TEM • CROSS SECTION POLISHER • MICROPROBE • SEM • ANALYTICAL MICROSCOPES

JEOL ink

JEOL USA News - Imaging & Microanalysis and More

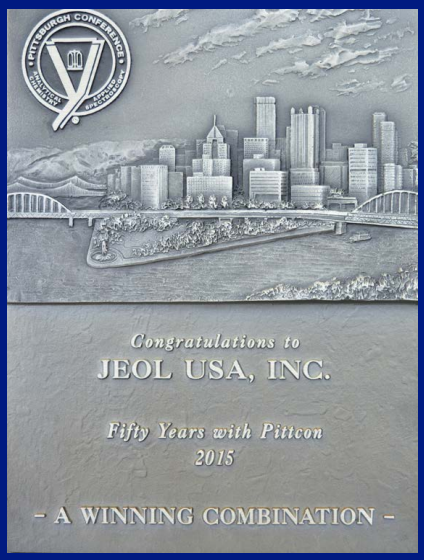
Issue: #56 April 2015

Upcoming Events

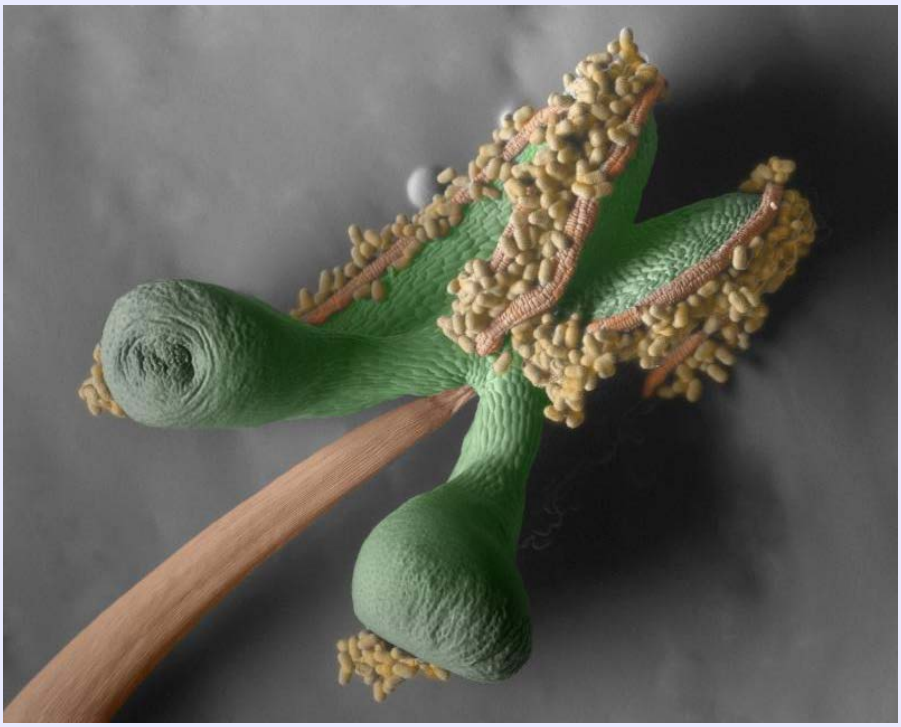
2015 Schedule of Events Online

To request a demo please contact your local sales representative.

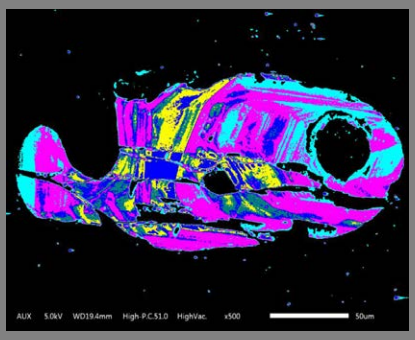
JEOL is proud to have received this special plaque from Pittcon commemorating our 50th year of exhibiting at the conference.



2015 Image Contest - Congratulations Our February and March Winners



February Winner
Subject: Anther of Commelina erecta
Credit:José R. Almodóvar Rivera, University of Puerto Rico Mayagüez
Method/Instrument: Dehydrate, critical point drying, and sputter coated, and false color added / JEOL 5410 LV



Take a fresh approach to SEM!

Nano Guppy.
Panchromatic cathodo-luminescence image of a zircon.

