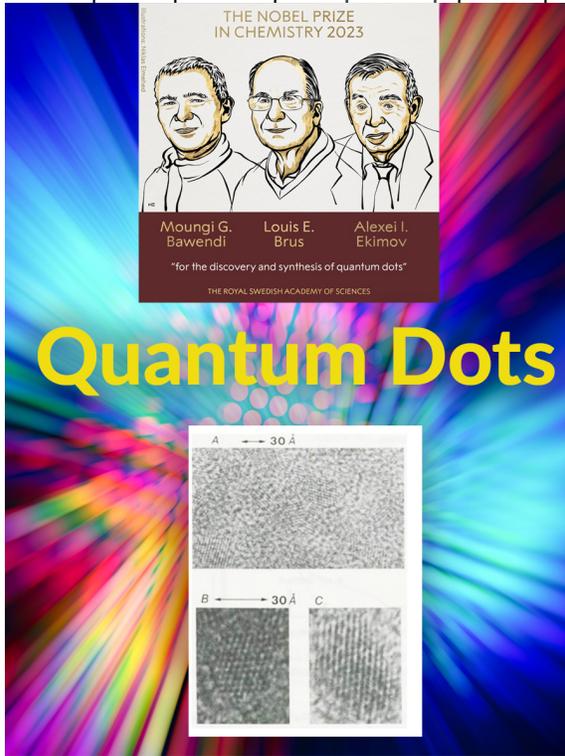


To view online, please [click here](#).



JEOL USA MICROSCOPY NEWS | OCTOBER 2023

SEM | TEM | EPMA | Sample Prep | NMR | Mass Spec | FIB | E-Beam | Elemental Analysis



Nobel Prize in Chemistry 2023

One of the 3 prize winners, Lou Brus, was at Bell Laboratories when he co-authored a 1984 paper showing that quantum dots could be made with the desired size and structure. J. Murray Gibson (now Prof. of ME at FAMU-FSU College of Engineering) provided the high-resolution electron microscopy using the JEOL JEM200CX. [Read more in our new blog.](#)

Specimen Exchange Navi

Simple SEM

Automate Routine Work

Live Analysis

Large Chamber

High Resolution



JSM-IT210
Compact SEM



JSM-IT710HR
FE SEM

Meet the Newest JEOL SEMs with Extreme Automation!

JEOL introduced two new Scanning Electron Microscopes and demonstrated them at M&M in Minneapolis this past July.

The new SEMs incorporate the next level of intelligent technology and automation for ease of operation and fast, high-resolution imaging and analysis for every level of user.

Learn more about the new [JSM-IT710HR Field Emission SEM](#) and the new [JSM-IT210 InTouchScope™ SEM](#)

JEOL offers a [full suite of SEMs](#) ranging from the NeoScope tabletop SEM to our flagship ultrahigh resolution field emission SEM. JEOL's applications and service support for all of its Electron Microscopes and scientific instruments, with over 70 years of expertise in electron optics, is unmatched in the industry.



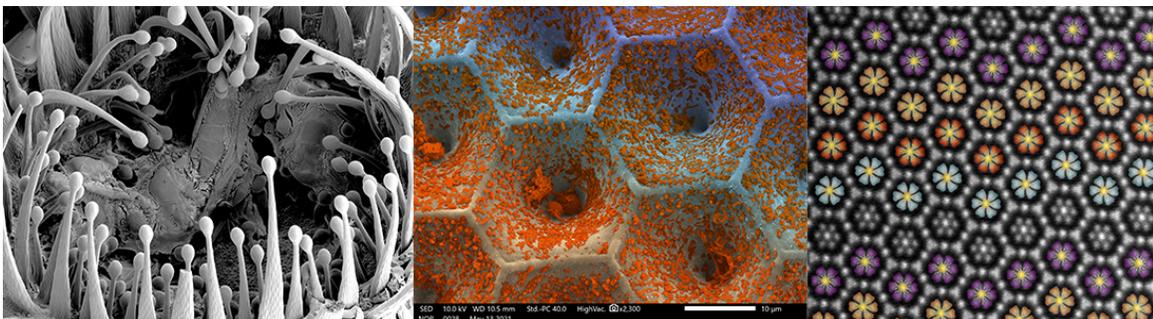
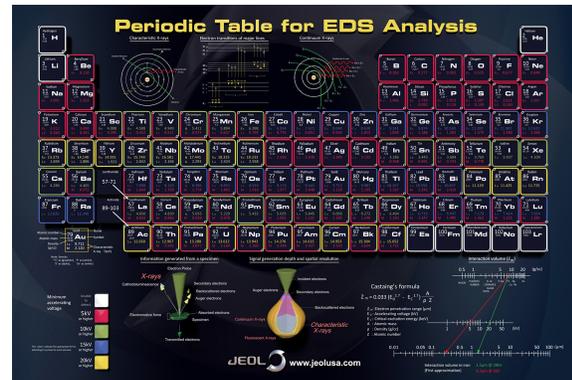
SEM Training: Looking Ahead to 2024

Thinking about additional SEM training this year, or planning ahead to 2024? [Check out the latest updates to the JEOL SEM training schedule and sign up for one of our classes.](#)

Instrument operations courses cover basic theory, physical operation, and practical applications.

