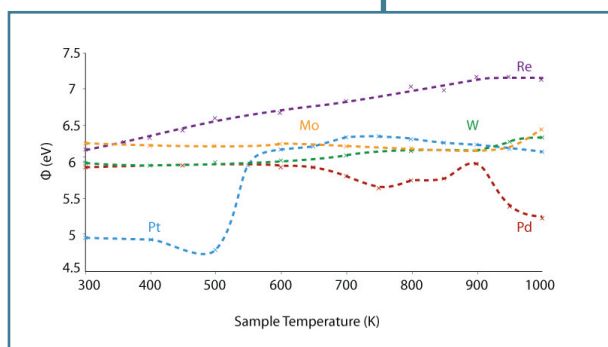
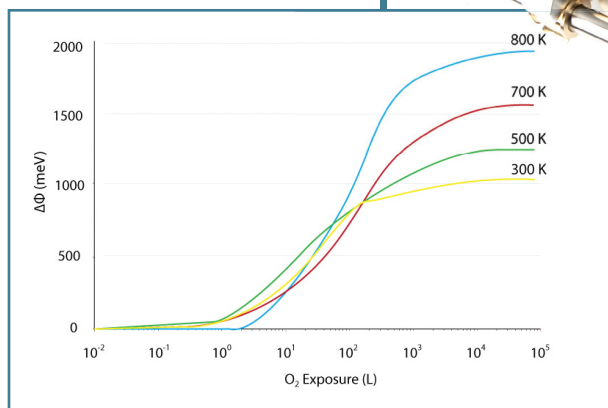
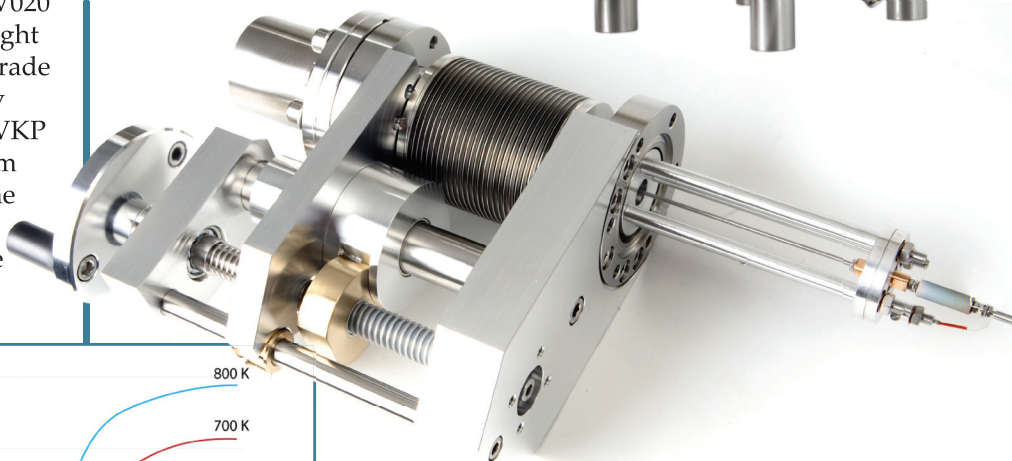


UHV KELVIN PROBE SYSTEM UHVKP020

The UHVKP020 is the perfect complementary tool for any Ultra High Vacuum (UHV) chamber. Reliable and repeatable results are obtained with ease, thanks to the unique features provided by the 'Baikie System'. The high quality linear translator included, enables simple tip to sample positioning, and the unrivalled tracking system holds the tip separation constant at all times during the measurement. For thin film studies, sub-monolayer coverage detection is trivial.

Consider adding the SPV020 or SPS030 modules for light sensitive studies, or upgrade to the only commercially available 'Absolute' UHVKP system. For a full vacuum solution take a look at the UHV mini system with sample heater for a wide range of UHV studies.

The Kelvin Probe is a non-contact, non-destructive vibrating capacitor device used to measure the work function (wf) of conducting materials or surface potential (sp) of semiconductor or insulating surfaces. The wf of a surface is typically defined by the topmost 1-3 layers of atoms or molecules, so the Kelvin Probe is one of the most sensitive surface analysis techniques available. KP Technology Systems offer very high wf resolution of 1-3 meV, currently the highest achieved by any commercial device.



“ The Kelvin Probe that you developed is wonderful because the distance is kept in measurement using gradient constant function. It is hard to set the distance between sample and probe with other systems. We have two Kelvin Probes: the KP Technology System is better in sensitivity, ease of use and customer service. ”

*Dr. Shinjiro Yagyu
National Institute for Materials Science
Ibaraki, Japan*

UHV KELVIN PROBE SYSTEM UHVKP020

THE BAIKIE SYSTEM

All KP Technology Systems are based upon unique features developed by Professor Iain Baikie. These features are unsurpassed by any other company.

- ◆ Highest work function/surface potential resolution of 1 - 3 meV (standard with 2mm tip).
- ◆ Voice Coil driver provides very high rejection of driver talkover noise compared with piezoelectric systems.
- ◆ Off null signal detection system for vastly improved resolution - Our Signal-to-Noise (S/N) features remain unsurpassed in the field.
- ◆ Height regulation feature to control the tip to sample measurements and scans which allow for stable, reliable and repeatable results.
- ◆ Full digital control of all Kelvin Probe parameters.



KP Technology



SYSTEM SPECIFICATIONS

- ◆ Work Function resolution of 1-3meV (2-10mm tip)
- ◆ User Defined Tip size (2-10mm standard)
- ◆ User Defined Kelvin Probe Length (Flange to Sample Distance)
- ◆ DN40 (2.75" mounting port) – other options available
- ◆ 50mm Manual Translator (100mm option)
- ◆ Vacuum Compatibility (2 x 10-11mbar)
- ◆ Tracking System with automatic control of tip to sample spacing
- ◆ Off-null detection system with parasitic capacity rejection

SOFTWARE FEATURES

- ◆ Digital Control of all Kelvin Probe parameters
- ◆ Simple set-up procedure for signal optimisation
- ◆ Fast measurement mode for tracking real time work function changes (1000 work function points / min at ~20meV resolution)
- ◆ Export of data to scientific analysis software

SYSTEM PACKAGE DESCRIPTION

- ◆ Kelvin Probe Head Unit with Integrated Tip Amplifier
- ◆ Digital Control Unit
- ◆ Dell PC with monitor
- ◆ Pre-installed KP software and Data Acquisition system
- ◆ Spare Tip Amplifier
- ◆ Autosensing Power Supply Unit
- ◆ 12 Month Warranty

ADDITIONAL OPTIONS

- ◆ Motorized Translation
- ◆ UHVS KP
- ◆ Absolute UHV KP
- ◆ Surface Photovoltage modules SPV020 and SPS030

