

JEOLink

JEOL USA Newsletter

November 2007

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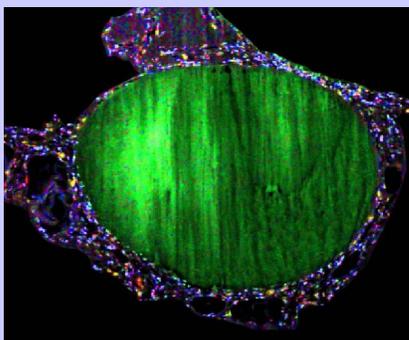
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Cross Section



The SEM image of a cross section of a fake eyelash coated with mascara demonstrates the precision of the JEOL cross section polisher.

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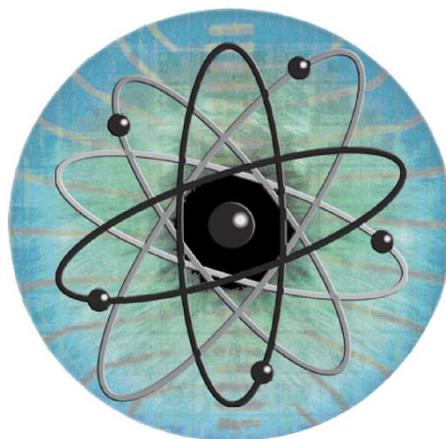
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Look an Atom in the Eye



Groundbreaking performance in electron microscopy will have a major impact on fuel cell, semiconductor, and nanotechnology research.

At the Microscopy & Microanalysis meeting on August 7th, an invited presentation entitled "Development of Spherical Aberration Corrected 300kV FE-TEM" revealed data from a next-generation TEM that has been jointly developed by JEOL Ltd. and Tokyo Institute of Technology, and funded by the Core Research of Evolutional Science and Technology (CREST) project of the Japan Science and Technology Agency.

The CREST microscope achieved a resolution of 0.5 Angstroms - the diameter of a hydrogen atom - at Tokyo Institute of Technology's Surface and Nanoscale Science Research Group under the direction of Professor Kunio Takayanagi.

"This is a major accomplishment that pushes the boundary of high resolution to the point where single atoms can be imaged and their chemistries determined," says Dr. Mike Kersker
Vice President and TEM Product Manager at JEOL USA.

JEOL USA Mission Statement

Achieve customer fulfillment and loyalty by delivering outstanding technology and superior support while maintaining a leadership position in the industries and institutions that we serve.

See Us at These Upcoming Meetings and Tradeshows

JEOL

Connecticut Microscopy Society Fall Meeting

Nov 7
Weslyan University

ISTFA - 33rd Annual International Symposium for Testing & Failure Analysis

Conference: Nov 4-8

Exposition: Nov 6-7

McEnery Convention Ctr
San Jose, California
JEOL: Booth #301

Demonstrations of JSM-6490LV SEM.
Introduction of MultiBeam for failure analysis.

Fall MRS

November 26 - 30, 2007
Exhibit: November 27 - 29
Hynes Convention Center and
Sheraton Boston Hotel
Boston, MA
JEOL: Booth #700

American Society of Cell Biology

47th Annual Meeting
December 1-5, 2007
Washington Convention Ctr
Washington, D.C.
JEOL: Booth #315
See why JEOL is the worldwide leader in TEM

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"Such high performance instruments offer far reaching opportunities to finally understand materials at the nanometer and Subnanometer level. We can now look an atom in the eye, ask it a question, and get a straight answer. There are very few mysteries and secrets in the materials world that we cannot unravel with these new microscopes."

The CREST microscope features two spherical aberration correctors- one for the illumination system and one for the image forming system each located above and below the specimen respectively. The instrument utilizes electrons with uniform energy produced from a cold field emission gun. The microscope has a new cold field emission gun (CFEG) and high-rigidity console plus an upgraded electron optic system to enhance essential factors such as power stability and mechanical stability.

MIT and Boston Japanese Consulate Host President of Tohoku University

Global Nanorace for New Materials Spurs Research and Industry



Prof. Inoue of Tohoku University (right) discusses bulk glassy alloys with Prof. Ned Thomas, head of Dept. of Materials Science & Engineering at MIT(left), and JEOL USA CEO and President Bob Santorelli (center).

Massachusetts Institute of Technology and the Consulate General of Japan in Boston hosted a seminar on Advanced Materials presented by [Professor Akihisa Inoue](#), President of [Tohoku University of Japan](#). Prof. Inoue addressed an audience of MIT materials science students and faculty, as well as representatives from JEOL USA who assisted with the event, in an MIT lecture hall on Wednesday, September 19th.

Marking the occasion of Tohoku University's 100th anniversary and the university's new initiatives in nanotechnology and materials science research, Professor Inoue is visiting key universities and research institutions around the world. He was an invited speaker at the Materials Science & Technology (MS&T) conference in Detroit, Michigan, where he discussed "Characteristics and Applications of Fe-based Bulk Glassy Alloys."

The university's new [WPI Research Center for Atom - Molecule - Materials](#) will pursue the creation of new compounds and materials with innovative functions, the construction of new devices, and the promotion of the research.