Posters for Your Lab

We have several types of posters that you may find suitable for your lab walls for decoration and instruction. Visit our [Resources/Posters webpage](#) to see the selection and request a printed copy to be sent to you.



Congratulations to our Image Contest Winners!

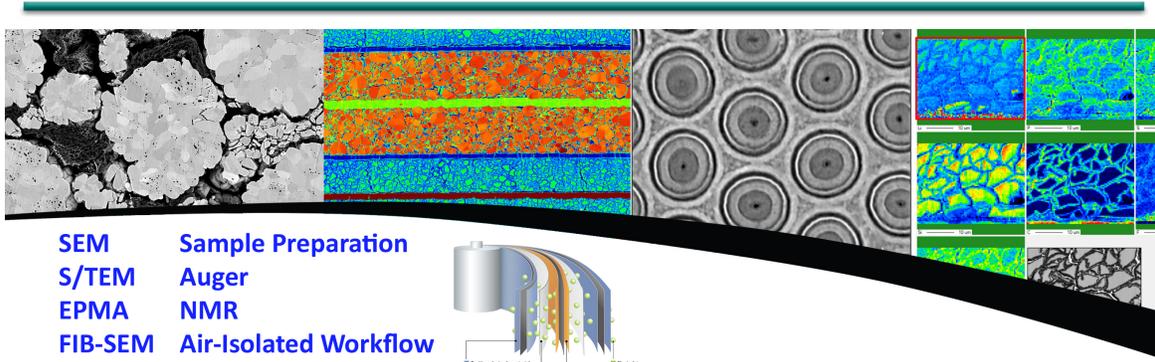
July "Banquet" - A carnivorous plant (*Drosera sp. sundew*) with partially digested meal (you can see the faceted eye!). CREDIT: Peta Clode & Patty Hayes, CMCA@UWA (University of Western Australia); JEOL JSM-IT800 FESEM fitted with a Leica VCT500 system

August: "Invaded Space" - Bacterial biofilm from egg surface of *Rhodnius prolixus* (infectious agent from chagas disease); CREDIT: Jander Matos

Guimarães, Universidade do Amazonas JSM IT500HR

September "Atomic Daisy" - Atomic structure of LLZO solid electrolytes;
CREDIT: Hongkui Zheng, University of California, Irvine; JEM-ARM300F Grand
ARM TEM

Visit the [Image Contest page here](#) for more images and descriptions, and to enter your own image!



JEOL Battery Solutions

Lithium-ion batteries present special analytical challenges, from sample preparation to detecting Lithium in these air-sensitive, complex materials. JEOL has developed a comprehensive approach to every aspect of microanalysis for this rapidly growing area of research and quality control, from particle analysis to chemical analysis, air-sensitivity, and ion beam milling of samples. While our work in this area is ongoing, we have created a special [Battery Applications](#) page as a resource for documentation and video explanations. Learn more about what JEOL can do for your [battery applications here.](#)



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JEOL News 2023

Each year the JEOL News has featured notable works made by our customers in microscopy, NMR Spectrometry, and Mass Spectrometry. The 2023 issue includes these papers and is [now available for download, or you can request a printed copy.](#)

- Revealing the Latent Atomic World through Data-Driven Microscopy
- Imaging Zeolite Architecture by High Resolution Scanning Electron Microscopy: When Physical and Chemical Etching Meet
- Low-Dose Atomic-Resolution Observation of Beam-Sensitive Materials via OBF STEM
- Introduction of Various Application Examples Obtained by Multi-Purpose TEM (JEM-F200) with Various Attachments
- TEM Sample Preparation using JIB-PS500i and Multi-Purpose FIB-SEM

Featured Research Papers and Microscopy News

Launch Event for New S/TEM - University of Waterloo Quantum-Nanofabrication and Characterization Facility [\[Link to Article....\]](#)

Direct imaging of local atomic structures in zeolite using optimum bright-field scanning transmission electron microscopy[\[Link to Article...\]](#)

New advanced electron microscope enables atomic-level discovery of novel energy-efficient materials[\[Link to Article....\]](#)

