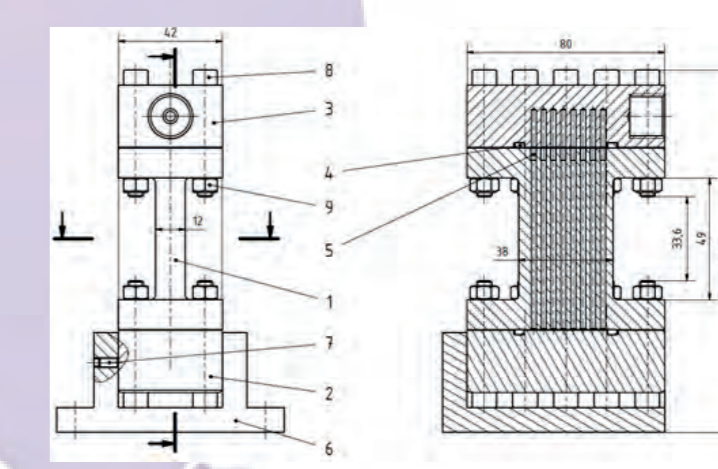
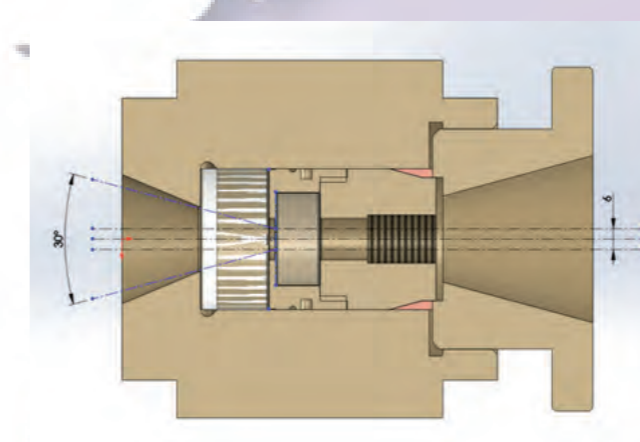
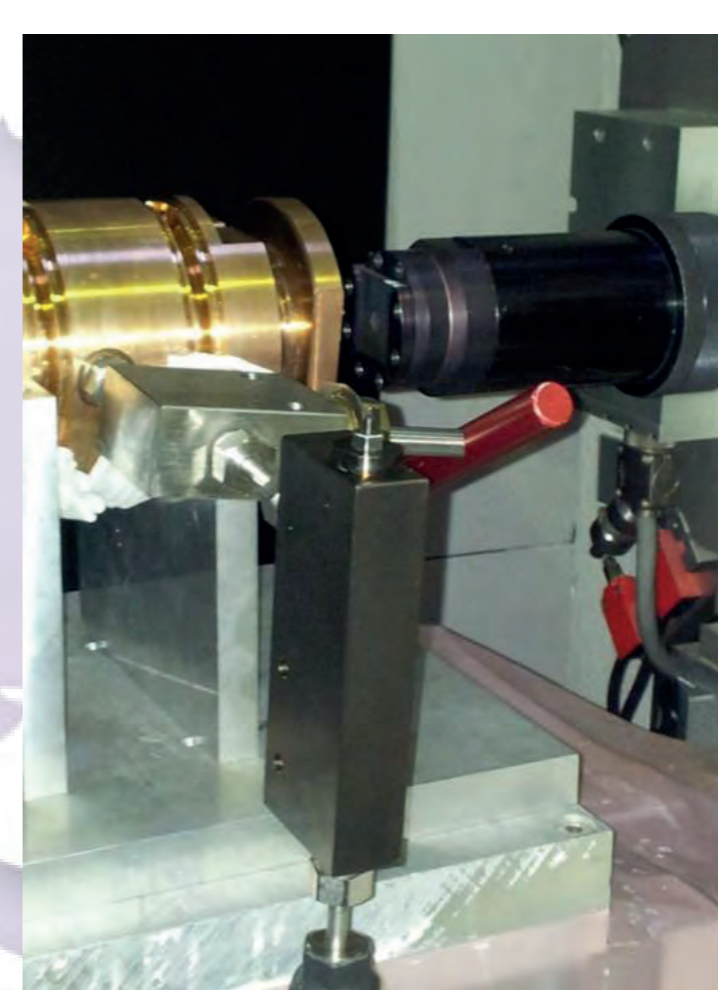
A platform for model biological membranes for structural and dynamical characterisations

- D Lipids extraction
- Technology improvement for unconstrained, deposited biomembranes
- New method for fabricating the lower Self Assembled Monolayer (SAM) using chemically modified substrates surfaces
- SAM of 100% coverage with defect-free bilayers on these surfaces



