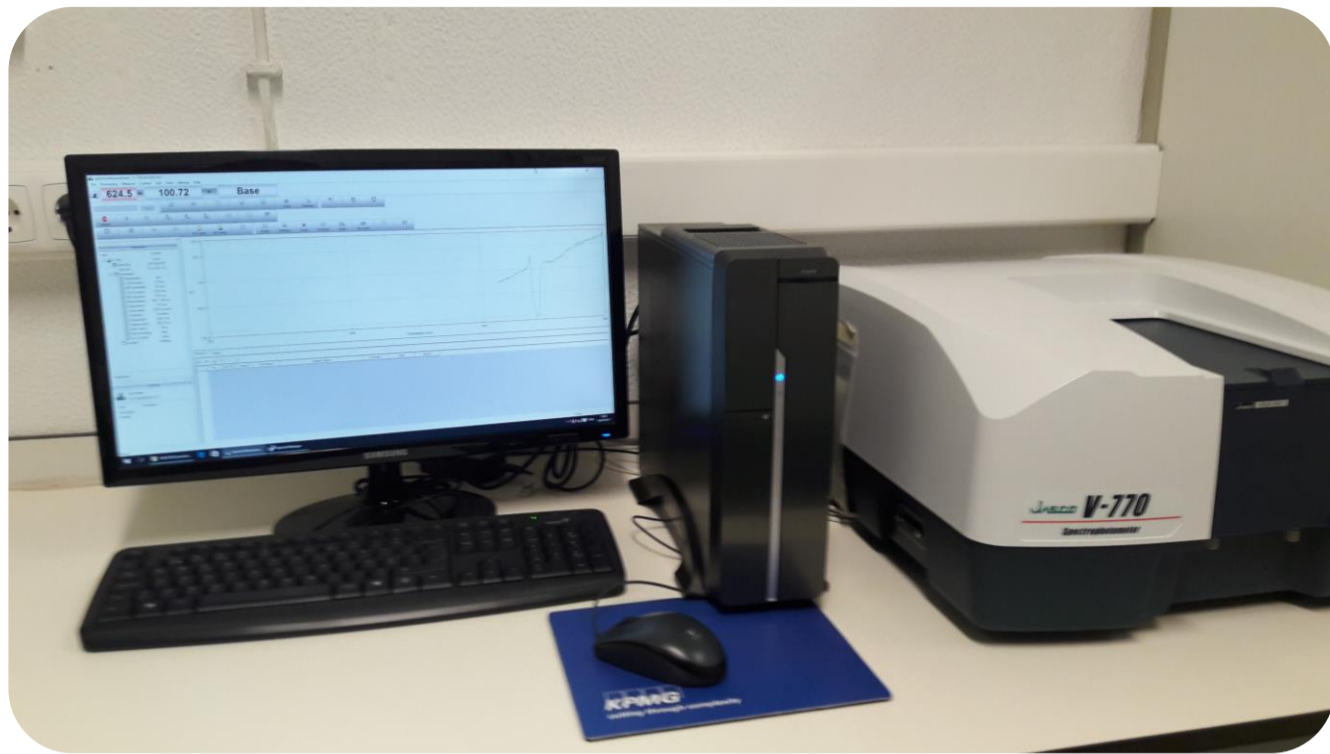


UV-VIS-NIR Spectrophotometer

TRANSMITTANCE, ABSORBANCE AND REFLECTANCE



JASCO V-770 Spectrophotometer

Specifications

- Single monochromator UV-Visible/NIR spectrophotometer
- Wavelength range 190 to 3200 nm with PMT/PbS detectors
- Wavelength accuracy: ± 0.3 nm (at 651.1 nm) and ± 1.5 nm (at 1312.2 nm)
- Scanning speed: 10 to 4000 nm/min

Accessories



Integrating sphere

Integrating spheres are designated to measure the diffuse transmittance or reflectance of a sample. The integrating sphere is provided with a light trap so that the reflectance of samples can be measured with or without the specular reflectance component.



