The Scanning Electron Microscope (SEM) at UWS is a Hitachi Regulus SU8230, a a cold cathode field emission SEM(FE-SEM) with an anode heating system and mild flashing function ensuring long-term stability and high performance.
The accelerating voltage range is 500V -30kV(Normal optics) and 10V-2kV (decelerating optics) which permits imaging of all solid surfaces including beam sensitive samples.
The resolution of the system is 0.6 nm at 15kV accelerating voltage and 4mm working distance at 270kX magnification.
With a large 150mm exchange chamber the SEM can accommodate a 6 inch semiconductor wafer for analysis.
In addition to secondary electrons providing high resolution images, several other detectors installed on the system expand the capability of the SEM and include :

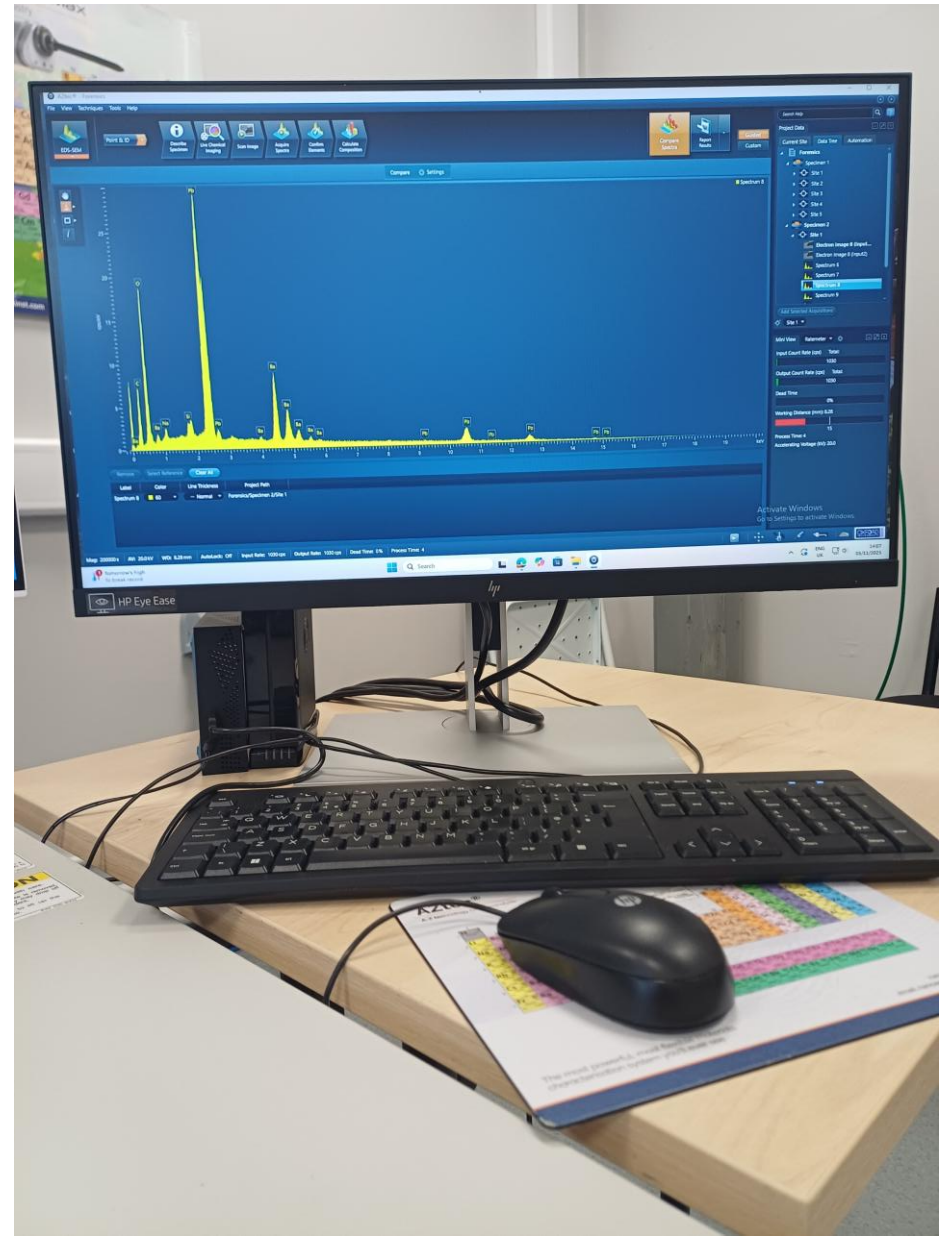
- A five-segment solid state backscatter detector providing compositional information in multi-phase samples by way of atomic contrast .
- An Oxford instruments N-Max^{N} 80 EDS detector with Aztec software; a powerful analytical tool for material characterisation providing elemental analysis.
- Hitachi Transmitted electron detector(STEM):Bright field& Darkfield.
- Oxford Instruments Aztec Symmetry S2 EBSD detector with AZtec HKL software which is a powerful, flexible tool for investigating grain size, grain boundaries and microstructure.


HITACHI
Regulus 8230
AZtecLIVE powered by Ultim Max


HITACHI
Regulus 8230


OXFORD
X-Max


80
OXFORD INSTRUMENTS
X-Max^N
SYMMETRY


HP Eye Ease