"Shedding Light on Cathodoluminescence - a Low Voltage Perspective"

JSM-IT300LV versatile, analytical tungsten SEM

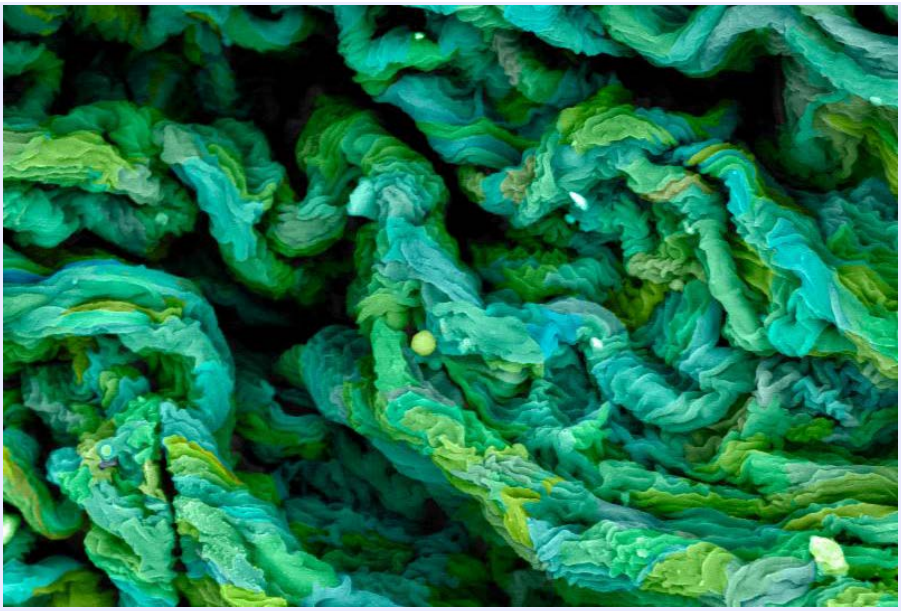
JSM-6010PLUS LA a new class of tungsten SEM

2015 Training Schedule at JEOL USA

Hooke College of Applied Sciences SEM/TEM Training

JEOL in the News and in Print

A Mobile Biosafety Microanalysis System for Infectious Agents

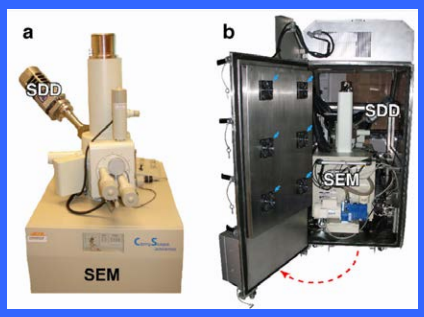


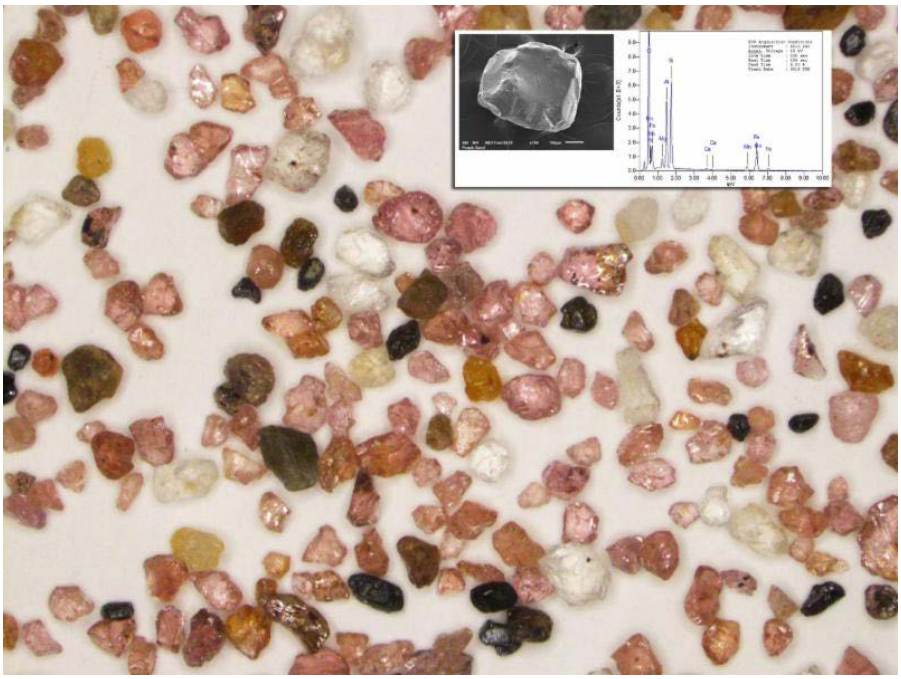
March Winner
Subject: Dried pieces of hot silicone
Credit: Maria Paula Rodriguez, Universidad de Los Andes
Method/Instrument: JSM-6490LV, Photoshop enhanced color

Take your best shot and enter the 2015 Image Contest! Learn more about the image contest details and visit our image gallery on our website.

Blog: Why is the Sand Purple at Plum Island Beach?