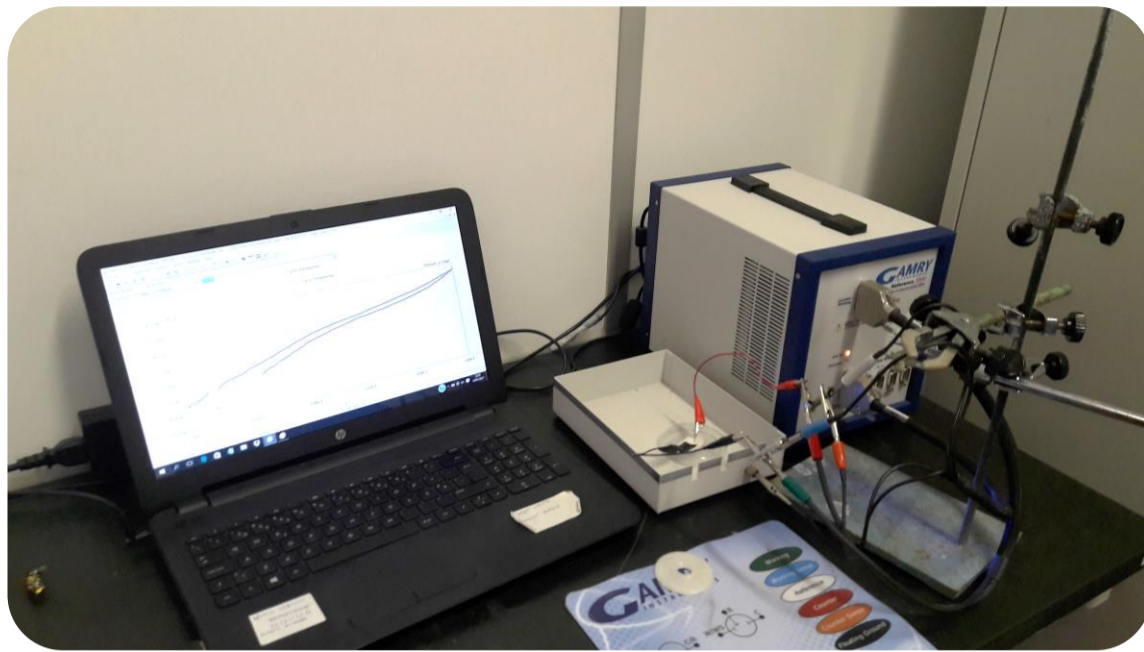
Film holder with variable incident angle

The film holder equipped with variable incident angle for measurement of a film (planar) sample. The incident angle of the light beam can be set in 15 deg. interval. Sample holder rotation range: ± 90 deg.

