

JEOL 2017 Image Contest - Monthly winner

The winning image for February 2017 is "**3D Nanocube**" submitted by **Chunhui Dai, University of Minnesota, Twin Cities.**

Chunhui writes, "The self-assembly method for making 3D nano-structures with surface patterning opens the possibility to explore advanced properties in nano-scale, resulting in the invention of novel devices, such as 3D plasmonic nanocavities and nanometamaterials. The image is made by using the secondary electron imaging (SEI) mode of JEOL 6700 SEM with voltage of 10 kV and current of 10 μ A. The magnification is X50,000.

Image Contest Details

[All entries](#) can be seen on our website. To [enter the contest](#) and submit your own images, check out the contest guidelines. We look forward to seeing your great results with the JEOL SEM, TEM, or EPMA! Each winning image for the month is reproduced in our annual [microscopy image calendar](#).

NEW IT300HR - We've Just Changed the Rules of the Game!

Ultrahigh resolution imaging of large samples in their native state.

The new InTouchScope series SEM offers the performance of a Field Emission microscope with the simplicity of the JEOL InTouchScope SEM. Built on the successful IT300 SEM platform, the HR delivers:

- Exceptional image fidelity at any kV
- High brightness, long-life emitter
- Ultra-stable, ultra-fast analysis with integrated EDS
- Large samples in their native state with fully integrated low vacuum
- Higher magnification to 600,000X (print), or >1,670,000x (display)
- Versatility and stability with rugged in-chamber stage and 12 ports
- Small footprint and easy installation (no cooling water or gas required)

[Ask us for more information or arrange for a demo.](#) Can't come to us? We can schedule a remote demo.

Research Team Reports Surprising Phase Transition Results in *Advanced Materials*

Researchers at University of Texas at Dallas (Moon Kim Lab) witnessed atoms rearrange into an interesting pattern - possibly the world's smallest American flag. The team was observing a new material at atomic resolution with the JEOL Transmission Electron Microscope when they increased the temperature of the sample to observe the phase transition. The surprising result was a whole new phase of "stars and stripes." Kim's team is pushing to create the world's smallest transistor, and the nanowires are smaller than 1 nanometer in diameter. The paper was published March 10 in *Advanced Materials*. http://go.jeolusa.com/e/234012/2nseDjl/p2fg/19867323?h=b_1PjO4sBDhnUM8jEK-D69A3ipxOBshyyb_neTnTyPE

Recent Publications



Correlative Fluorescence and Electron Microscopy in 3D—Scanning Electron Microscope Perspective. Center for Biologic Imaging, University of Pittsburgh with co-authors from JEOL.
Current Protocols in Cytometry 12.45.1–12.45.15, April 2017
[Preview the data here.](#)



Researchers at Northwestern shared the news that they coauthored a paper with UIC recently published in *Nature*. The paper reports an **electron cryo-microscopy structure** of ArfA and RF2 in complex with the 70S ribosome bound to a nonstop mRNA. http://go.jeolusa.com/e/234012/2jwGXzn/p2fn/19867323?h=b_1PjO4sBDhnUM8jEK-D69A3ipxOBshyyb_neTnTyPE

[h=b_1PjO4sBDhnUM8jEK-D69A3ipxOBshyyb_neTnTyPE](http://go.jeolusa.com/e/234012/2jwGXzn/p2fn/19867323?h=b_1PjO4sBDhnUM8jEK-D69A3ipxOBshyyb_neTnTyPE)



Crafting a vaccine against RSV (respiratory syncytial virus) has been a minefield for 50 years, but scientists at Emory University School of Medicine and Children's Healthcare of Atlanta believe they have found the right balance. A **3D rendering of a live-attenuated RSV particle, captured in a near-to-native state by cryo-electron tomography**. http://go.jeolusa.com/e/234012/2ikXHJO/p2fq/19867323?h=b_1PjO4sBDhnUM8jEK-D69A3ipxOBshyyb_neTnTyPE

[h=b_1PjO4sBDhnUM8jEK-D69A3ipxOBshyyb_neTnTyPE](http://go.jeolusa.com/e/234012/2ikXHJO/p2fq/19867323?h=b_1PjO4sBDhnUM8jEK-D69A3ipxOBshyyb_neTnTyPE)



At Emory University School of Medicine, Prof. Elizabeth Wright and her colleagues have refined **techniques for studying viruses in the context of the cells they infect**, allowing them to see in detail how viruses enter and are assembled in cells, or how genetic modifications alter viral structures or

processing. http://go.jeolusa.com/e/234012/2id2Jbi/p2fs/19867323?h=b_1PjO4sBDhnUM8jEK-D69A3ipxOBshyyb_neTnTyPE

[h=b_1PjO4sBDhnUM8jEK-D69A3ipxOBshyyb_neTnTyPE](http://go.jeolusa.com/e/234012/2id2Jbi/p2fs/19867323?h=b_1PjO4sBDhnUM8jEK-D69A3ipxOBshyyb_neTnTyPE)



Photographic prints of platinum metal on paper (1890-1920s) are [examined in this article](#) (or published in *Microscopy & Microanalysis* and authored by Patrick Ravines (SUNY Buffalo), Natasha Erdman (JEOL), and Rob McElroy (Archive Studio).

Long-time JEOL customers are invited to upgrade to the new generation of versatile, powerful analytical and high resolution Field Emission and Tungsten SEMs. We'll make it easy with 0% financing for up to 60 months. Check out our 2017 New Fiscal Year Finance Special for the [JSM-7200F FE SEM](#) and the [IT100 - undoubtedly the world's most popular Tungsten SEM!](#)

Upcoming Events



ACS Spring

Join us for a special event during the conference.

Solutions for Innovation Workshop [Click here for details and registration.](#)

Monday, April 3, 2017 | ACS Spring | San Francisco | Booth #600

9:30am - 12:00 noon | Moscone Center, Hall B, Exhibitor Workshop Room 2

See us in booth #600 for a demo on the IT100 SEM, or to learn more about our Mass Spec and NMR solutions



April 25-27, 2017 | Cleveland, OH | Booth #1008

We're looking forward to our first time exhibiting at this conference. If you're in the area or plan to attend, and want to schedule a demo on the JEOL IT100 SEM, or learn how our SEM Cross and Section Polisher expertise can help you unlock the answers about ceramics samples, let us know!

Advances in Sample Preparation, Electron Microscopy and Analysis

Wednesday, May 3, 2017 | ASM International | Materials Park, Ohio

Presented by JEOL, ASM International, and Mager Scientific

[Click here for details and registration >>>](#)

Past Events

Research Experiences and Exploration in Materials Science (REEMS), and Houston Community College - Seminar on Electron Microscopy, March 21.

Pittcon, Chicago March 6-9

Third Coast Workshop on Biological Cryo-EM, Chicago, March 3

We look forward to seeing you in 2017! Check out our current [events calendar](#) to see where we will be.

Stay in touch with us at JEOL USA and share in the fun and some valuable information. Besides, we like to see you there!



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