Typical New England beach sand differs in color from light and dark grey to medium tan based on its common mineralogy, but at Plum Island Beach there are swatches of purple sand that appear haphazardly as one walks along the shore. While looking for snowy owls in the dunes, three coworkers from JEOL spotted the mysterious sand and brought it back to be analyzed using the JSM-6010 SEM with EDS. (Hint: it's the January birthstone.) The investigation and data are explained in our new Blog.





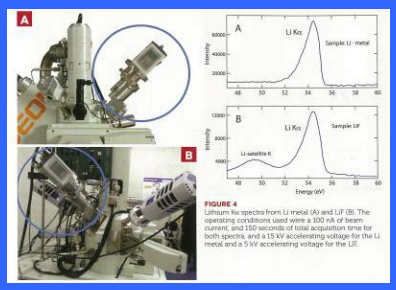
[The Revealed River Wonders](#) - new book of Diatome images and fashion

Glossary of TEM Terms

An excellent resource for terms applying to Transmission Electron Microscopy can be found on the JEOL global website. Just search by word or alphabetically.

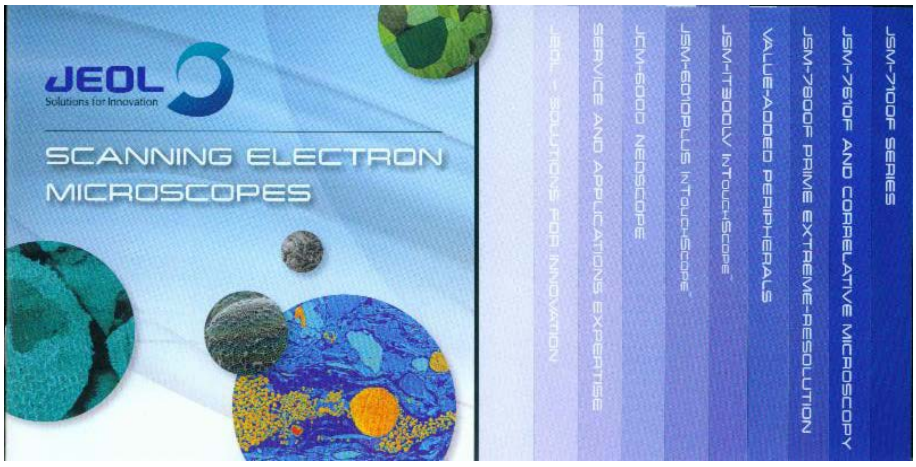
[Glossary of TEM Terms >>>](#)

[A Unique Wavelength-Dispersive Soft X-ray Emission Spectrometer for Electron Probe X-ray Microanalyzers](#)



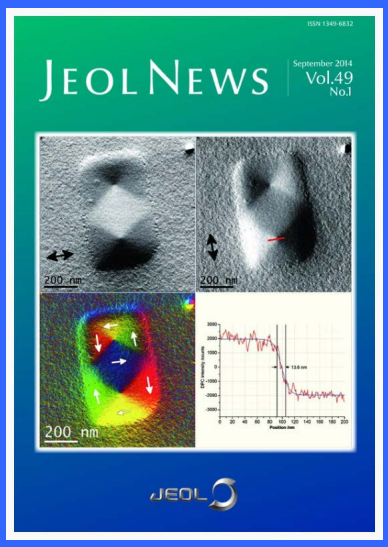
Flip Through the SEM Selection Guide

Flip through the booklet at the link for a concise overview of JEOL SEMs and peripherals. From the benchtop SEM to the ultrahigh resolution field emission SEM, cross section polisher and more, learn more about the capabilities of each. The link will take you to the booklet at the bottom of the web page.



[Application of High-Resolution MALDI-TOFMS with a Spiral Ion Trajectory for the Structural Characterization of Free Radical Polymerized Methacrylate Ester Copolymers](#)

JEOL News 2014
Request a printed copy or download (click on image) - registration required.



Superhigh Resolution EM Stimulate Progress in Materials Science

Quick Links

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A Note on Resolution

For decades the SEM community has struggled with a consensus way to measure and report resolution. Resolution (or Resolving Power) is defined as the ability of an optical instrument to produce separate images of closely placed objects. One has to be careful with definitions when this topic is discussed. Resolution is not "image quality." Image quality is a function of the resolution (usually viewed indirectly as the sharpness of the image when resolution is not specifically being measured or very fine structures are not being observed) and the signal-to-noise ratio (viewed indirectly as the graininess or lack thereof in the image). Factors such as the size of the nanostructure in the sample being imaged, the inherent contrast mechanism of the sample being viewed, the beam sensitivity of the sample, brightness and contrast settings, etc. contribute to or take away from the final image quality - either the resolution part or the signal-to-noise part or both.

