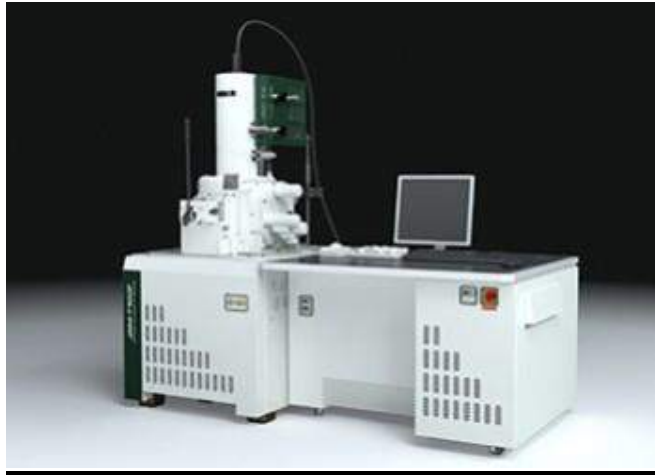




Instrument Details: Field Emission Scanning Electron Microscopes with EDS



Make : JEOL, Singapore

Model : JEOL JSM-7100F

Specification:

The 7100 is a Field Emission Scanning Electron Microscope (FE-SEM) with a hot (Schottky) electron gun. It was installed in 2013 and is ideal for imaging and analysis of micro- and nano-structures. It has a resolution (sample dependent) of 1.2nm at 30kV and 3.0nm at 1kV. It is equipped with a GATAN Alto2500 cryo-preparation system for cryo scanning electron microscopy (cryo-SEM) that allows suitable liquid or hydrated specimens to be examined frozen. The 7100 also has a JEOL 129eV resolution silicon drift detector (SDD) for X-ray Energy Dispersive Spectroscopy (EDS) microanalysis.

Principle specifications:

Resolution (SE image): 1.2nm (30kV), 3.0nm (1kV)
- 3.0nm (15 kV, WD10mm, probe current 5nA)

Magnification: - x10 to $\times 1,000,000$

Image: Secondary electron image, Back scattered electron image

Accelerating voltage: 0.2kV to 30kV

Probe current: Maximum 200nA

Electron gun: In-lens thermal electron gun

Objective lens: Conical objective lens

Specimen stage

- 5 axes motor controlled specimen stage

- X-Y: 70mm to 50mm, Z: 3mm to 41mm

- Tilt: -5 to +70degree, Rotation: 360degree endless

Option

- EDS, WDS, EBSD, CL, Low vacuum mode, TTL system, Electron beam lithography



Centre for Nano and Material Sciences

JAIN UNIVERSITY

Declared as Deemed-to-be University u/s 3 of the UGC Act 1956

User Instructions:

After installation of the instrument, instructions will be circulated.

Contact Us

Faculty in charge: Prof. Geetha R Balakrishna

E-mail: br.geetha@jainuniversity.ac.in

Contact number: +919886150598