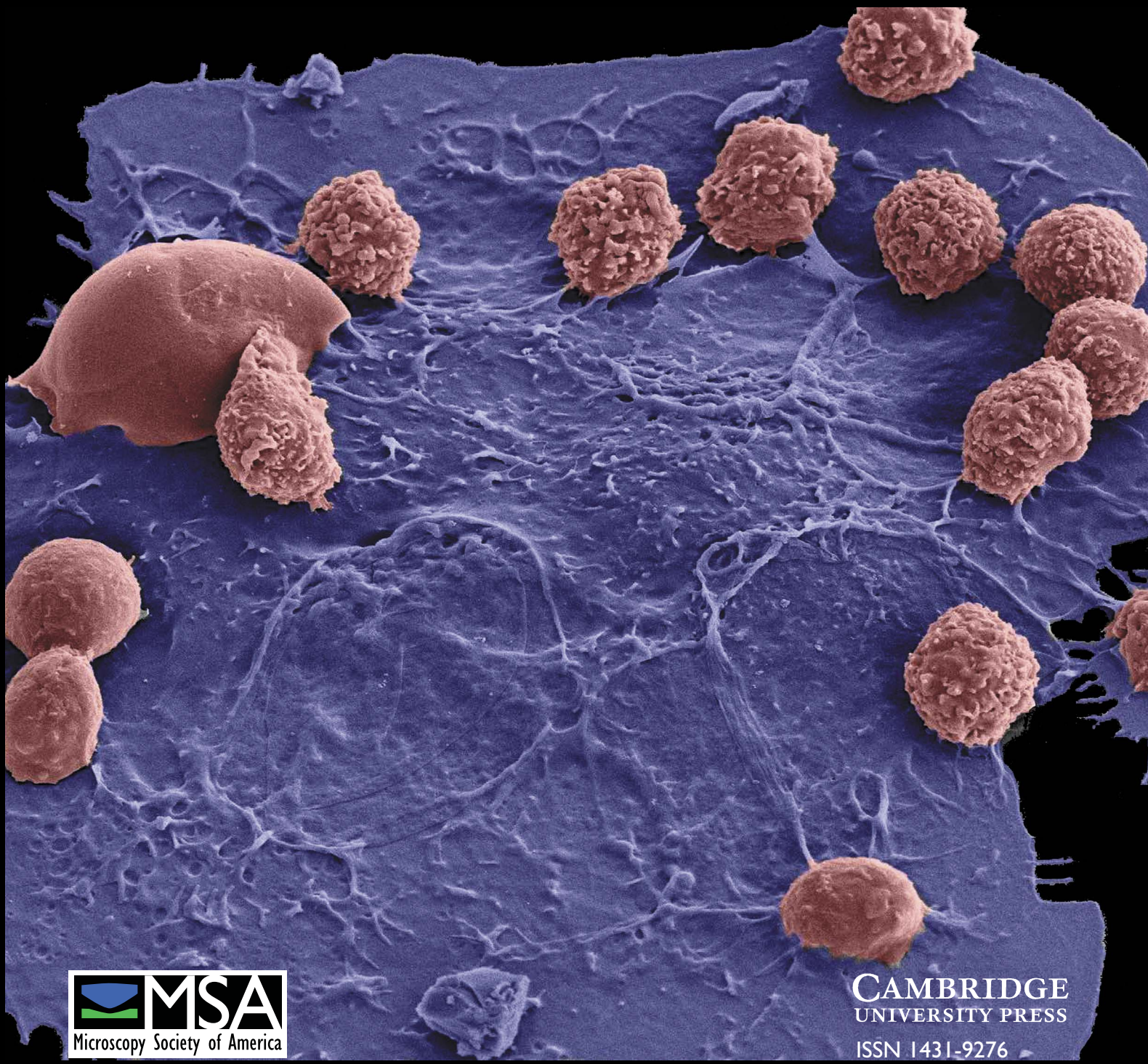
Volume 22, Number 2 April 2016

Microscopy AND Microanalysis



MSA Microscopy Society of America

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EMS has it!

