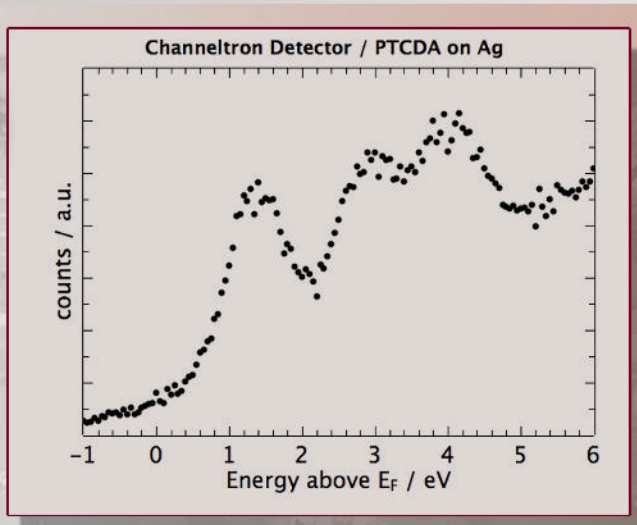
OmniVac

Surface Analysis and Vacuum Technology

Inverse Photoelectron Spectroscopy System

IPES 2000



Density of unoccupied electronic states of the organic semiconductor PTCDA measured with IPES 2000 detector.

The OmniVac IPES 2000 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.

- Solid state detector (channeltron)
- Bandpass filter for UV photon detection
- Low energy electron source with high beam current
- overall resolution 0.9 eV
- easy-to-use

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IPES 2000 System

The **OmniVac IPES 2000 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 2000 system consists of an UV bandpass photon detector based on a NaCl coated channeltron in combination with a SrF_2 entrance window.
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 2000 Detector

Detector	Solid State Detector (NaCl)
Window	SrF_2 (standard), other materials possible
Resolution	0.9 eV (overall)
Mounting flange	DN 40 CF
Data acquisition	Preamplifier and pulse counter with USB interface
Data processing	Software for signal counting
Remote control	Electron source energy control (USB)

Low Energy Electron Source System

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

- channeltron UV-Detector
- standard configuration
  $NaCl/SrF_2$
  resolution 0.9 eV
- window heating option
- other configurations possible

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OmniVac
Hertelsbrunnenring 30
D-67657 Kaiserslautern / Germany

Tel +49 (0) 631 3110740
Fax +49 (0) 631 28056
sales@omnivac.de