

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

JEOLink

JEOL USA News - Imaging & Microanalysis and More

Issue: #53

November-December 2014

Upcoming Events

[Our new 2015 Schedule of Events is Now Online](#)

To request a demo please contact your local sales representative.



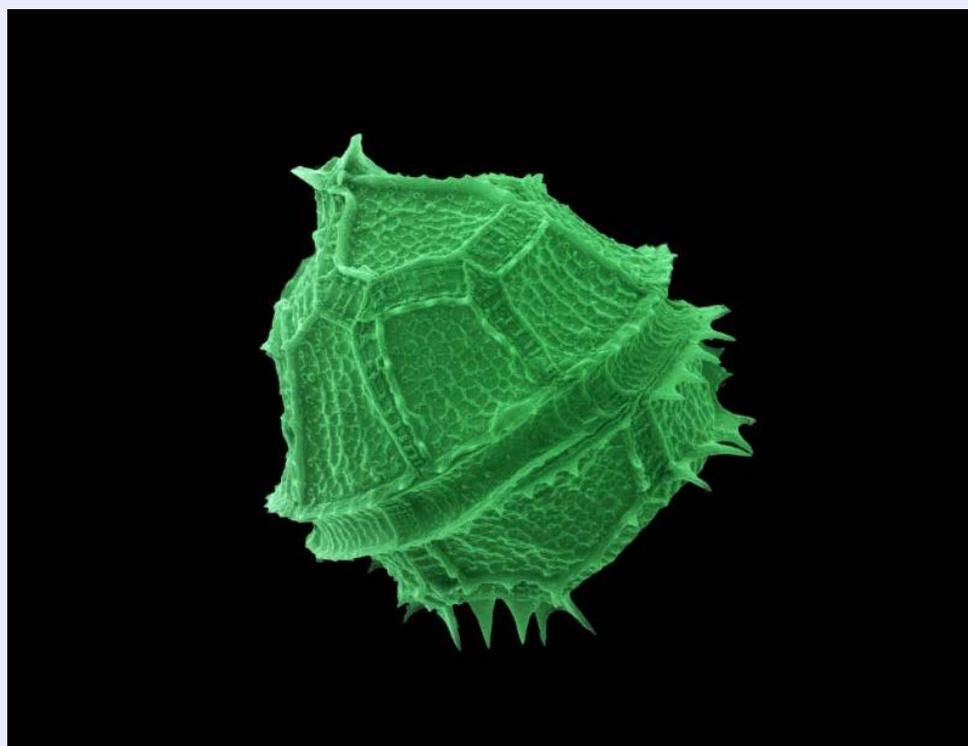
[2015 Training Schedule at JEOL USA](#)

[Hooke College of Applied Sciences SEM/TEM Training](#)

JEOL in the News and in Print

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

Wrap Up: JEOL 2014 Image Contest

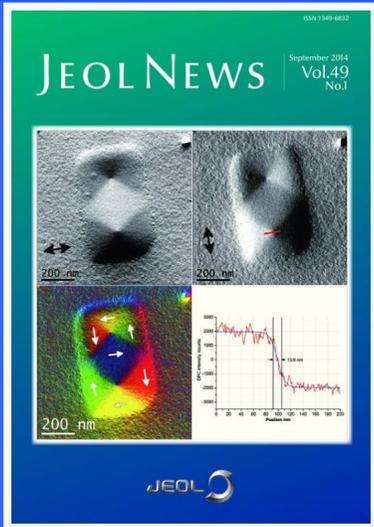


The Winning Image for December "Bioluminescens" ~ A Dinoflagellate Responsible for Bioluminescens in Parguera Bay José Almodóvar, University of Puerto Rico, Mayagüez Campus Imaged with JEOL 5410LV SEM

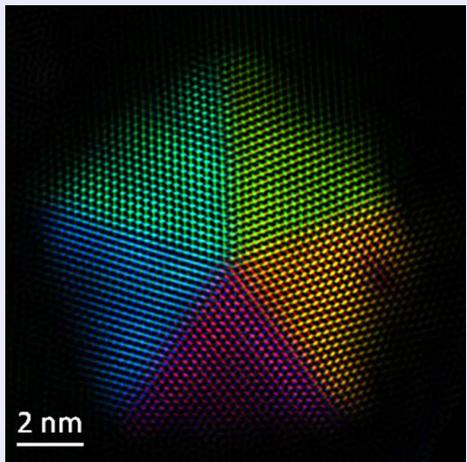
CONGRATULATIONS to José Almodóvar, who had two winning images in 2014, including "Bioluminescens" selected for the month of December.