FlipScribe™

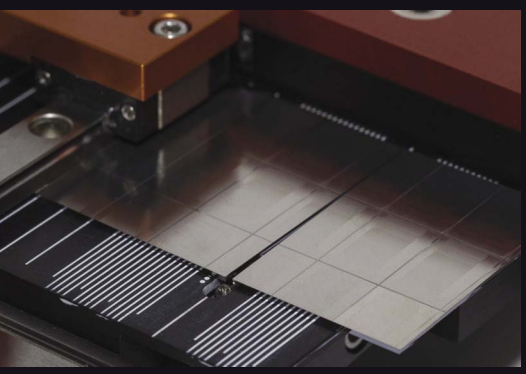
Scribing and Cleaving Solution

Benefits

- Enables accurate cleaving through frontside targets with a scribe made on the backside of the substrate
- Scribe does not damage the frontside of the sample
- Accuracy of scribe ±200 µm (achievable)
- Flexible with respect to sample size and shape
- Capable of scribing bonded crystalline and amorphous wafers and chips for subsequent cleaving
- No maintenance required

Features

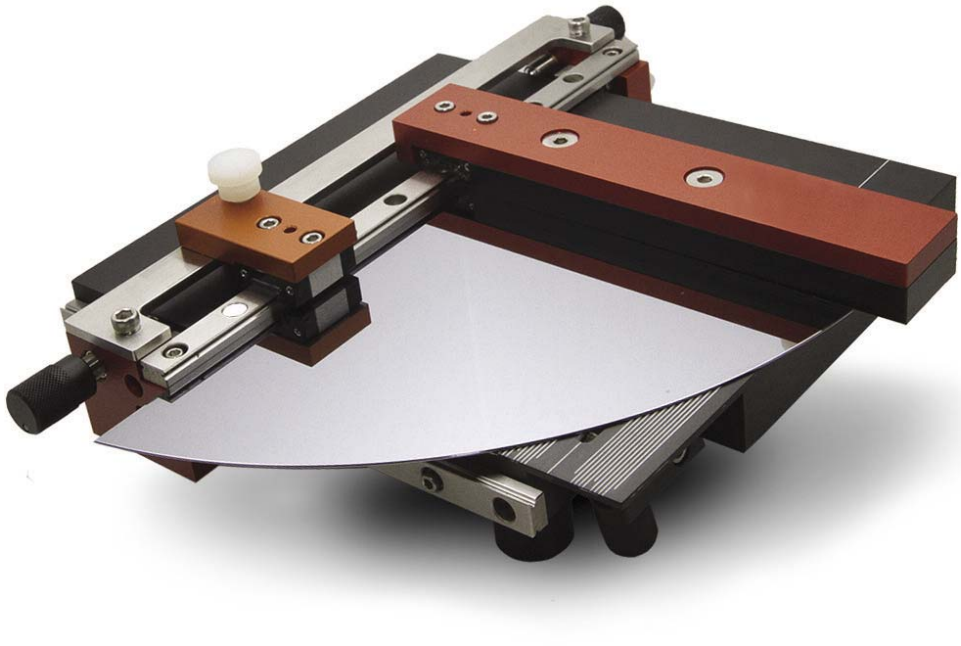
- Accurate positioning of the scribe relative to features on the front side (the front side being observed either by eye or with a stereoscope).
- The length of the scribe can be varied from 1 mm to 100 mm
- Prealigned diamond scribe in user replaceable cartridge; height and angle adjustable
- Ruler embedded in platform enables precise and repeatable sample alignment and sizing
- The tool is purely mechanical; no power required



