

k-Space is Expanding --- AGAIN!

2011 has been an exciting year for us at k-Space as our company continues to experience significant growth. Thank you for your business in 2011, another record year for kSA! We continue to enhance our product line through close collaboration with our customers. You will notice some new faces and voices as we continue our tradition of unparalleled customer support by adding new sales and technical support



staff in response to growing demand for our products. To support this growth, kSA is expanding its manufacturing space in Ann Arbor/Dexter, MI and has recently broken ground. When completed in early 2012, our facility will double in size. We maintain an open invitation to anyone who would like to visit us if your travels take you near Ann Arbor!

k-Space Wins Phase II SBIR for In-Situ Monitoring During HgCdTe MBE Growth

k-Space has been awarded a Small Business Innovation Research (SBIR) Phase II grant by the US Department of Defense, through the Army's Night Vision Laboratory. Successful Phase I feasibility was shown for an in-situ, real-time process monitoring system for use with Si, GaAs, and CdTe-buffered Si/GaAs substrates during the deposition of CdTe and HgCdTe thin-films. The complex devices utilize the molecular beam epitaxy (MBE) growth of dissimilar materials to form the basis of far-infrared imaging devices. Deposition of these thin films yields significant stress accumulation, which must be monitored. Furthermore, repeatable substrate temperature control below 200 °C is critical for high-quality device fabrication. The Phase II project was awarded to accelerate kSA product technology that will simultaneously measure thin-film temperature, 2D curvature and stress, and growth rate/reflectivity during the complex growth of these far-IR detectors. Upon Phase II completion, k-Space shall have a fully integrated, turn-key solution for all HgCdTe-based MBE systems.



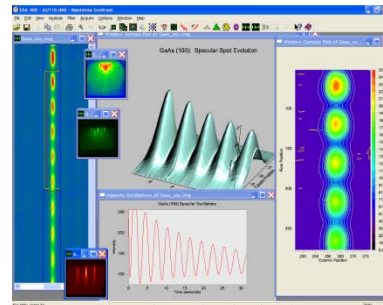
New! kSA 400 Version 5.0 Software Now Available.

As k-Space grows with new products and increased focus on the thin-film solar and high-brightness LED markets, we strive to support and innovate with our existing kSA products and customers. The

industry leader in analytical RHEED since its introduction, the kSA 400 is now in its 5th generation with the newly announced Version 5.0 software and additional CCD options. With Version 5.0, the world's most powerful analytical RHEED system just became more so with the following enhancements:

- **Windows 7 (32-bit and 64-bit) operating system compatibility.**
- **Support for the latest camera technology, including GiGE.** New high-resolution CCD options using the GiGE interface provides 4x greater pixel density and increased frame transfer speeds compared to existing models.
- **RHEED image and movie database.** RHEED images and movies supplied by kSA 400 customers are now included with the V5.0 software. Make comparisons and help visualize important RHEED information with direct examples.
- **Tabbed file and data charts.** Enhanced user interface including tabbed data charts and a file browser within the kSA 400 application.
- **IDL 7.0 integration.** The most advanced graphics and data analysis routines integrated within kSA 400.
- **kSA 400 preferences and software configuration files.** Save all kSA 400 user interface and processing settings to a unique file for multiple users and/or disaster recovery.

k-Space Associates, Inc.



Please contact k-Space for more details or to upgrade your kSA 400 system.

A new kSA product is coming...

Stay tuned for an exciting new product announcement from k-Space in the next few months. This one has been over 5 years in the making!



See the k-Space Product Line in Action at the Following Upcoming Conference:

SEMICON JAPAN 2011
(kSA representative in Japan)
December 7-9th, 2011
Chiba, Japan