Also, **CONGRATULATIONS** to all the winners and those who submitted photos for our first Image Contest. The choices were not always easy because there were so many excellent submissions. Because of that, all images submitted between November - December will roll over into our 2015 contest.

Congratulations to Our Grand Prize Winners for 2014



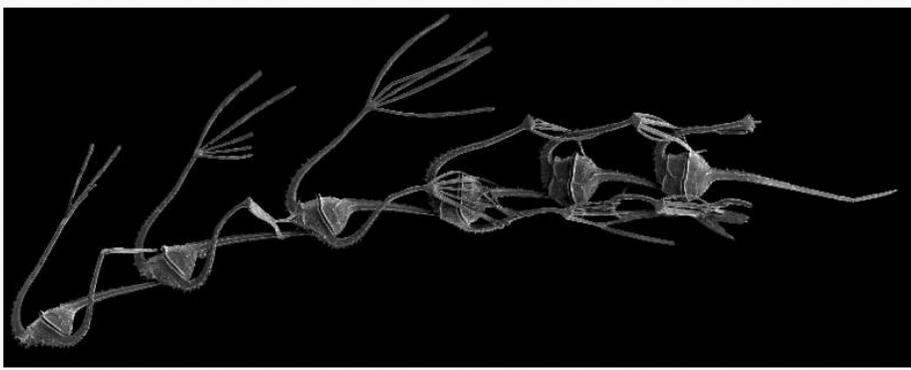
Prof. Moon Kim, University of Texas, Dallas for "Birth of a Nanostar"
 - A pseudo-colored STEM HAADF image of a Pd-Rh bimetallic nanoparticle during the early stages of its formation. The five distinct regions are indicative of its five-fold rotational symmetry, colored for easy viewing. Credit: Moon Kim's group: Ning Lu, Jinguo Wang - University of Texas (Dallas). Sample from Prof. Younan Xia at Georgia Tech. Method/Instrument: JEM-ARM200F STEM HAADF imaging, pseudo-coloring.



Superhigh Resolution EM Stimulate Progress in Materials Science



Prof. André Rochon, ISMER-UQAR for "Neoceratium ranipes Daisy Chain." Six cells of the dinoflagellate *Neoceratium ranipes* with the "fingers" extended at the end of the antapical horns. Dinoflagellates are an important component of marine phytoplankton. The samples was collected in 2007 off the west coast of Mexico in the Pacific Ocean. Method/Instrument: Composite of 9 high resolution images taken at 500x with a JSM-6460 LV SEM microscope at 2.9 kV. (Oriented horizontally for inclusion in the newsletter.)



CSI for Animals: How an Oregon Lab Practices Forensics - Real-time analysis with JEOL mass spectrometer.

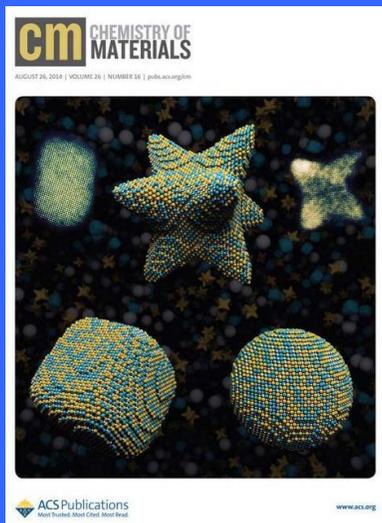


Untested, Unregulated Teen Supplements - Real-time analysis with JEOL AccuTOF-DART mass spectrometer.

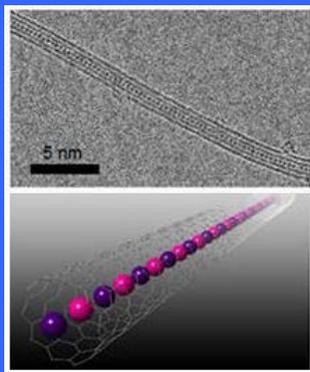


JEOL 2015 Image Contest - yes, let's do it again! Here are the Contest Guidelines. Please send us your best shot!

