

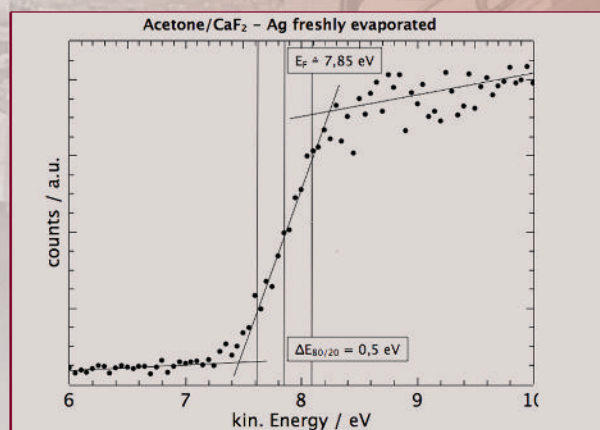
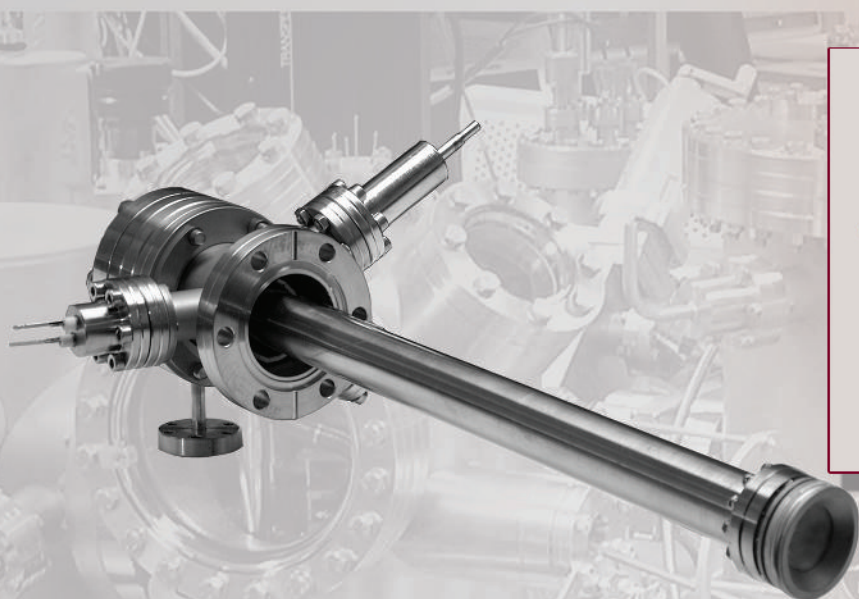


# OmniVac

Surface Analysis and Vacuum Technology

## Inverse Photoelectron Spectroscopy System

### IPES 3000



Density of unoccupied electronic states at the Fermi energy of a silver thin film measured with IPES 3000 detector.

The OmniVac IPES 3000 System is a highly sensitive surface analysis tool for probing the density of unoccupied electronic states between the Fermi and the Vacuum Level, which is not accessible for PES experiments.

Geiger Mueller Tube

Bandpass filter for UV photon detection

Low energy electron source with high beam current

overall resolution 0.5 eV

heating option for resolution tailoring

[www.omnivac.de](http://www.omnivac.de)

# IPES 3000 System

The **OmniVac IPES 3000 System** is a highly sensitive surface analysis tool for probing the density of unoccupied electronic states between the Fermi and the vacuum level, which is not accessible for PES experiments.

The IPES 3000 system consists of an UV bandpass photon detector based on an Acetone/Argon filled Geiger Mueller tube with CaF<sub>2</sub> entrance window, mounted on a DN 40 CF UHV flange.

The electron source is fully UHV compatible and mounts on a DN 40 CF flange. The thermionic emission of electrons is achieved from an indirectly heated BaO cathode.

The electron beam is characterized by a high beam current in the low energy range and a small energy distribution. Electron beam energy, beam current and spot size are independently adjustable over wide ranges.

## IPES 3000 Detector

<i>Detector</i>	GM Tube with gas mixing station
<i>Window</i>	CaF <sub>2</sub> (standard), other materials possible
<i>Gas filling</i>	Acetone/Argon (standard)
<i>Resolution</i>	0.5 eV (overall)
<i>Mounting flange</i>	DN 40 CF
<i>Data acquisition</i>	Preamplifier and pulse counter with USB interface
<i>Data processing</i>	Software for signal counting
<i>Remote control</i>	Electron source energy control

## Low Energy Electron Source System

<i>Beam energy</i>	1 eV - 200 eV
<i>Beam current</i>	1 nA to 20 $\mu$ A
<i>Spot size</i>	0,5 mm to 5 mm at 20 mm working distance
<i>Working distance</i>	Range: 5 mm to 100 mm, 20 mm recommended
<i>Filament</i>	BaO
<i>Mounting flange</i>	DN 40 CF
<i>Power supply</i>	All necessary voltages to drive the electron source
<i>Computer/Remote control</i>	USB

- ▶ GM-tube UV-Detector
- ▶ standard configuration  
Acetone/Argon + CaF<sub>2</sub> window  
resolution 0.5 eV
- ▶ window heating option
- ▶ other configurations possible

### **Related products:**

**Front window heating for resolution tailoring**



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