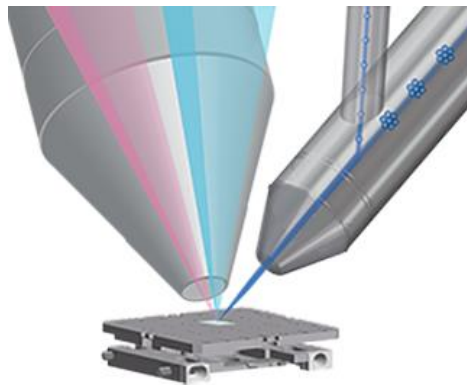


## Dual-Source Ion Beam

A dual-source ion gun, which is equipped with both a high-performance argon gas cluster ion beam and a monatomic argon ion beam, is a replacement for the standard 5 kV monatomic argon ion gun. The monatomic ion source on the dual source gun provides surface cleaning capability as well as XPS depth profiling at high (up to 5 keV) or low ion impact energies (200 to 500 eV). This unique gun allows sputter depth profiling with excellent depth resolution. The gas cluster ion source on the dual source gun provides surface cleaning capability with minimal damage to surface chemical compositions of inorganic and organic materials. It also provides sputter depth profiling, with little to no chemical damage, for a wide range of polymer and organic thin films.

In addition, the new Dual Ion Guns can be used to change the cluster size, and a new cluster size instrument can be developed and added. This makes it possible to confirm the actual cluster size used inside the device.



Information is from Physical Electronics, Inc. (PHI)