

### 17.2.1.1 Ultraviolet photoelectronspectroscopy (UPES)

Acronyms: UPES, UVPES, UPS, UVPS

The use of the name: photoemission spectroscopy (PES) is discouraged.

*Ultraviolet photoelectronspectroscopy* is a fixed photon-frequency technique useful for elucidation of valence structures of atoms, molecules, surfaces and chemisorbed particles.

Incident: Fixed energy UV photons (4-40 eV).

Flux: high Angle of incidence: 0-85° (not critical).

Detected: electrons: 0 eV to within a few eV of the incident photon energy. Angle of exit: Polar and azimuthal angles fixed. Polar angle usually in range 10 - 80°. Azimuthal angle not critical.

Spectrum: Photoelectron count rate vs. analysing energy (photoelectron energy or ionization energy).