Kinetic/dynamic measurements in periodic external fields

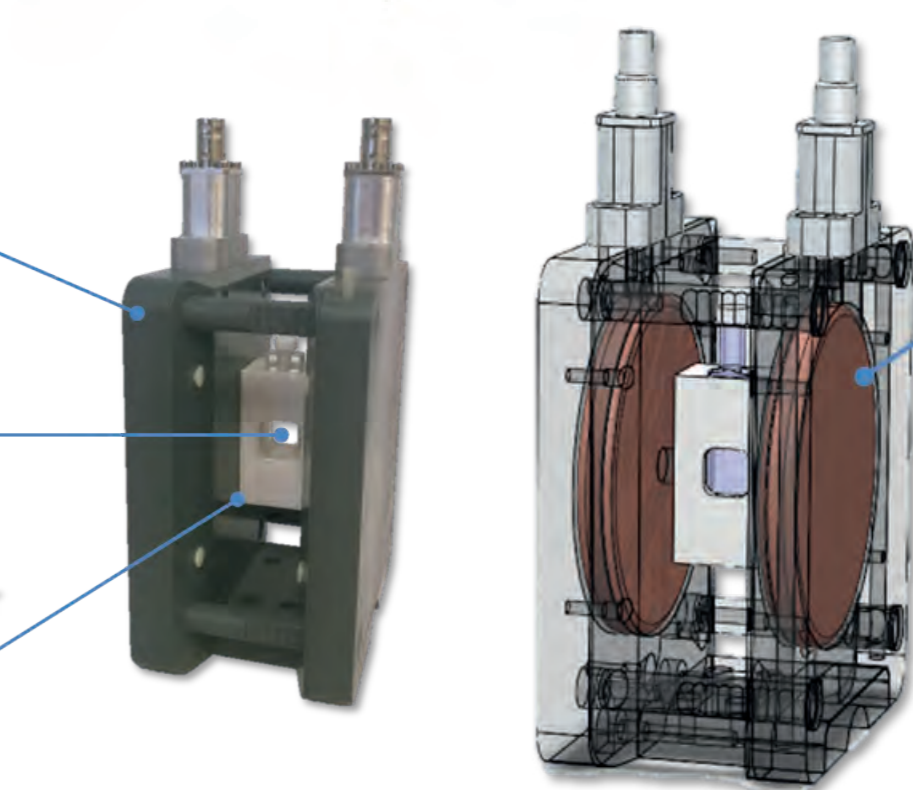
- Device for multi-angle, static and dynamic light scattering combined with small angle scattering
 - 2 different scattering angles accessible simultaneously
- Electrical Field cell with electrodes outside the sample cell
- Pressure cells for Small Angle Neutron Scattering with sapphire windows and with TiZr material for larger sample volume for Neutron Spin Echo
- Improved Stop Flow for smaller samples; better and faster homegeneization and thermalization



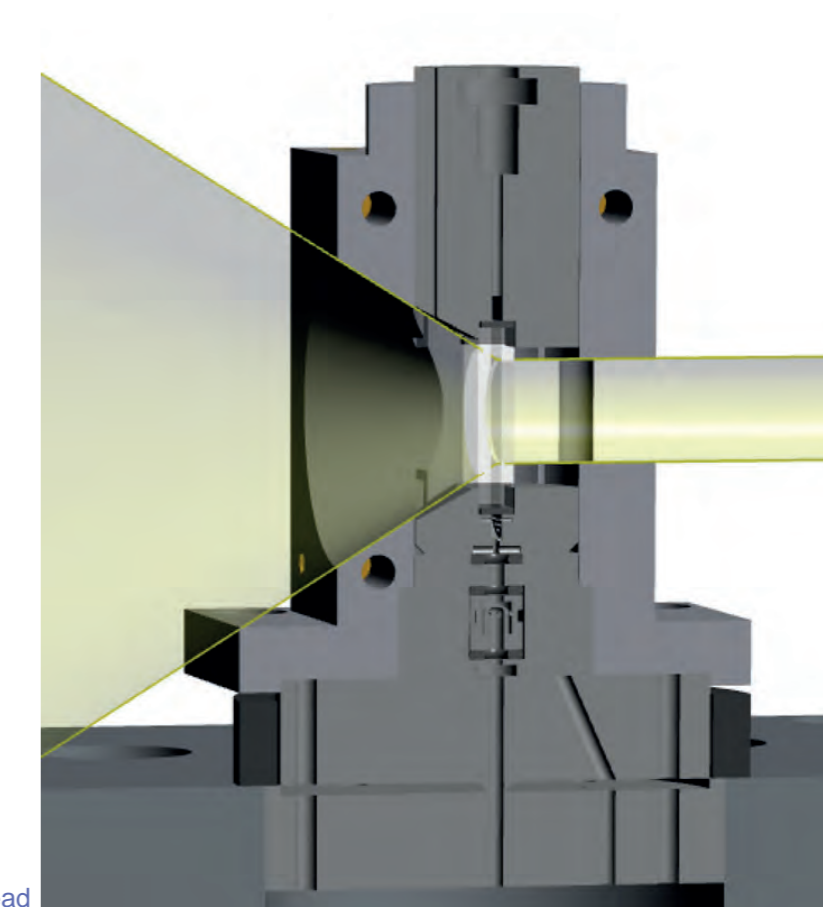
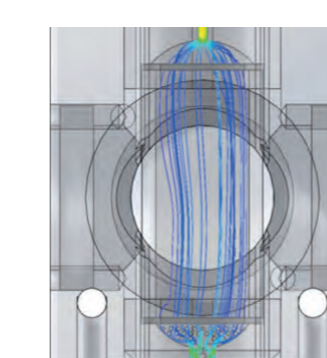
PVC
 $\epsilon_r = 5$