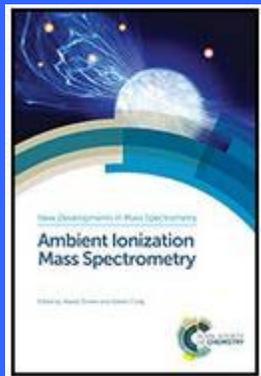
What to expect when you're expecting the JEOL ARM200F TEM - Nickel/Iron Oxide Nanocrystals with a Nonequilibrium Phase: Controlling Size, Shape, and Composition



Scientists Synthesize a 2-Element Atomic Chain Inside a Carbon Nanotube



Ambient Ionization Mass Spectrometry



EPMA International Service Meeting

JEOL USA hosted the international EPMA service meeting at our Peabody, MA headquarters in December. The bi-annual meeting is meant to be an exchange of ideas and information to improve EPMA service and increase communication between engineers and the factory for the benefit of the customers. Service personnel from around the globe came together for a week of discussions.

In the photo are:

(front row) - Dr. Peter McSwiggen (Minnesota), Lance Breisch (Maryland), Juergen Boerder (Germany), Ricardo Sanabria (Brazil), John Glass (New Jersey), Shinya Fujita (Japan), Jacky Larnould (France), Masayuki Kawashima (Japan)
(back row) - Hiroyuki Yamada (Japan), Patrick Ritchie (Peabody), David Videchak (Peabody), Felice D'Alia (Italy/Poland), ED Snoek (Netherlands), Teo Glavan (Montreal/Canada), Cyril Kirkland (California), Ken Stern (Colorado), Keith Steinacher (Missouri), Chris Spencer (UK), Shigeru Honda (Japan), Kazunori Tsukamoto (Japan)

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**Important
Announcement for**



Hands-on TEM Training for Gatan Engineers

We recently hosted a group of Gatan engineers for a 3-day training session. It was a diverse collection of factory and field service engineers with one engineer traveling from Europe (Germany) to participate. The focus of the training was a combination of TEM optics theory as well as hands on experience with operating the JEM-1400 and the JEM-2010F, particularly general daily alignments. The purpose of the training was to provide the Gatan engineers with instrument knowledge so they will be more comfortable working with and around our equipment during Gatan installation and service visits.

Co-trainers were Scott Johnson from the Peabody office, who was with a second group not shown, and Mark Komin from JEOL's Columbia, MD office (far right). From back to front are Mark Dods, Jim Cook, and Scott Wadewitz of Gatan.

JEOL Welcomes New FE-SEM Applications Specialist

NMR Users

JEOL USA Console Replacement Offer to NMR Users

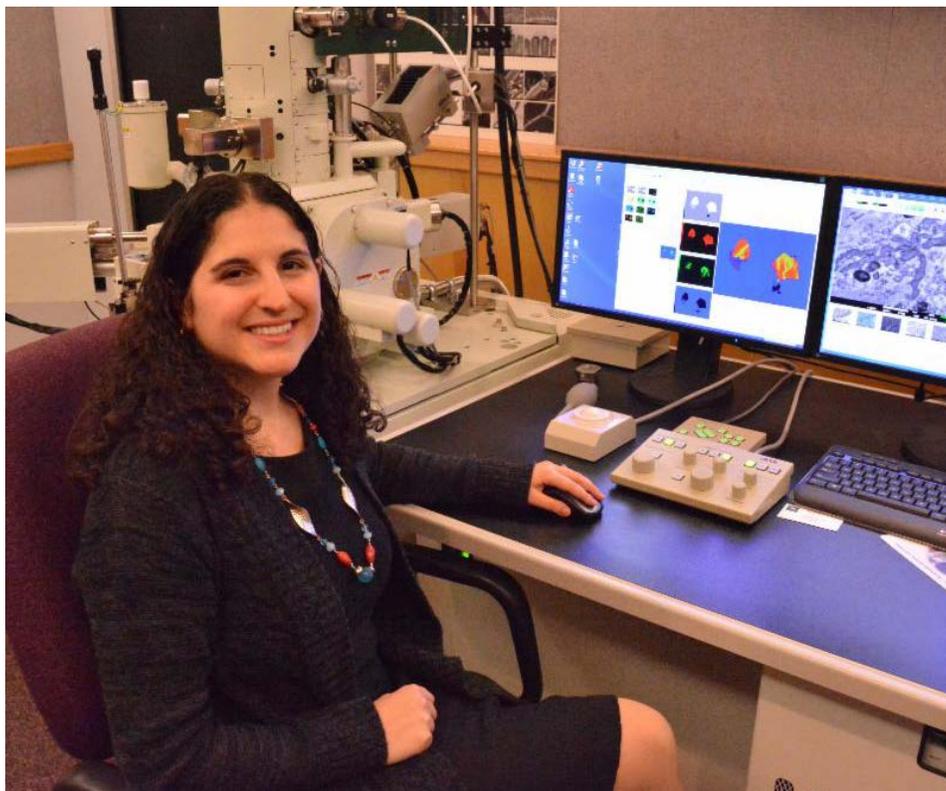
December 15, 2014 (Peabody, MA) -- JEOL USA is pleased to announce a new program that, for a limited time, offers NMR users in the Americas the opportunity to replace their NMR consoles at a special price.

