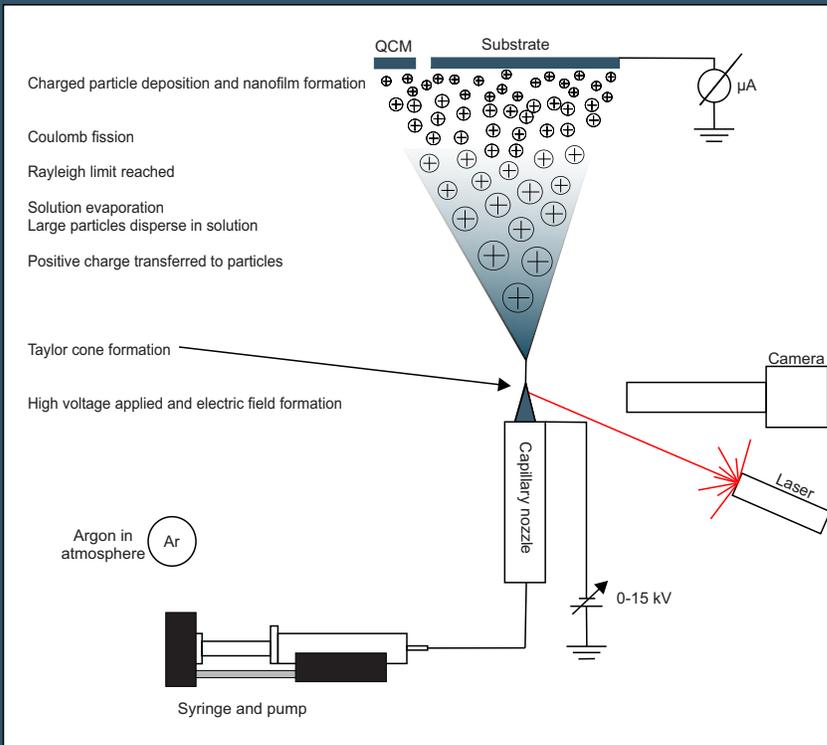
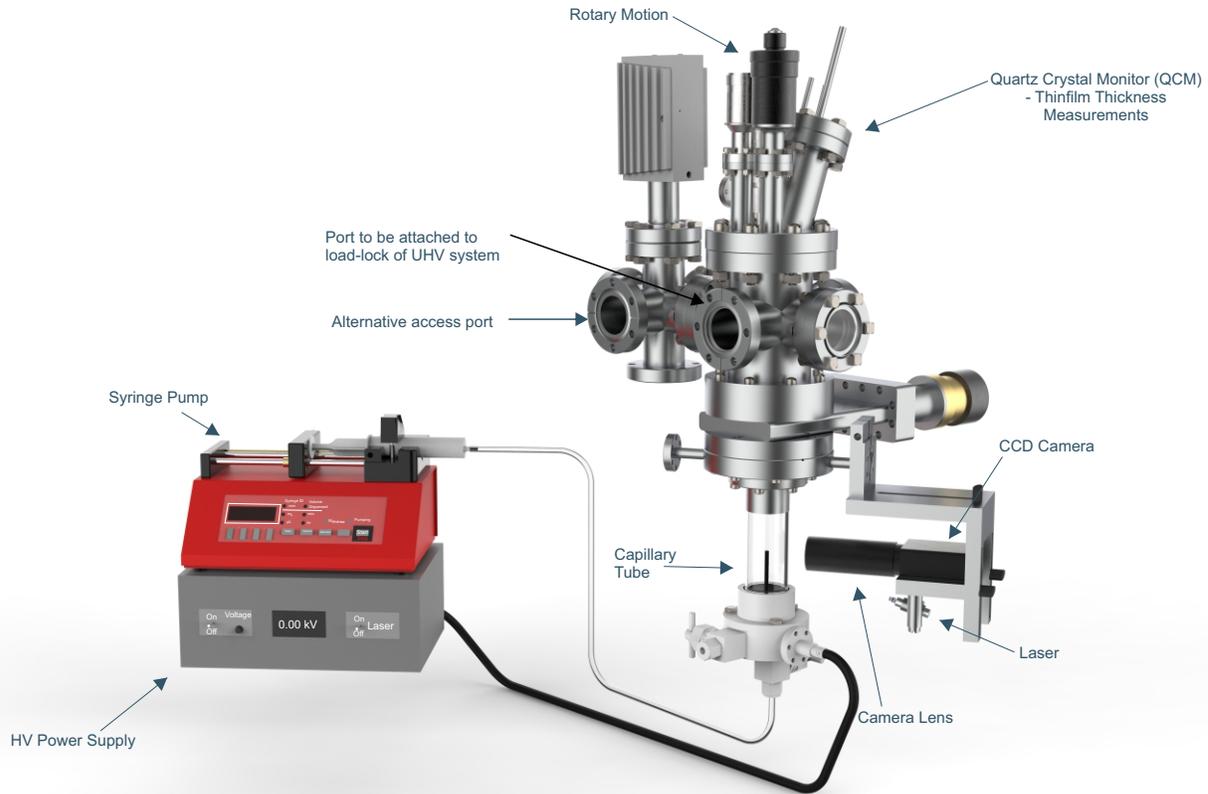


