



REDI

ADVANCED MATERIALS CHARACTERISATION FACILITY

RESEARCH ENGAGEMENT | DEVELOPMENT | INNOVATION

Western Sydney University has an Advanced Materials Characterisation Facility (AMCF) that is home to a suite of state-of-the-art instruments for materials characterisation. The AMCF specialises in assisting researchers, students and industry with material analysis and characterisation.

The AMCF has a wide variety of instruments for material and biological characterisation including:

- SEM JEOL 7001F (FEGSEM and microanalysis).
- SEM JEOL 6510 LV (Low Vacuum with EDSmicroanalysis).
- SEM JEOL 840 (SEM, EDS and X-ray mapping).
- JEOL EM Probe 8600 (EDS/WDS and XRM).
- Bruker D8 Advance Powder Diffractometer (XRD) with High Temperature stage and grazing incidence.
- Digital Nanoscope III AFM.
- Thermal Characterisation Instrumentation:
 - TGA/DSC Netzch STA449C Jupiter.
 - DSC Netzch 204 F1 Phoenix.
 - Simultaneous evolving gas analysis by infrared spectroscopy (FTIR) and TGA/DSC.
- Surface Area and Porosity Analyser (Micromeritics ASAP 2020).

- Vibrational Spectroscopy (FTIR and Raman).
 - Mid infrared microscope Hyperion 1000 attached to the Bruker Vertex 70 spectrometer.
 - Hybrid Fourier Transform/Dispersive Raman microscope Bruker Ramanscope III Senterra.
 - Combined Fourier Transform Infrared/ Raman spectrometer Bruker Vertex 70 & RamII Module.

The AMCF instruments can be used for:

- The characterisation of materials and biological structures at the micro and nano scales.
- Identifying elements & compounds.
- Characterising chemical composition (X-ray analysis and mapping).
- Thermal analysis.

Located at the Parramatta South Campus the AMCF offers:

- Access to state-of-the-art expertise and instrumentation.
- Research support.
- Training in use of instrumentation.
- Range of short course and workshops. These include SEM, EDS, XRM, XRD, Raman, Thermal Characterisation and Instrumentation Maintenance.
- Contract research and development.
- Grant aided research.
- Testing services.
- Fee for service and direct access (priority access is available to industry on request).



**FOR FURTHER INFORMATION
ON HOW TO ACCESS THE AMCF
PLEASE CONTACT:**

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