Optical Characterization

Potentiostat

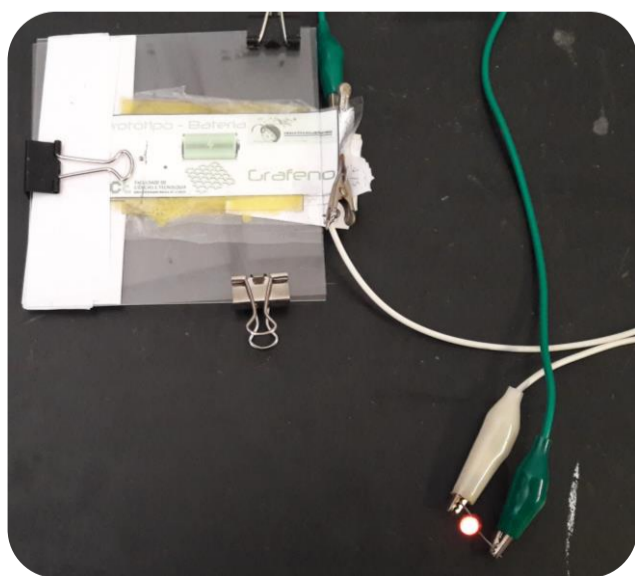
ELECTROCHEMICAL CHARACTERIZATION OF ELECTROLYTES AND BATTERIES



Gamry Instruments reference 3000

Electrochemical techniques

- Physical Electrochemistry: Cyclic voltammetry, chronoamperometry, and chronopotentiometry.
- Pulse Voltammetry: Pulse voltammetry, square wave voltammetry
- DC Corrosion: Standard DC corrosion tests such as polarization resistance, potentiodynamic, cyclic polarization, and galvanic .
- Electrochemical Energy: Charge, discharge, cyclic charge-discharge techniques, potentiostatic and galvanostatic.
- Electrochemical Impedance Spectroscopy: Potentiostatic, galvanostatic and hybrid impedance spectroscopy experiments.



Graphene-based device

Applications

Batteries
Fuel Cells
Super Capacitors
Photovoltaics
Coatings
Corrosion
Sensors

Electrical characterization

UV-VIS Spectrophotometer

TRANSMITTANCE AND ABSORBANCE SPECTRA



PG Instruments T90+ Spectrophotometer

Specifications

- UV-Visible spectrophotometer
- Wavelength range 190 to 900 nm with photomultiplier detector
- Double beam system with Czerny-turner monochromator
- Variable bandwidth: 0.1, 0.2, 0.5, 1, 2 and 5 nm

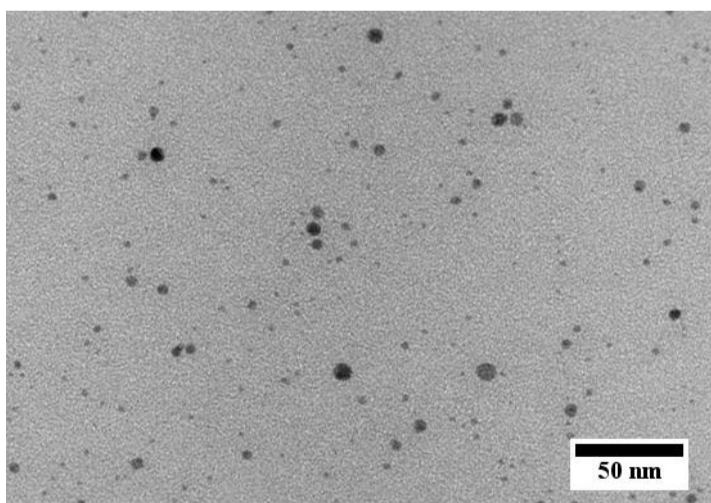
Accessories



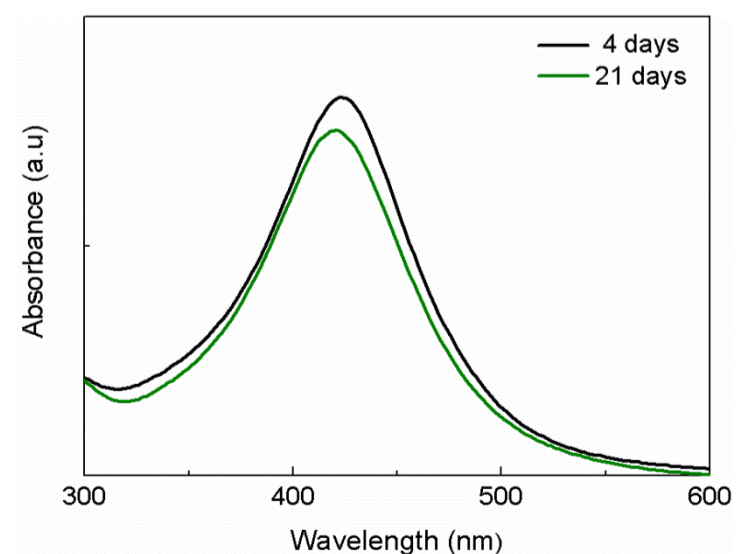
CH19-1 Thermostatic Cell Holder

Thermostatic cell holder is used together with constant-temperature water bath and water pump. They can measure samples at a specific temperature.

Measurements



Ag NPs dispersed in PVP



Optical Characterization