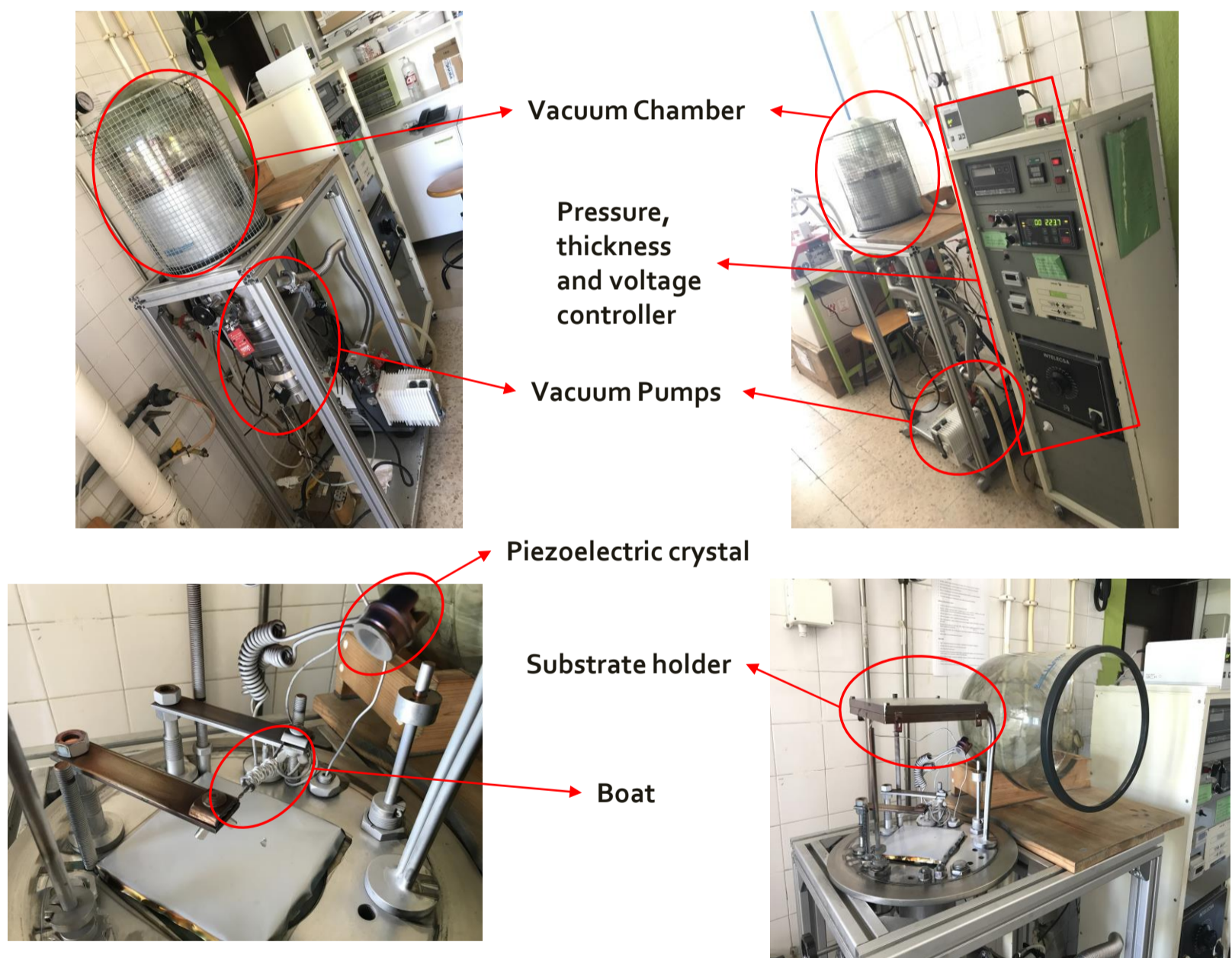


# Resistive Thermal Evaporation

## PHYSICAL VAPOR DEPOSITION OF THIN FILMS

Thin film technology plays an important role in the development and study of materials with unique properties. One form of thin film deposition is through Physical Vapor Deposition (PVD) by **RESISTIVE THERMAL EVAPORATION**. During this process, a solid material in a high-vacuum atmosphere is heated to its evaporation point by joule heating of a resistive boat. The material is usually located at the bottom of the chamber, often on top of the boat, and the substrates are held inverted at the top of the chamber. The evaporated molecules then travel from the boat to the substrate where they nucleate, forming a thin film coating. A wide variety of materials can be deposited using this technique, whereas metallic and oxide materials are the most common.

## HOMEMADE RESISTIVE THERMAL EVAPORATION SYSTEM



### Resistive Thermal Evaporation system full tech specs

- Manual pumping sequence
- $10^{-6}$  Torr by high vacuum pump
- Piezoelectric crystal with deposition rate controller
- 250 W DC power supply
- Source type: Boat & Filament
- Source Material: W

# Thin film Deposition