Hellma® Cell
Quartz
 $\epsilon_r = 4.2$

Sample holder
PTFE
 $\epsilon_r = 2.2$

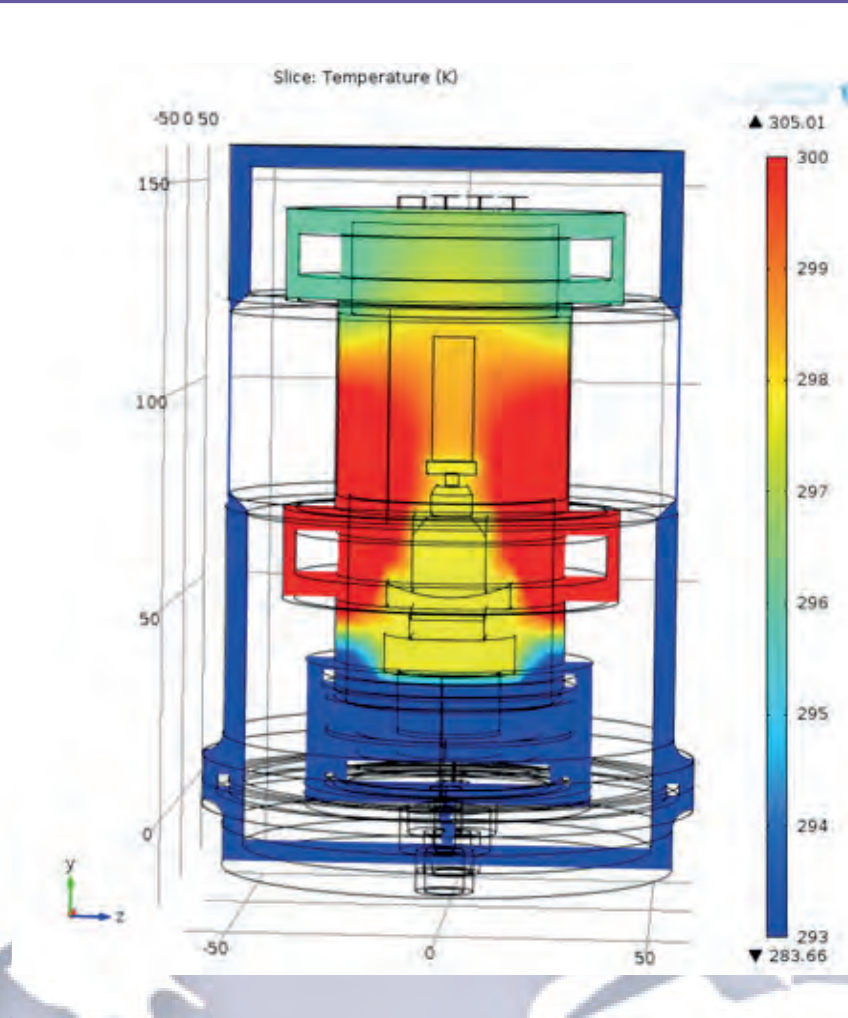
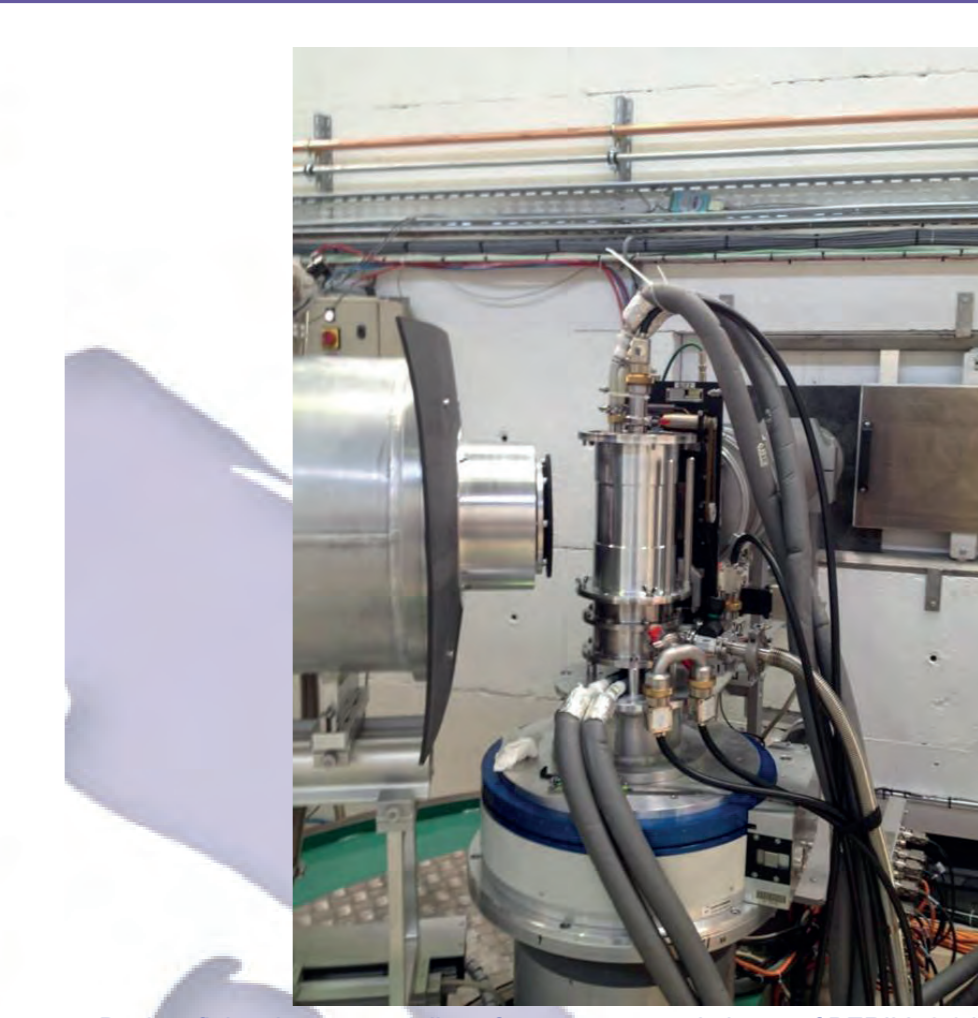
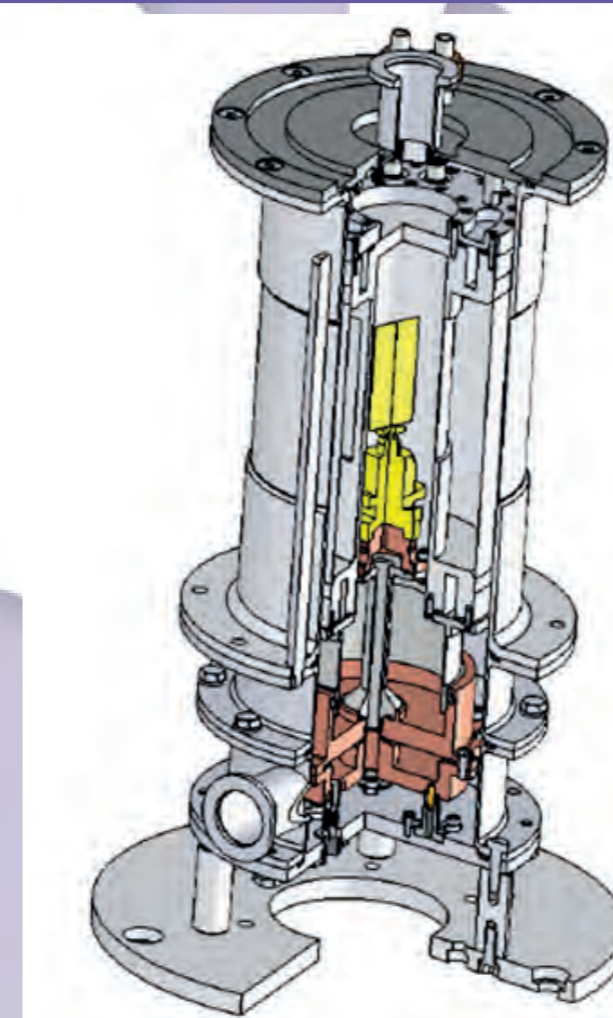


Electrode



Humidity chamber

- Humidity cell with a factor of 5 improvement in humidity ratio (temperature) stabilization



Cryogen-free cryostat with sample changer for fast automatic data collection

- Compact, modular, cryogen-free cryostat for multiple samples, with a separate sample space isolation vacuum and a cold head isolation vacuum
- Thermal coupling to the cold head achieved by heat switches to realise fast cool down and warm up

