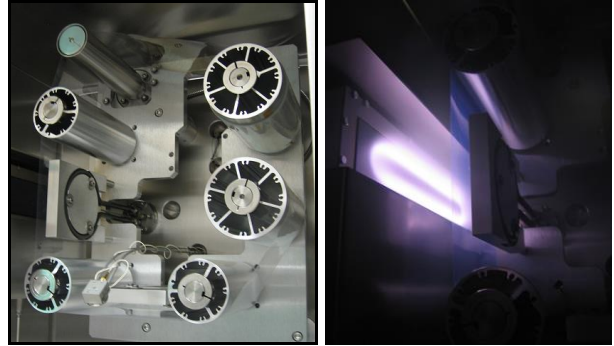


MVSystems News

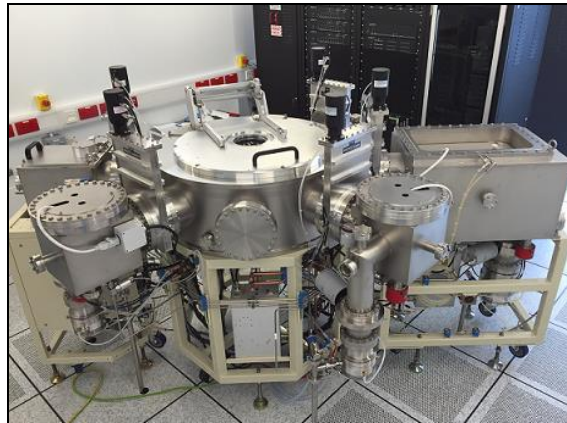
Golden, Colorado, USA: MVSystems is pleased to announce the completion of the following contracts in 2015:

1. MVS delivered and installed a reel to reel cassette module at **The University of Toledo, Ohio, USA** that enables the study of high temperature (>600C) processes on flexible substrates. The system has been retrofitted onto the reel to reel cassette cluster tool system used for the development of advanced thin film solar cells.

2. MVS delivered and installed a roll to roll sputtering-evaporation web coating system for the deposition of TCOs and metals at the **Shaanxi Normal University, Xi'an, China**. The system is equipped with tension control via load cell feedback, two heating stations, RF and pulsed DC sputtering capability, thermal evaporation, built in degassing routines and an intuitive HMI (human machine interface).



3. MVS delivered and installed a cluster tool system at the **University of Cambridge, UK**. The cluster tool consists of an isolation and transfer zone (ITZ) with 8 port locations and capability for up to seven processing modules. The system is currently fitted with one sputtering, two PECVD chambers and an ALD module.



4. MVS recently completed the construction of a multi-source sputtering module addition to the MVS cluster tool system already installed at the **Instituto Nacional de Astrofísica, Óptica y Electrónica, Puebla, Mexico**. The original cluster tool has three PECVD chambers and is used for the deposition of thin film silicon.

5. MVS has recently added atomic layer deposition (ALD) to its portfolio. The ALD module is fully compatible with our existing cluster tool configuration and it complements our line of processing modules which also includes **PECVD, sputtering, Hot Wire CVD, evaporation and annealing**.