Introduction of New Products

High Throughput Electron Microscope

JEM-2800

The JEM-2800 is a new transmission electron microscope that achieves nano-area analysis through Automation and Convenience, while being Easy-to-use so that expert results can be achieved by operators of any skill level. The advanced electron optical system of the JEM-2800 makes it possible to perform high-resolution TEM and STEM imaging, EDS, EELS, tomography and in-situ observation on the same sample without sacrificing any of these capabilities. This next-generation TEM provides innovative solutions through its high performance and user-friendly operation.

Automation
The JEM-2800 can be operated using fully automatic functions for contrast, brightness, specimen Z position (height), crystal zone axis alignment, focus and astigmatism correction. Each function can be simply executed by pushing the corresponding button.

Performance
The JEM-2800, with its new electron optic system, achieved both high resolution imaging and high speed analysis. A variety of preset beam data are available to insure the optimum settings for the sample or analyzing technique, enhancing the speed and accuracy of analysis. The microscope is image rotation free and positional shift of the area of view in the entire magnification range from low to high resolution imaging, and when the mode is switched between TEM and STEM. This includes rapid, easy imaging and analysis in all imaging modes.

All – in – one
The JEM-2800 has the capability to observe TEM, STEM and SE (secondary electron) images along with electron diffraction patterns. In scanning mode BF-STEM, DF-STEM and SE images can be observed simultaneously. With the addition of EDS and EELS systems, microscope operation from initial search to final analysis can be performed seamlessly.

Quick Turn Around Time
These features combined enable for quick specimen observation and data collection, realizing quick turn around time between specimens.

JEM-Navi
The JEM-2800 incorporates a new operation navigation system, "JEM-Navi". This system makes the JEM-2800 easy to be used for operators with any level of skill.
**Introduction of New Products**

**Thermal Field Emission Scanning Electron Microscope**

**JSM-7800F**

The new JSM-7800F has been developed to be an ultimate research tool suitable for institutions requiring a large variety of material research.

The newly developed super hybrid objective lens (SHL) provides the resolution of 0.8nm at 15kV and 1.2nm at 1kV. The SHL objective lens allows researchers to study magnetic samples at high magnification.

The in-lens thermal FEG produces an extremely stable probe current.

Addition to the observation of fine surface structures, the JSM-7800F enables researchers to analyze sub-micron structures with EDS, WDS, and EBSD.

---

**Extreme resolution**
The super hybrid objective lens provides extreme resolution of 0.8nm at 15kV and 1.2nm at 1kV.

With a very low incident electron energy, extremely fine surface structures are revealed.

The distribution of materials can be observed even at 0.5kV.

**Fast and high precision analysis**
The aperture angle optimizing lens keeps the electron probe small even at large probe currents.

A large probe current allows you to analyze samples quickly without sacrificing the precision and quality of the analyses. A variety of analytical systems including EDS, WDS, and EBSD are available.

Distortion free EBSD patterns are obtained for high precision crystal structure analysis.

**High stability, consistency in acquired data**
The in-lens thermal FEG produces an extremely stable probe current.

The Highest Performance is always available when you need it. Results obtained by multiple users or on different days are consistent and easy to compare.

**No limitation in specimens**
The super hybrid lens is a field free lens at the analytical working distance.

Magnetic samples can be observed and analyzed at high magnification.

Non conductive samples are easily observed.

**Come closer to the nano-world**
The super hybrid objective lens brings you closer to the nano-world. The objective lens delivers superb high resolution even at extremely low electron energies. This is necessary to observe and analyze nano size structures.

The super hybrid objective lens can be used to observe and analyze magnetic materials at high magnifications.

**Detectors**
A variety of detectors can filter electrons from the specimen by energy and emission angle.