

MVSystems News

Golden, Colorado, USA: MVSystems, Inc. is pleased to announce the recent completion and receipt of following contracts:

- 1. MVS has received an order from **M.Braun, Inc.**, **New Hampshire, USA** for a cluster tool consisting of sputtering and several PECVD chambers. The system is designed to be connected to a glove box at the point of entry/exit of the substrates allowing for integration of in-vacuum and atmospheric processes without exposing the films to air.
- 2. MVS has received an order from **The University of Toledo, Ohio, USA** for the development of heating capability for the reel to reel cassette system that will enable the study of high temperature (>600C) processes on flexible substrates. The system will be retrofitted onto the reel to reel cassette cluster tool system currently used by Dr. R. Collins's group for advanced thin film silicon solar cell development.
- 3. MVS is currently building for the **Shaanxi Normal University, Xi'an, China** a cluster tool consisting of sputtering and several PECVD chambers for the development of solar cells under the direction of Dr. Frank Liu. The system is scheduled to go through the factory acceptance test in February, 2013 with subsequent shipment and installation at Shaanxi's facility in China.
- 4. MVS has recently delivered at the *Instituto Nacional de Astrofísica, Óptica y Electrónica*, **Puebla, Mexico** a multi-chamber PECVD system for silicon thin film Silicon development for solar cell applications, under the direction of Professor Andrey Kosarev.
- 5. MVS has delivered and installed a cluster tool system for **TOTAL New Energies, Paris, France.** The cluster tool is currently located at the *École Polytechnique* of Paris and consists of an isolation and transfer zone (ITZ) with 10 port locations and capability for up to nine processing zones. The system is currently fitted with sputtering, several PECVD chambers and a characterization module.
- 6. MVS is also conducting foundry and R & D work in solar cells for private entities as well as developing solar to hydrogen conversion devices on a grant by the Department of Energy.

On a personal note we would like to inform you that MVSystems' founder and president, Dr. Arun Madan passed away on January 2nd, 2013 after a long battle with cancer. Even though Arun was not involved in the day-to-day activities of MVSystems for about a year his inspiring conduct during that time was and continues to be a strong motivating force behind all of our activities.

MVS manufactures advanced **Cluster Tool** systems which allow integration of different process modules such as **PECVD**, sputtering, Hot Wire CVD, rapid anneal etc.

MVSystems, Inc., a US based company, was founded by the leading authorities in the thin film semiconductor area. They have pioneered the expanding and versatile Amorphous Silicon technology from 1970 onwards. The principals involved have a long history of PECVD equipment development for research and production. MVS has delivered in excess of 80 systems which are located in 23 countries.



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