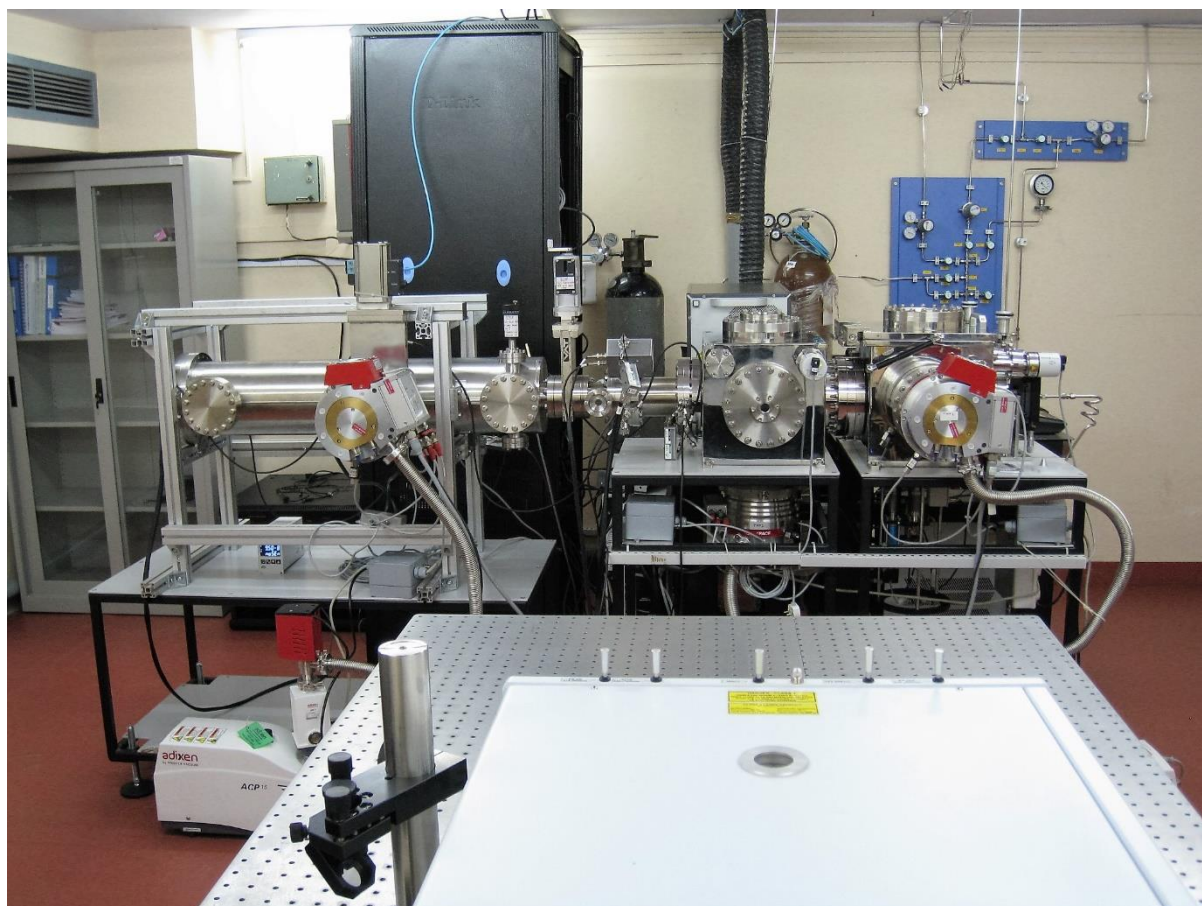


## Binary Metal Cluster Setup

**Indigenously developed setup for the generation of bi-metallic clusters in gas phase and their investigations using mass spectrometry and laser spectroscopy.**



The setup consists of a dual-target dual-laser vaporization source for generating the metal clusters and cooled in the supersonic expansion process in a nozzle with pulsed carrier gas. A customized Reflectron Time Of Flight Mass Spectrometer (ReTOFMS) is coupled to the cluster source. The neutral and cation clusters in gas phase can be investigated for their thermodynamic stability by mass spectrometry. The laboratory is equipped with Nd:YAG lasers with 1064, 532, 355, and 266 nm wavelengths, Excimer laser (157 nm), and a tuneable OPO laser (2600-192 nm) for laser spectroscopy experiments like threshold photoionization, photodissociation. The clusters can be mass-selected and isolated as well for their investigation.

The preformed clusters can be soft landed on a range of substrates as well.