For more than 50 years, JEOL has been known for its legendary support. The company's wide range of NMR solutions are tailored to meet the needs of academic, industrial, and government customers whose applications range from routine experiments to advanced research.

JEOL has recently introduced an all-new ECZ-S and ECZ-R NMR Series, systems that incorporate the latest digital and high frequency technologies and offer both flexibility and expandability. With these new systems available, JEOL offers a special price for replacement of existing consoles from JEOL and other manufacturers, depending on magnet compatibility.

To learn how to improve the performance of their current NMR systems and enjoy JEOL USA support, users can submit a profile of their requirements to JEOL USA at www.jeolusa.com/NMRUpgrade.

New Dimensions
in
NMR



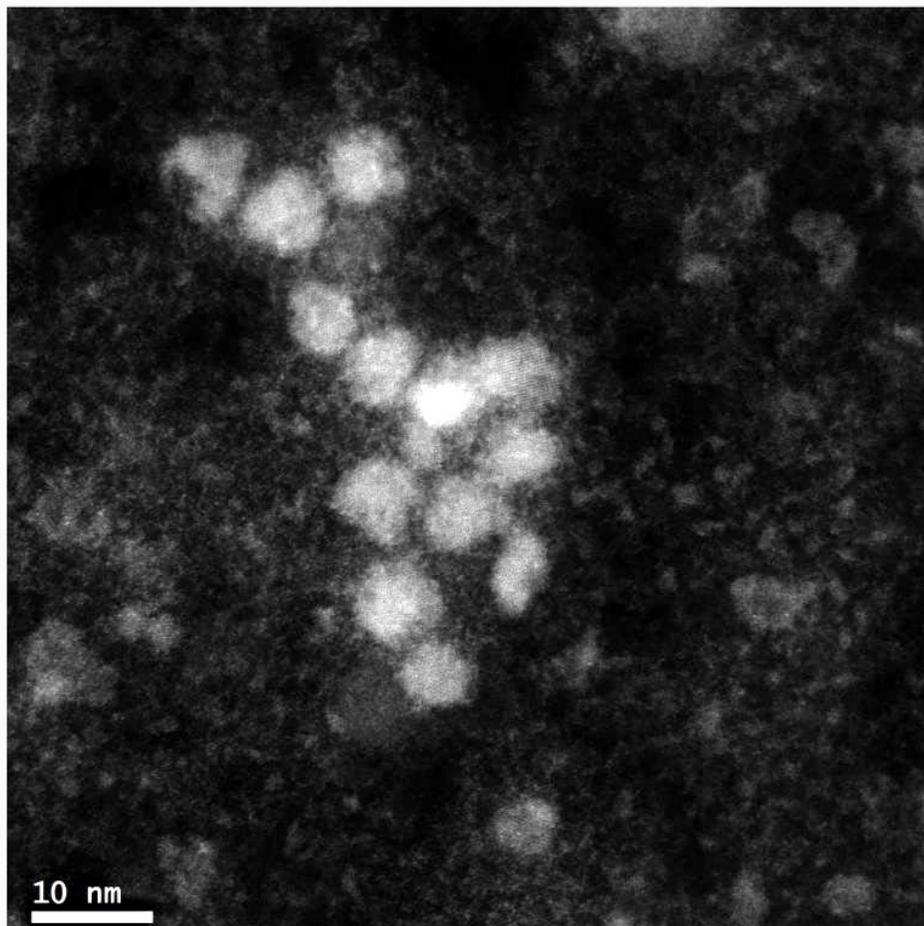
A recent addition to our FE-SEM applications specialists is Dr. Jennifer Misuraca, who comes to us from a Senior Post-doctoral joint position at University of Illinois at Urbana-Champaign and Stony Brook University, which she carried out mainly at Brookhaven National Laboratory.

