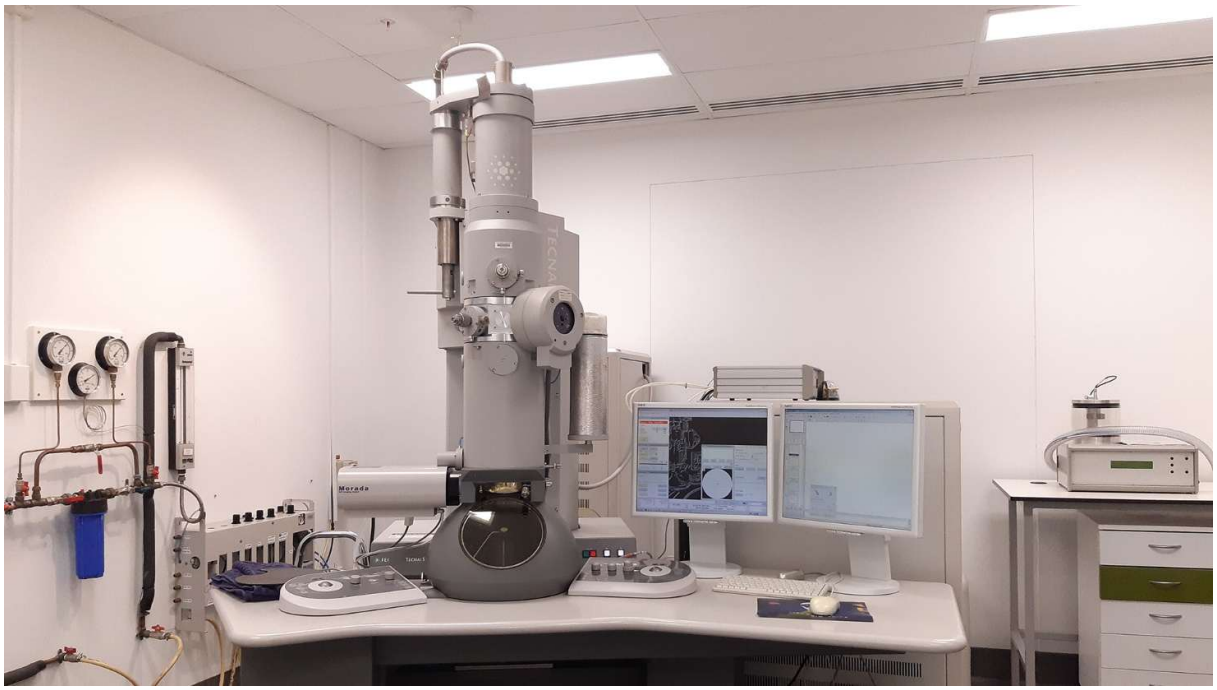
Waipapa Taumata Rau University of Auckland

Tecnai G² Spirit Twin transmission electron microscope



Introduction

The TEM is used for imaging negatively stained particles such as extracellular vesicles or ultrathin sections on grids that have been stained with heavy metals that provide contrast. This 120kV machine is also capable of acquiring a tilt series.

Camera

- *Olympus-Soft Imaging Systems Morada*
- *high resolution: up to 11 MegaPixels*
- *extensive dynamic range: 14 bits*
- *2x, 4x, 8x binning*

Applications

- *Sample screening and data collection of negatively-stained single particle samples*
- *Conventional TEM imaging of prepared tissue sections or other stained material.*
- *2D and 3D tomographic imaging*

- *Xplore3D (tomographic reconstruction)*
- *Visage Imaging Amira (3D visualisation and analysis)*

Software

- *Tecnai User interface*
- *ITEM FEI Image capture*
- *TEM Image and Analysis software*

Specifications

- *Accelerating voltage range of 20 to 120 kV.*
- *Magnifications 18x - 650,000x*
- *Electron Source: LaB6 Emitter*
- *Point resolution: 0.34 nm; Line resolution: 0.2 nm*
- *Eucentric Tilt: +70°*

Sample preparation equipment

- *Leica Ultramicrotome*

Contact person

Ratish Kurian

IT Systems Specialist, Technical Services

Email: r.kurian@auckland.ac.nz

Telephone: 021 182 0664