

Physics Dept

Assistant Professor



Isabel Catarino

PhD degree in Engineering Physics from UNL (2002). Several scholarships at the SBT – CEA, Grenoble (France) (2000-2006). Visiting Independent Advisor at the Jet Propulsion Laboratory (JPL-NASA/Caltech), California, USA, for one semester (2009).



Objectives

Founder member of the FCT's Cryogenics Laboratory.

Since 2006, our activities are focused on low temperature heat switches, Cryogenics Energy Storage Units (European Space Agency and FCT contracts) and on adsorption studies at low temperature (FCT contracts)



Methodology

- 3 K-300 K cryocooler (1 W @ 4 K)
- 8 K- 300 K cryocooler (2 W @ 20K) × 2, one equipped with a turning support.
- Vacuum oven
- Leak detector (He, H₂)
- Profilometer
- Able to measure (3 K- 300 K)
 - Resistivity, temperature, pressure
 - Thermal conductivity, Specific heat



Expected Results

Cryogenic thermal management equipment construction, testing and developing.
Cryogenic characterization techniques.

