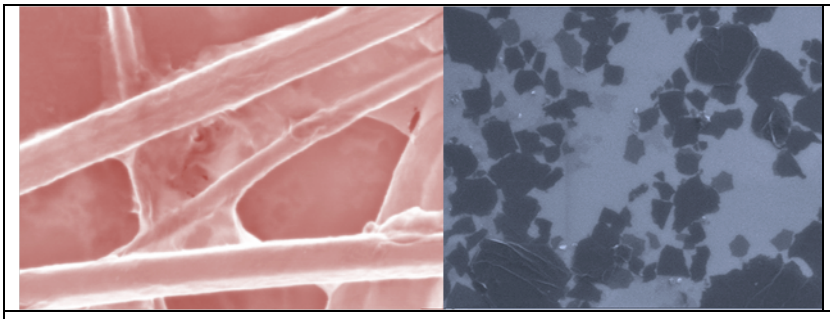
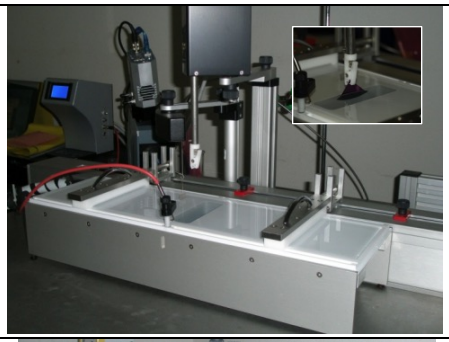
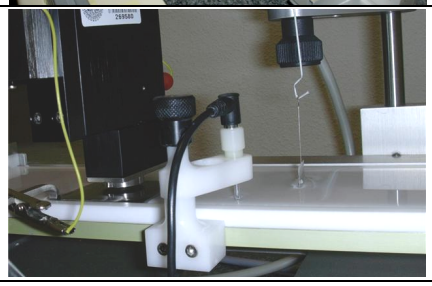


CHEMICAL AND STRUCTURAL CHARACTERIZATION OF NANOMATERIALS

Description

We prepare and characterize new materials such as metal nanoparticles, Quantum dots and graphene derivatives in solution and deposited onto solids.

Equipment

Langmuir-Blodgett (KSV2000 System 2) To Fabricate and characterize monomolecular films with precise control of lateral packing density	
Brewster Angle Microscopy (Optrel BAM 3000) Visualization of Langmuir monolayers or adsorbate films at the air-water interface	
Kelvin probe (KSV SPOT1) It allows determining Composition, Dissociation degree, Orientation and Interaction in Langmuir monolayers	
Quartz Crystal Microbalance (Q-sense E1) Mass changes and interactions occurring at surfaces. Surface rheology of surface bound materials.	

Raman UV-VIS-NIR **LabRam HR Evolution** Laser sources: 532 nm 100 mW 633 nm 17mW 770 - 795 nm > 200 mW	
Malvern Zetasizer Nano ZS To determine Molecular size, Molecular weight, Particle size, Zeta potential	
Drop (Lauda TVT 2) and maximum bubble pressure tensiometers (Lauda MPT2) To measure equilibrium and dynamic surface tension (from 1 ms)