Structures of a FtsZ single protofilament and a double-helical tube in complex with a monobody[\[Link to Article....\]](#)

Apollo Achieves Amazing Resolution Fast[\[Link to Article....\]](#)

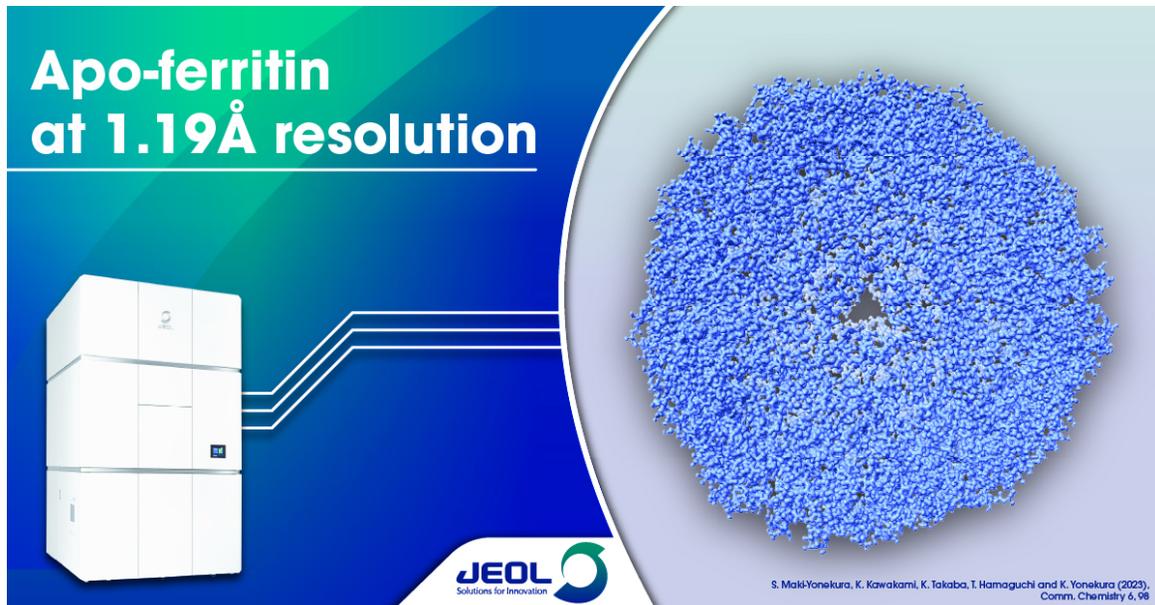
Sterol derivative binding to the orthoseteric site causes conformational

changes in an invertebrate Cys-loop receptor [[Link to Article....](#)]

Dynamic interplay between metal nanoparticles and oxide support under redox conditions [[Link to Article....](#)]

CRYO ARM Bibliography [[Link to PDF](#)]

Do you have a published paper or news to share related to your applications with the JEOL microscopes? Please let us know! Contact jeolink@jeol.com.



New SPA Milestone

A new milestone has been achieved in single particle structure analysis (SPA) by cryo-electron microscopy with the publication of a 1.19Å structure of apo-ferritin by Maki-Yonekura et al. obtained using a JEOL CRYO ARM™ 300. The JEOL CryoEM is designed for highly automated workflows allowing acquisition of thousands of images of vitrified specimens for SPA, batch tomography, and microED. Apo-ferritin is a conveniently available benchmark protein used for determining the performance of these highly automated cryo microscopes. [Read more....](#)



Jake Lafon (left) and Craig Koht (right).

Changing of the Guard: Field Service Operations ***A letter from the General Manager of JEOL USA Service***

I am very pleased to announce the promotion of Jake LaFon to the position of Manager–Field Service Operations effective October 1, 2023. Jake will be the successor of Craig Koht in this role, who will stay on as a senior advisor to Jake during this transition until Craig’s retirement later in the year.

Jake has been with JEOL USA for 19 years, and during that time he has consistently exceeded expectations in his roles. Jake started with JEOL USA as a field service engineer in Texas. While working full time, he continued his education earning a master’s degree in Business Administration. He was a clear choice to become a District Service Manager when one was needed. In his role as a District Manager, Jake made significant contributions to the team. For example, he managed complex installations at important industrial customers, government laboratories and academic institutions. He also maintained and enhanced existing relationships with key JEOL customers in his territory.

I am confident that Jake will continue to be a valuable asset to our team and the company as a whole. He has a great vision for the future that will help us reach new heights in the level of customer service provided by the field service team.

Please join me in congratulating Jake on this well-deserved promotion!

Sincerely,

Steve Tryon
General Manager, Service Division



[Learn how JEOL is committed to sustainable development goals](#)

View JEOL Webinars on Demand

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