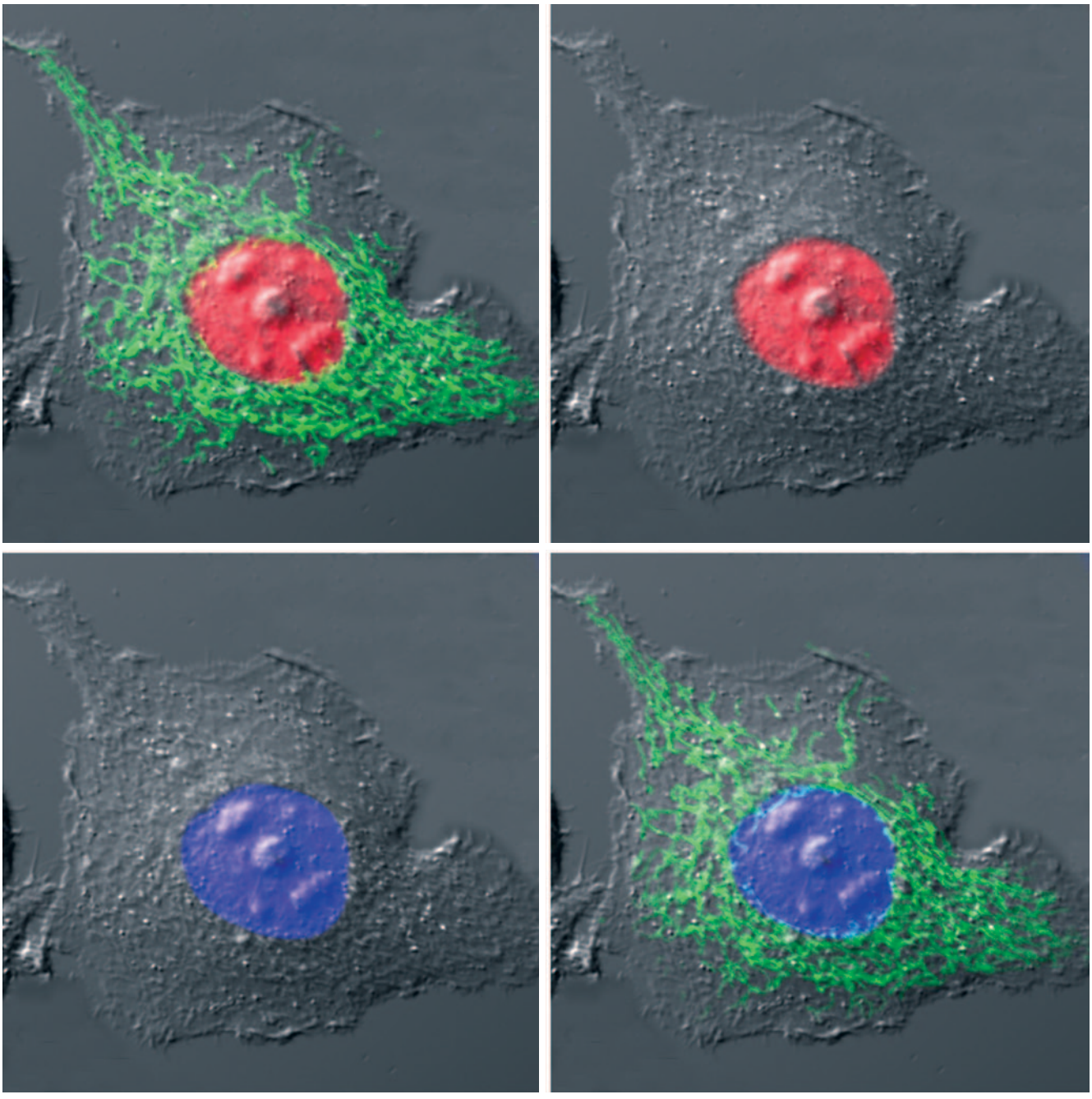
https://doi.org/10.1017/S1551929509000078 Published online by Cambridge University Press

Microscopy TODAY

Volume 17 Number 4 2009 July



MSA Microscopy Society of America

www.microscopy-today.com

CAMBRIDGE UNIVERSITY PRESS

Hitachi – A Great Image is Everything

For nearly 20 years, Hitachi has been developing Variable Pressure SEMs, each unequally designed with improved performance and with more flexibility to handle the most challenging samples. From the economical and simple to use TM-1000 Table Top microscope to the UHR and 200nA beam current offered with the SU6600 Analytical VP FESEM, Hitachi has the right instrument suited for any sample and any application. The SU-1510, S-3400N and S-3700N offer various chamber size without compromising performance or versatility. All models include Hitachi's patented Quad Gun Bias circuitry and low voltage electron accelerator plate for unsurpassed low voltage SE, BSE and ESED image performance. TMP are included on all models for clean, efficient, high speed pumping. And yes, a great image is everything.