Inoue began his relationship with JEOL when he selected scientific instrumentation for his labs some years ago.

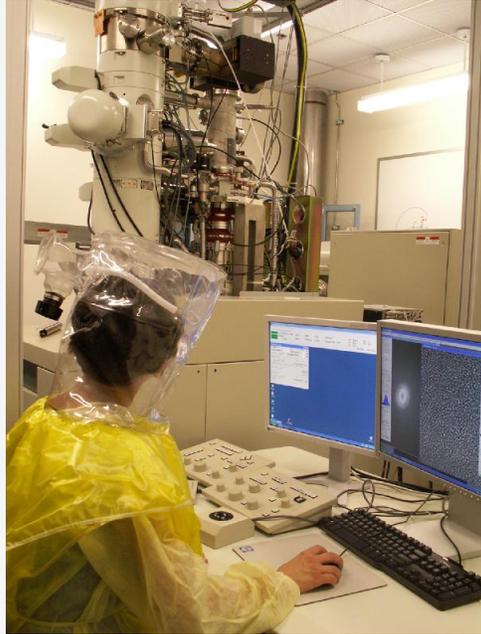
[Papers/Presentations at Fall MRS](#) by Prof. Inoue.

[Full story.](#)

Visit a REALab



Follow our REALab link above to where we spotlight researcher's work using JEOL electron microscopy or JEOL analytical instruments, and how their scientific advances are impacting their field.



Cross-Atlantic TEM Operation

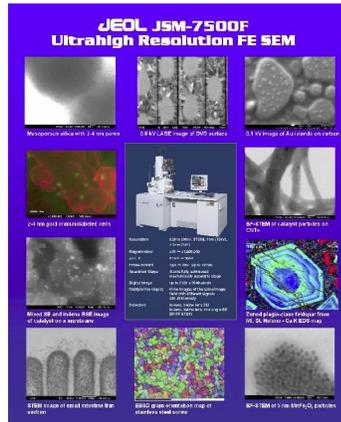


From the new Global Lab at Imperial College London (part of the AtlanTICC Alliance with [Georgia Institute of Technology](#) and the [Oak Ridge National Laboratory](#)), the Minister of State for Science and Innovation "controlled and manipulated one of the world's leading electron microscopes at Oak Ridge, the [JEOL 2200FS Aberration Corrected Electron Microscope \(ACEM\)](#). In this extremely powerful microscope, electrons are focussed into a probe that is less than 0.0.1nm in diameter, which is less than the length of a typical chemical bond. By scanning this probe across a sample, it is possible to analyse individual atoms."

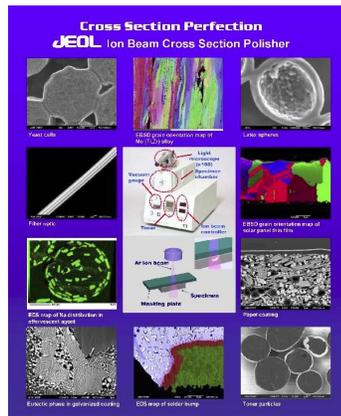
[Full Story](#)

New Posters for Display

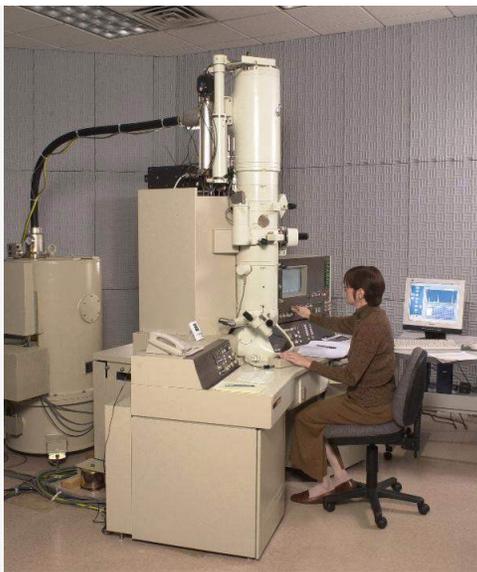
New 20 x 18 posters to decorate your lab. Please contact us at jeolink@jeol.com if you would like any of the free posters below.



Ultrahigh Resolution FE SEM



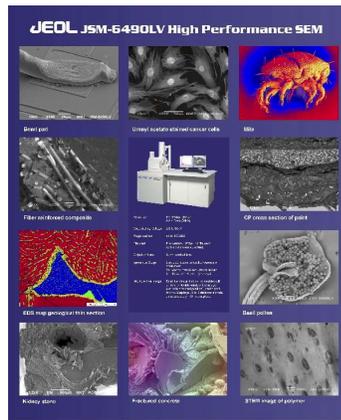
Cross Section Perfection



SEM Specimen Holders



JEOL USA has the widest offering of sample holders for SEMs. Follow the link above to our Parts Online pages to see the selection. We also work closely with our customers when they have unique requirements. For more information, contact us at salesinfo@jeol.com.



Popular JSM-6490LV SEM

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