# Electrospray Ionization Deposition System with UHV Compatibility for growing nanofilms

Model: ESID-UHV-75



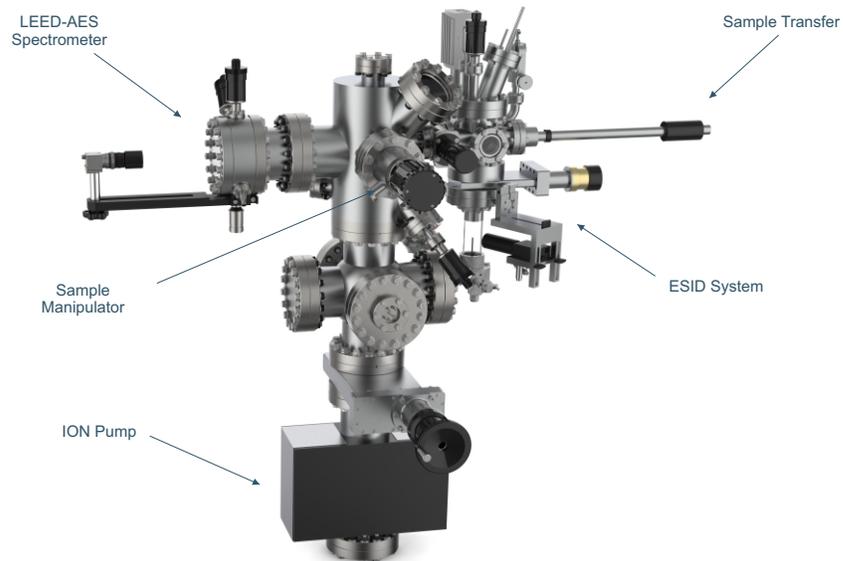
## Principle of Electro-spray Ionization Deposition

The electro-spray ionization deposition method (ESID) is based on the atomic dispersion of fluid that contains molecules or nano-articles under high electric field onto a substrate. The spray nozzle is connected to a high-voltage power supply while the target substrate is grounded. This creates a potential difference and therefore, a strong electric field which builds up at the end of the nozzle which forms a Taylor cone. The Taylor cone then deforms into a jet at the tip and disperses into a fine mist. Within the mist there are charged clusters that deposit onto the substrate due to ionic attraction which form a nanofilm.

During the fluid dispersion, there are several processes occurring such as Taylor cone formation, charge transfer, solution evaporation, Coulomb fission, impact on the surface, nucleation, diffusion and nanofilm growth.

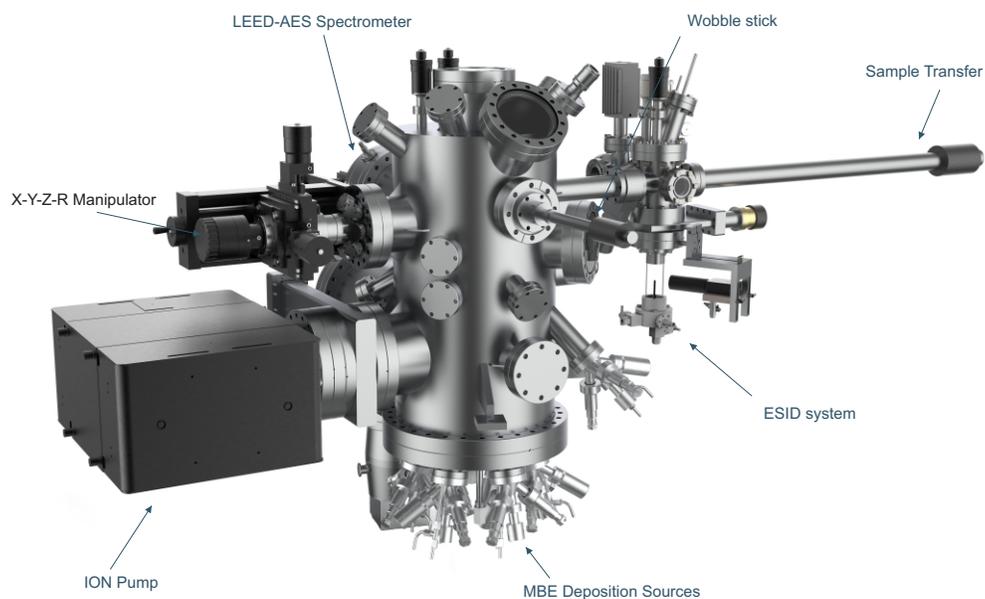
# Integration to UHV system

## UHV SYSTEM



ESID chamber integrated to basic UHV system with LEED - AES spectrometer

## MBE SYSTEM



ESID chamber integrated to basic MBE system with LEED-AES spectrometer