TM-1000 Table Top

S-3400N VPSEM

SU6600 VP FESEM

SU-1510 VPSEM

S-3700N VPSEM

HITACHI
Inspire the Next

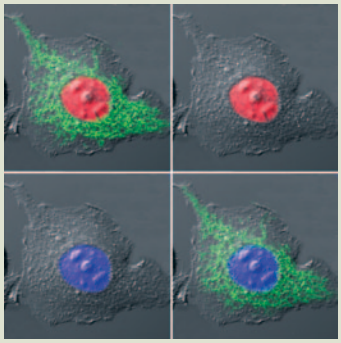
Hitachi High Technologies America 5100 Franklin Drive Pleasanton, CA 94588 www.hitachi-hta.com

Volume 17 Number 4 2009 July

Microscopy TODAY

Contents

About the Cover



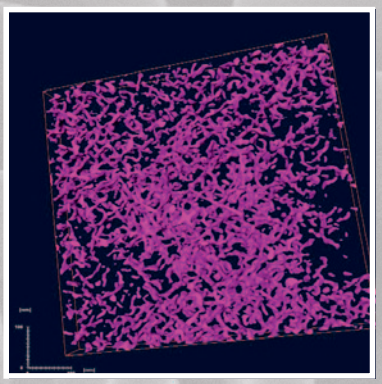
Dual-probe optical highlighting with Histone2b-mOrange and Dronpa-mitochondria, changing colors sequentially. Image width 40 µm.

See article by Piston et al.

Solutions for applied Materials Research

3D NanoCharacterization

discover down to the atomic scale

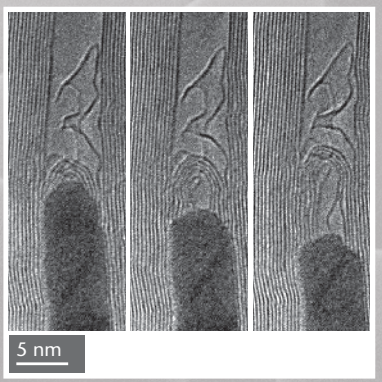


Electron tomography enables 3D visualization of nanonetworks. Such as this polymer solar cell material

Courtesy of
Joachim Loos, Eindhoven University of Technology, Netherlands

in situ NanoProcesses

experiment down to the atomic scale

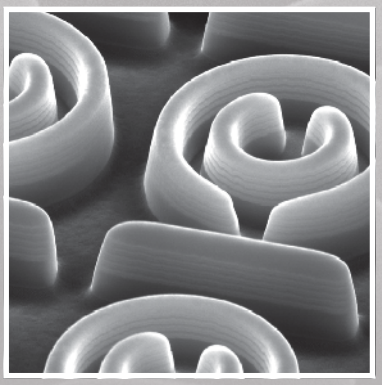


Materials confined within nanotubes provide an *in situ* atomic scale chemical reaction chamber in the TEM

Courtesy of
Julio A. Rodriguez-Manzo, and Mauricio Terrones, IPICyT, Mexico
Florian Banhart, Universitaet Mainz, Germany

3D NanoPrototyping

create down to the nanoscale



Split-ring resonator array with a critical dimension of 120nm, prepared directly by FIB

Background image: Split-ring resonator array with a critical dimension of 120nm, prepared directly by FIB. Image is darkened for artistic impression.

See beyond at fei.com/research

From the Editor

New Look for *Microscopy Today*

Welcome to the new look of *Microscopy Today*, the magazine for all microscopists and microanalysts. This controlled-circulation publication is still owned by the Microscopy Society of America, but it is now published by Cambridge University Press along with the society's peer-reviewed scientific journal, *Microscopy and Microanalysis*.

How was *Microscopy Today* published before this issue? Answer: through Ron Anderson's editorial skill, financial acumen, and determined salesmanship. While Ron handled most editorial and production tasks single-handedly, he was ably assisted by Dale Anderson (Art Director), Phil Oshel (Technical Editor), and Renée Stratmoen (Advertising Director). Without seven successful years under their leadership, *MT* might not even be an MSA publication. Thanks, Ron.

What is different inside these covers? Many features remain the same: Stephen Carmichael's column (his 109th appears in this issue), *NetNotes* (edited by Thomas Phillips), *Dear Abbe* (correspondence handled by John Shields), *Microscopy 101*, and eight-to-ten articles covering all areas of microscopy. New aspects include a feature article that provides an overview of a topic of interest to practicing microscopists (MSA President-Elect Dave Piston supplied the feature article for this issue), a new column entitled *Microscopy Pioneers* (edited by Michael Davidson), and a column about *Microscopy Education* (edited by Steven Barlow).

A completely new feature is the *Microscopy Today* digital edition. Beginning with this issue, *MT* will be published simultaneously as an exact-replica digital edition. You may have seen other digital magazines, but *MT*'s on-line presence will have a special feature. The reader will be able to adjust the page magnification continuously, overcoming an annoying difficulty with many digital magazines. Try it out at the *MT* website: www.microscopy-today.com.

Finally, I am announcing some new awards. *Microscopy Today* is sponsoring ten awards for the most innovative instruments or methods related to microscopy in a given year. The awards will be called the *MT-10 Awards*. Details about the submission process and deadlines will be given in the September issue.

Charles Lyman
Editor-in-Chief

Publication Objective: to provide information of interest to microscopists.

Microscopy Today is a controlled-circulation trade magazine owned by the Microscopy Society of America that is published six times a year in the odd months. Editorial coverage spans all microscopy techniques including light microscopy, scanning probe microscopy, electron microscopy, ion-beam techniques, and the wide range of microanalytical methods. Readers and authors come from both the life sciences and the physical sciences. The typical length of an article is about 2,000 words plus figures and tables; feature articles are longer. Interested authors should consult "Instructions for Contributors" on the *Microscopy Today* website: www.microscopy-today.com.

ISSN 1551-9295

Microscopy TODAY

Magazine website:
http://www.microscopy-today.com
Free subscriptions are available for qualifying individuals

Publisher
Cambridge University Press
32 Avenue of the Americas
New York, NY 10013-2473
(212) 337-5000

Circulation: 16,400

https://doi.org/10.1017/S1551929509000078 Published online by Cambridge University Press