

# Wednesday Lunch, October 20, 2010

## Exhibitors & Manufacturers Technology Spotlight

Room: Southwest Exhibit Hall - Session EW-WeL

## Exhibitors & Manufacturers Technology Spotlight

Moderator: D.J. Surman, Kratos Analytical Inc., R.

Langley, Consultant

12:00pm **EW-WeL1 Novel Detectors and Electron Sources for Vacuum and Elevated Pressure Environments**, *P. Holmes, W. Netolicky, B.N. Laprade*, PHOTONIS USA, Inc.

This presentation will address several unique applications, including electron multiplier and MCP detector operation in high pressure applications, such as RGA's; "cold" electron source arrays for vacuum environments; and novel microchannel plate shapes and configurations for specialized instruments.

12:20pm **EW-WeL2 Simplicity Solutions™ from the Granville-Phillips® Portfolio will be Introduced as a New Line of Gas Analysis Instrumentation**, *K. Van Antwerp, G. Brucker*, Brooks Automation, Inc.

Simplicity Solutions™ from the Granville-Phillips® portfolio will be introduced as a new line of gas analysis instrumentation and two new vacuum quality monitoring products based on Anharmonic Resonant Ion Trap Technologies for use in low mass range mass spectrometry and vacuum quality measurement applications. A brief description of the technology will be provided, a comparison to other low mass range separation technologies will be described and examples of key mass spectrometer performance characteristics will be shown. We will further stress the importance of the vacuum quality index as a method to reduce complex measurements into easy to understand instrumentation outputs.

12:40pm **EW-WeL3 Synchronous Motion, Close Proximity Sputtering System**, *R. Belan*, Kurt J. Lesker Company

Conventional sputtering systems have a well defined relationship between the size of the substrate being coated, sputtering gun target size, and the throw distance that separates the substrate from the sputtering gun. Substrate size and the required thin film uniformity are the key factors from which the sputtering gun size and the throw distance are then derived. We report on a sputtering system developed at the Kurt Lesker Company that breaks these geometric dependencies while at the same time delivering thin film uniformity of +/-1% or better and sputtering rates that are 5 to 10 times greater than most standard sputtering systems which follow conventional codependent geometries. This rate improvement can be achieved with metal or insulating targets using RF, DC, or pulsed DC power. This sputtering system works by placing the sputtering gun very close to the substrate (<1") and then synchronizing the travel of the sputtering gun across the face of a rotating substrate, controlling the rotational speed of the substrate, and controlling the power that the sputtering gun is operating at as the sputtering gun deposits its target materials. The advantages of this sputtering system, the economy of scale, and the versatility will be explained.

1:00pm **EW-WeL4 Internet Access to your Thin Film Deposition Systems**, *C. Malocsay, T. Haight*, Semicore

For years, field service by factory personnel for a deposition system meant getting in a car, plane or other mode of transportation, sometimes spending as much time in travel as the actual service, and, of course, adding that cost. After many years of arm twisting, cajoling or direct threats from a manager, internet access to many high end deposition systems has come to reality. It has taken 20 years for computer control to become a mainstay in the operational architecture of thin film deposition systems. Now with that hurdle gone, resistance to on-line service and support is the next obstacle to overcome.

1:20pm **EW-WeL5 BIG SIMS, LITTLE SIMS**, *N. Long*, SAI, UK

ToF-SIMS has become the tool of choice in a wide variety of today's surface and interface analysis tasks. The level of performance required of these tasks varies enormously, resulting a wide range in the capability of available instruments. SAI's expertise in ToF-MS technology has enabled it to offer instruments both at the top end of the scale and at the entry level making sure customers are uniquely well served in their quest to match investment levels to their task set. Illustrative data will be presented in the talk to demonstrate the concept across the gamut of SIMS applications.

# Authors Index

**Bold page numbers indicate the presenter**

**— B —**

Belan, R.: EW-WeL3, **1**  
Brucker, G.: EW-WeL2, **1**

**— H —**

Haight, T.: EW-WeL4, **1**  
Holmes, P.: EW-WeL1, **1**

**— L —**

Laprade, B.N.: EW-WeL1, **1**  
Long, N.: EW-WeL5, **1**

**— M —**

Malocsay, C.: EW-WeL4, **1**

**— N —**

Netolicky, W.: EW-WeL1, **1**

**— V —**

Van Antwerp, K.: EW-WeL2, **1**