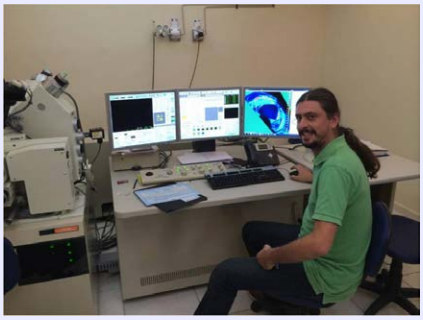
Read the full Technical Note >>>>

See all our SEM technical notes online in our Resources section of the JEOL USA website.

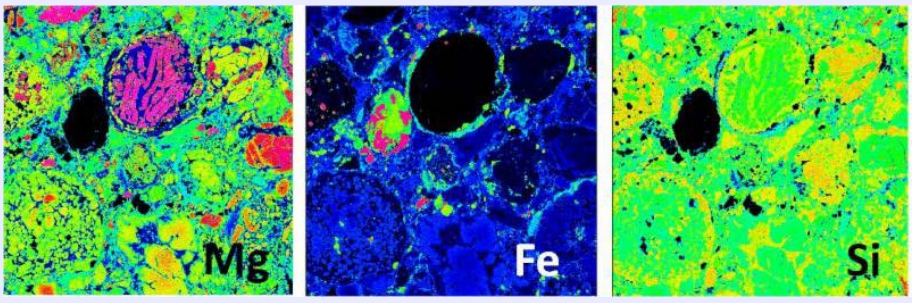
EPMA Lab at UNESP a Resource for Mining Industry in Brazil

The EPMA laboratory at UNESP (Universidade Estadual "Júlio Mesquita Filho"), Rio Claro campus is a multi-user facility supported by the State of Sao Paulo Foundation FAPESP. The goal of the lab is to support the mining industry and all the scientific research within the state as well as requests from other states.

The lab is managed by Dr. George L. Luvizotto, a geologist. Dr. Daniel Godoy, also a geologist, has been recently hired to assume the EPMA day-to-day operations.



Dr. George Luvizotto



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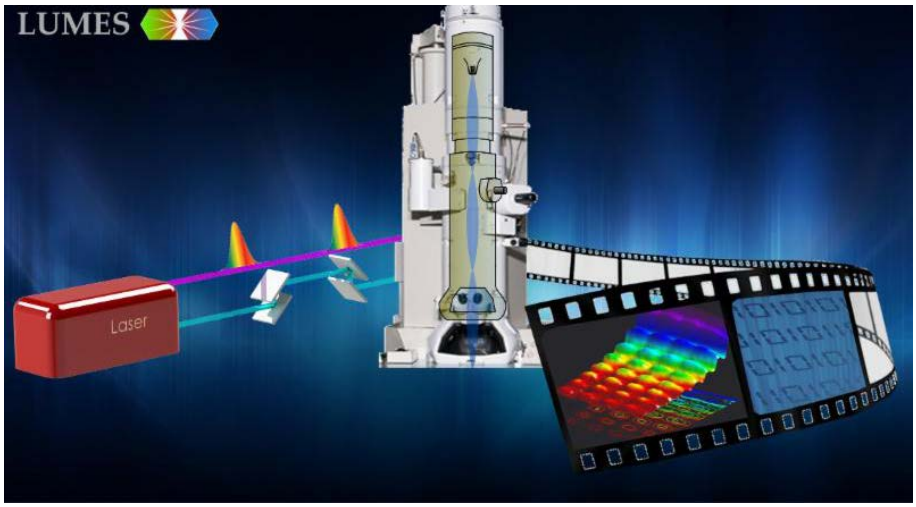
Magnesium, Iron and Silicon map intensities recently obtained at the EPMA UNESP facilities. The laboratory will support vigorous research programs at the Geosciences and Exact Sciences Institute, however, as a multi user facility is expected to collaborate with other research groups around Brazil and other countries around the world. More>>>

Photographing Light



How do you take a photo of light itself? The JEOL 2100 TEM was used to take the first ever photograph of light as both a particle and a wave. This new paper describes the successful experiment that used the way electrons interact with light to show its dual nature. http://bit.ly/18eFBzf for the simple explanation and a movie! And http://bit.ly/19ejQRe for the full paper.

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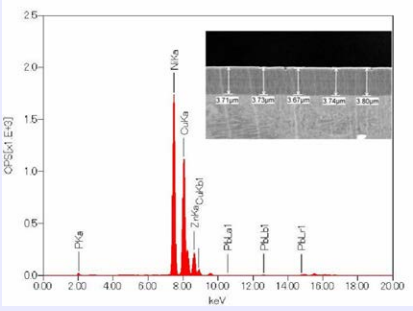
Archived Issues

Applications Corner

Plating Analysis with SEM and XRF



Both SEM and XRF analysis can provide complementary information on plated samples. Read this application note or learn more about the ElementEye XRF.