In her research, Jennifer has used several different types of JEOL SEMs, EDS, and e-beam lithography for semiconductor device fabrication. Her Ph.D. focused on spintronics, and other research has included measuring electronic, magnetic, and thermal properties of semiconductor devices, thermoelectric materials, and intermetallic single crystals.

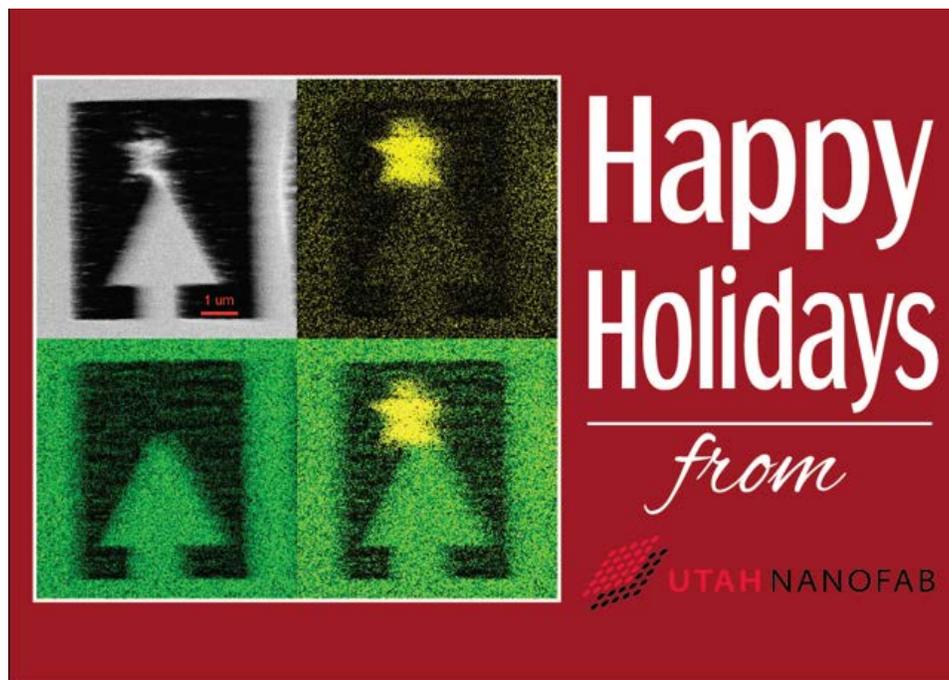
Now being at the controls of the latest FE-SEMs at JEOL USA has introduced her to advanced EM capabilities like sample bias (Gentle Beam), low vacuum, and ultrahigh resolution. She is working closely with Dr. Natasha Erdman and Masateru Shibata in her group and is involved in the FE-SEM demonstrations as well as taking on a lead role in JEOL's correlative microscopy program. She holds a Ph.D. and M.S. in Physics from Florida State University and a B.S. in Physics from UMass Amherst. Jennifer is a native of northeast Massachusetts.

Holiday Spirit - Happy Holidays to All!

Canhui Wang, [University of Illinois at Chicago](http://www.illinois.edu), submitted this atomic resolution image that looks a little like his title: "A baby reindeer curiously looking back at her observers." This ARM200F TEM image is of Ferritin molecules in graphene sandwich.



Scanning transmission electron micrograph and elemental maps were used to make this special Holiday card from Utah Nanofab. The four images are from the new JEOL JEM 2800 analytical electron microscope. The greyscale image is a transmission electron micrograph. The yellow image pixels represent spatial locations of platinum, green is Au. Sample preparation and measurement by Dr. Randall Polson of the Nanofab facility.



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Sincerely,

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