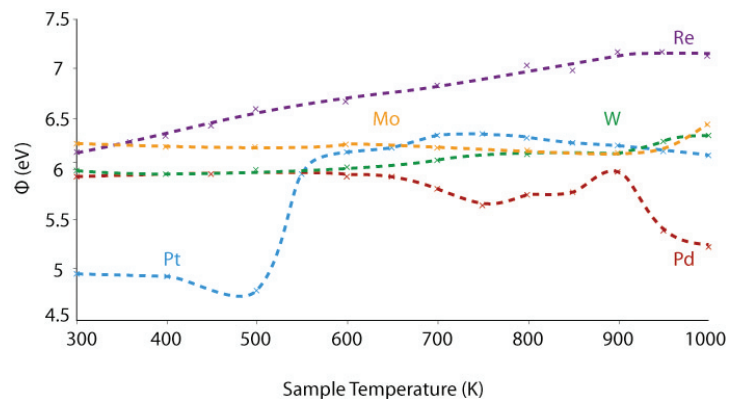


ULTRA-HIGH VACUUM KELVIN PROBE SYSTEMS

UHVKP Corner Cube featuring UHVKP020

SYSTEM DESCRIPTION

Our range of Ultra-high Vacuum (UHV) Kelvin Probes give the user full access to work function (Φ) and contact potential difference (CPD) measurements under vacuum. Each system comes with a high quality manual or motorised translator that enables reliable and accurate tip-to-sample positioning, and the unrivalled tracking system holds the tip separation constant at all times during the measurement. Even under these conditions, the work function resolution is 1-3 meV. The dedicated software allows full digital control of all parameters to match the exact requirements of the sample under investigation. The recorded data is easily exportable to analysis software. The UHV Kelvin probe can be mounted to the user's existing chamber or KP Technology Ltd offers an elegant UHVKP cell system (UHVKP corner cube) that can be used for ambient, UHV or gaseous measurements. This cell is modular and a host of extras can be added-on.



Work Function of Metals versus Temperature under Vacuum
I.D.Baikie et al. J. Vac. Sci. Technol. A, 19.4, Aug 2001

FEATURES

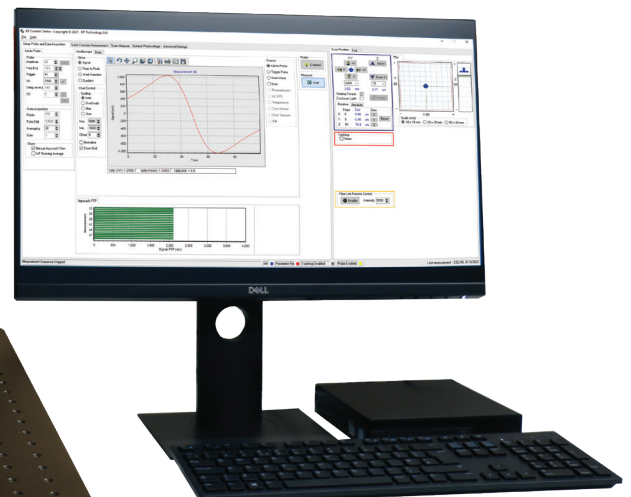
- Work function resolution of 1-3 meV
- Camera and monitor provided (cube system)
- Gaseous or ambient measuring
- Modular system for upgrades and add-ons
- Automatic height regulation
- SPV, SPS and APS options available

APPLICATIONS

- Organic and non-organic semiconductors
- Metals and metal alloys
- Thin films and surface oxides
- Solar cells and organic photovoltaics
- Corrosion e.g. protection and resistance



Example of our UHVKP corner cube system with camera and monitor highlighting the sample position.



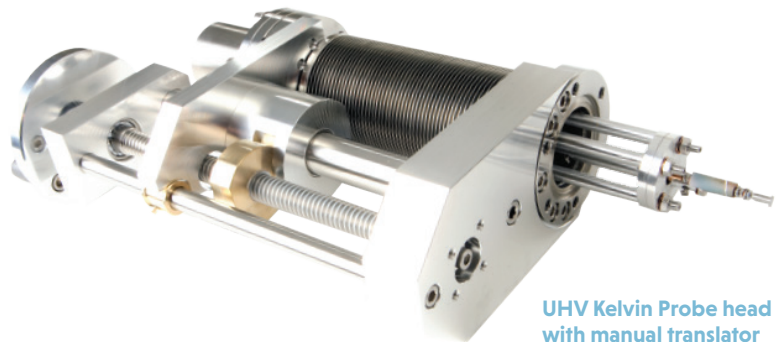
ULTRA-HIGH VACUUM KELVIN PROBE SYSTEMS

UHVKP Corner Cube featuring UHVKP020

SYSTEM SPECIFICATIONS	UHVKP020 - Manual	UHVKP020 - Motorised	UHVKP corner cube
Tip material / diameter	4 mm - 10 mm stainless steel tip		
Work function resolution	1 - 3 meV		
Manual translator sizes	50mm or 100mm manual translators		50mm or 100mm manual translators
Motorised translator sizes		50 mm or 100 mm motorised translators	50mm or 100mm manual translators
Height control (auto)	Approximately 1 - 5 mm by DC offset		Approximately 1 - 5 mm by DC offset (unless motorised)
Visualisation	Single-point work function/contact potential difference scans		
Oscilloscope	Digital TFT oscilloscope for real time signal		
Test sample	DN40 stainless steel shipping sample		
Control supplied	PC control with dedicated software		
Detection system	Off-null with parasitic capacity rejection		
Mounting geometry	Normal to sample surface		
Mounting port	DN40/CF70 (2.75 inch) OD		
Vacuum compatibility	2 x 10 ⁻¹¹ mBar		
Flange to sample distance	User defined	User defined	KP defined
UHV cell	Not included	Not included	2.75" 6 port cell
Warranty	12 Months		

UPGRADES AND ADD-ONS

- Ambient-pressure Photoemission Spectroscopy
- Surface Photovoltage (QTH or LED)
- Surface Photovoltage Spectroscopy (400-1000nm)
- Motorised or manual translators (50 mm to 100 mm)
- Heater stage and/or sample translation



UHV Kelvin Probe head with manual translator

KP Technology has been serving the scientific community since 2000 and has grown to be the leading supplier of Kelvin Probe systems worldwide.

Founded with the aim of bringing new surface research tools to the market, we offer a spectrum of dedicated Kelvin Probe systems for work function and energy level measurement. Our systems have been specially developed for applications in a variety of environments, ranging from ambient and controlled atmosphere to Ultra-High Vacuum. Recent developments include a patented dual mode Kelvin Probe and Photoemission Spectroscopy system for measurement of the absolute work function of a material by photoemission in air.

The range of Kelvin Probe systems offered, and the accuracy of the work function resolution provided by our unique systems is unsurpassed by any other Kelvin Probe supplier.

A strong research and development team, coupled with decades of experience in materials research and characterisation has supported the rapid growth KP Technology has experienced over the years. We now service hundreds of companies and research institutes worldwide in their materials research and characterisation requirements.

KP Technology systems have been named in hundreds of research papers and continue to feature in peer reviewed client publications year after year.

KP TECHNOLOGY

Contact us for more information, to request a quotation or to discuss how our systems can support your research.

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T: +44 1955 602 777

Or visit our website:

www.kelvinprobe.com

KP Technology Ltd. is the proud winner of the Queens Award for Enterprise: Innovation 2018