Semiconductor sample after scribing and cleaving

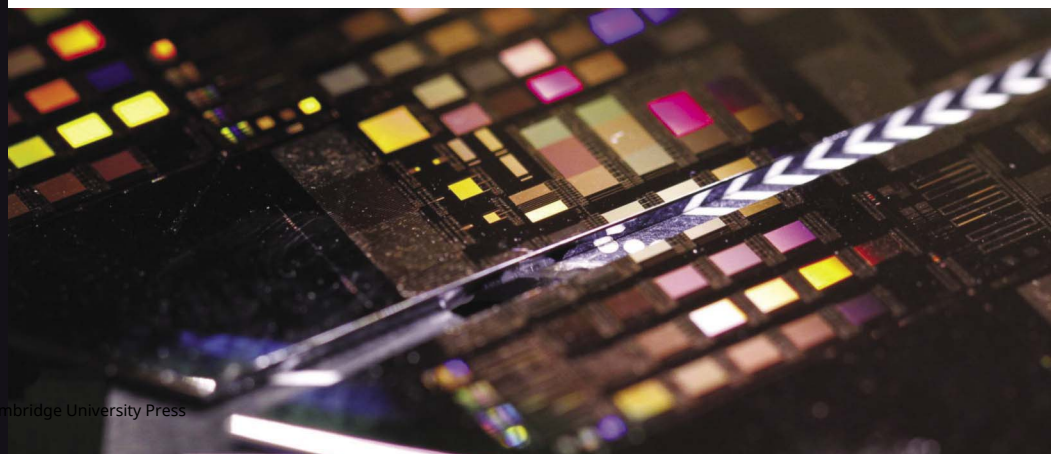
scribing reinvented...

Introducing FlipScribe™



FlipScribe™ is a compact, stable, accurate, fast and low cost scribing and cleaving solution suitable for any lab; no utilities required. It provides a more accurate method for scribing than can be achieved with hand held tools, by integrating a robust diamond scribe into a sample platform with a fence guide design. Time required to align and scribe is about a minute.

FlipScribe takes scribing to a new performance level, making clean, straight scribe lines on the back side to accurately cleave front side targets, bonded wafers and other substrates. This method eliminates contamination of sensitive front side devices during the scribing processes and is valuable for both crystalline and amorphous samples.



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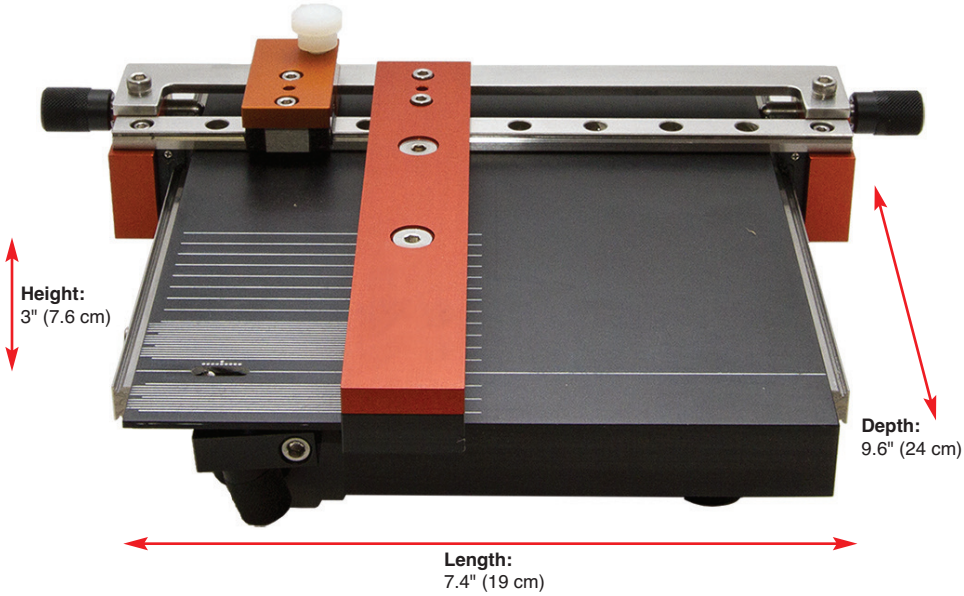
FlipScribe™

Scribing and Cleaving Solution (continued)

FlipScribe has a small footprint, allowing it to be placed on any work surface.



