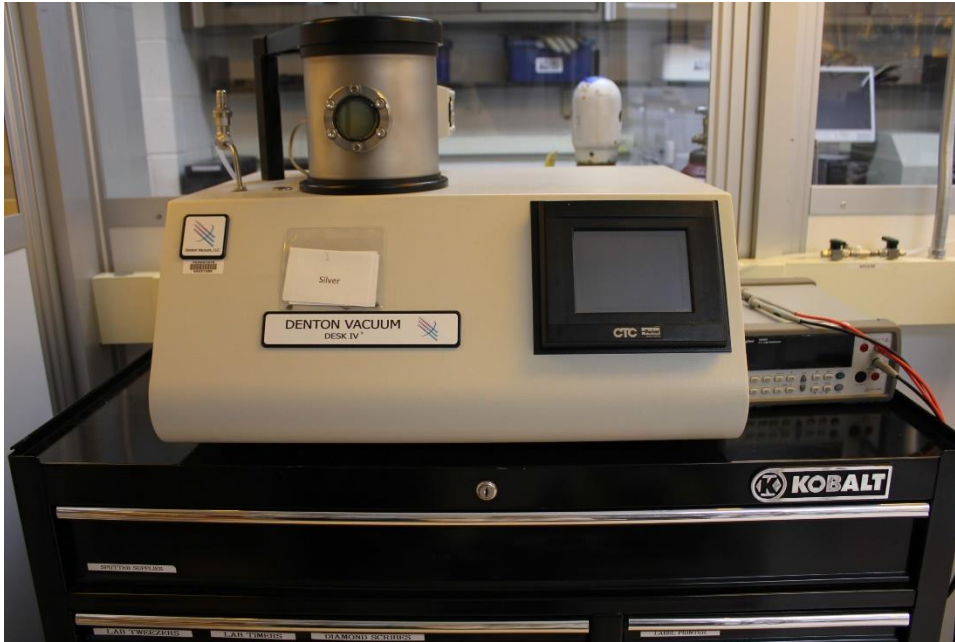


Sputter Coater



How It Works:

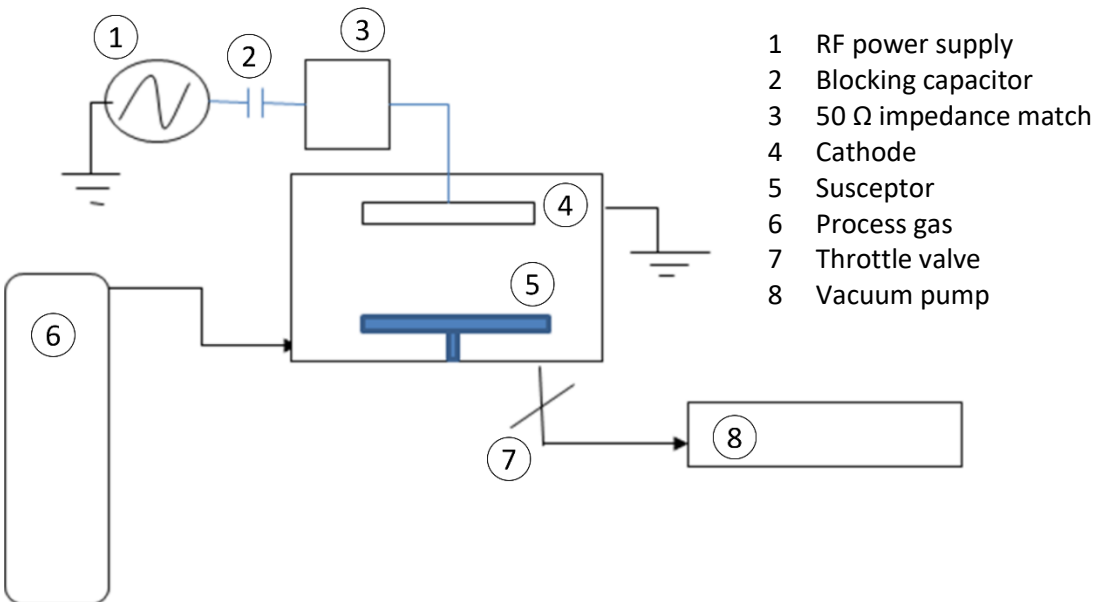
High energy ions are accelerated into a solid target causing atoms to break free from the target surface and be deposited on the sample. This is a momentum transfer operation, analogous to billiard ball impacts.

Tool Operation:

DC Diode Sputtering: Under vacuum, argon gas is flowed into the chamber where it is ignited into a plasma. The target is grounded and is referred to as the cathode. A high density of positively charged argon ions from the plasma is attracted to the cathode. A magnetic field confines the plasma to the target and traps electrons causing more ionizing collisions to form a plasma around the target.

Material / Applications:

DC Diode Sputtering is good for depositing metal films including metal alloys that cannot be evaporated.



- 1 RF power supply
- 2 Blocking capacitor
- 3 50 Ω impedance match
- 4 Cathode
- 5 Susceptor
- 6 Process gas
- 7 Throttle valve
- 8 Vacuum pump

Denton Vacuum Desktop IV Specifications

Film Growth:	Fine grain 100 Å film in 3 minutes
Chamber:	6" OD steel Chamber with view port
Gas Capabilities:	Argon at 5 psig
Vacuum Pumps:	Mechanical and Turbo
Targets:	Au, Pt, Al, Cr, Ni, Si, SiO ₂
Options:	Film Thickness Monitor, Rotation, Tilt Manual or Timed Operation