

KP Technology

Company Profile



KP Technology is an award-winning company that designs and manufactures Kelvin Probe systems for work function and surface potential measurements. We supply state-of-the-art equipment and consultancy services to innovative companies and research institutes throughout the world. Our in house teaching laboratories ensure you get the best out of your system

The company was founded with the aim of bringing to the market new surface research tools that would allow specialists to investigate surface phenomena, provide equipment pathways for non-specialists and lastly to educate scientists, engineers and technologists in the capabilities of these emerging technologies.

Since inception in 2000 KP Technology has experienced rapid growth and now services over 100 companies and research institutes worldwide in their materials research and characterization requirements. Our team consists of electronic and software engineers, materials research associates, training, sales and administrative staff.

Prof. Iain D. Baikie is the CEO and company founder. He began developing Kelvin Probes for surface analysis in the early 1980's and has over 25 years experience with development and applications. Prof. Baikie is the inventor of the Off-Null, Height Regulated (ONHR) Kelvin Probe system.

Prof. Baikie has held tenure's at Universities and Research Institutes in Europe and USA and has previously been Chairman of a UK University Physics Group. He has published extensively in the fields of surface science and materials research and has pioneered introduction of modern educational tools in Physics Education.

The Baikie System

KP Technology systems are based upon unique features developed by Prof. Baikie, we are currently in our 7th Generation of design, with features unsurpassed by any other company:

- * Highest work function/surface potential resolution.
- * Off null and height regulation features invented by Prof. Baikie.
- * Full digital control of all Kelvin probe parameters.
- * High signal levels, patented signal processing.
- * Excellent system stability and repeatability.
- * Very high rejection of driver talkover noise compared with piezoelectric systems.
- * World's first commercial absolute Kelvin Probe system.
- * Quick change probe tip allowing user selectable spatial resolution.
- * Versatile equipment upgrade paths.
- * Our Signal-to-Noise (S/N) features remain unsurpassed in the field.
- * No expensive lock-in amplifier (LIA) is required.

Surface Photo Voltage Kelvin Probe System (SPV)



The KP Technology SPV range provide modular additions to the Kelvin Probe System giving a seamless upgrade for automatic Surface Photovoltage measurements.

Surface Photovoltage Add-On Module (SPV010)

The SPV010 package includes an LED Light Source (White LED) and enhanced software features to allow SPV measurements. The LED Light Source can be automatically controlled via our standard Kelvin Probe Digital Control Unit.

Surface Photovoltage Add-On Module (SPV020)

The SPV020 package includes an additional Application Module Digital Control Unit for control of a range of light sources, including LED, LUXEON and Quartz Halogen sources. The package also allows for variable intensity and variable frequency measurements.

Surface Photovoltage Spectroscopy Add-On Module (SPS030)

The SPS030 package includes an additional Application Module Digital Control Unit for control of a range of light sources, including LED, LUXEON and Quartz Halogen sources. Also included is a Motorised Monochromator with a wavelength range of 400 to 800 nm. The package allows for variable intensity and variable frequency measurements as well as AC or DC photovoltage measurement options.

Surface Photovoltage Spectroscopy Add-On Module (SPS040)

Surface Photovoltage Spectroscopy: includes light source and Motorized Monochromator, wavelength range 400-800 nm 500x500x500 Optical Enclosure, optical table top 900x600mm AC and DC surface photovoltage measurements.



The SPV020 System Package (shown with optional Optical Enclosure)