Specifications

Cleaving Accuracy	± 200 µm
Cleaving Cycle Time	1-2 minutes
Minimum Sample Size	3/8" /9.5 mm (L) × ¼"/6.3 mm (W) × .01"/300 µm (H)
Maximum Sample Size	Wafer: 4" (100 mm); ¼ of 12" (300 mm) Non-Wafer: 3/8"/ 9.5 mm (L) × 1/4"/6.3 mm (W) × .01"/300 µm (H)

Configuration

Rail and Guide System	Maintains sample orthogonality and method to push the sample when scribing.
Sample Platform	7" (178 mm) × 6" (152 mm); ruled to facilitate sample sizing
Scribe Stop	Sets the length of the scribe; continuously variable >1 mm - 4" (102 mm)
Diamond Scribe	Pre-installed diamond scriber with an eight (8) point diamond tip tool and 4 facets at 45° angle.

Installation Requirements

Flat work surface
No power required
Stereo microscope with parfocal zoom recommended
No assembly required

Options

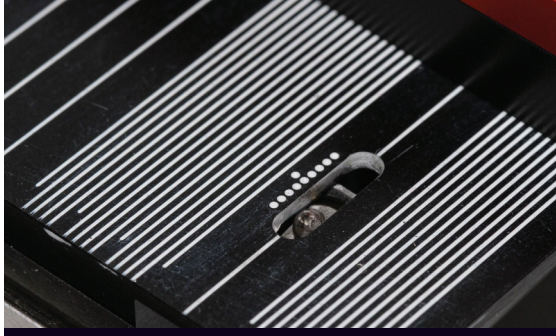
LatticeAx™ (LGAX-420LG)
LatticeAx cleaving machine for analysis-ready samples with accuracy to ±10 microns

Small Sample Cleaver (MC-SSC-100)
Cleaver for small samples, includes sample holders and cleaving apparatus

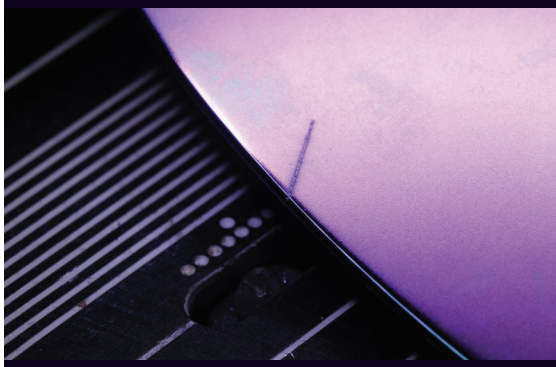
Wafer Cleaving Kit (WCSK-102LG)
Wafer cleaving kit including pliers and scribers

Ordering Information

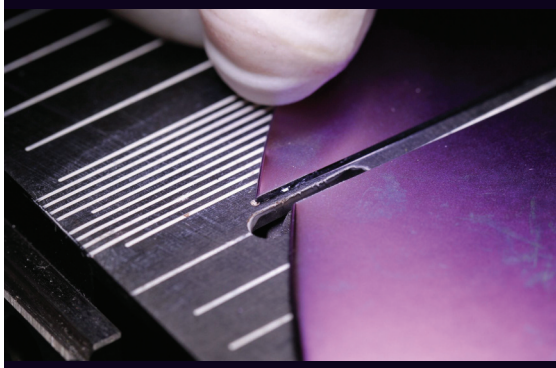
Cat. No.	Description	Qty.
7670	FlipScribe™ 100	each



scribing area showing ruler



straight-line scribe on curved part of wafer



cleaved wafer

CONTACT US FOR MORE INFORMATION...

Electron Microscopy Sciences

P.O. Box 550 • 1560 Industry Rd.
Hatfield, Pa 19440
Tel: (215) 412-8400
Fax: (215) 412-8450
email: sgkcck@aol.com
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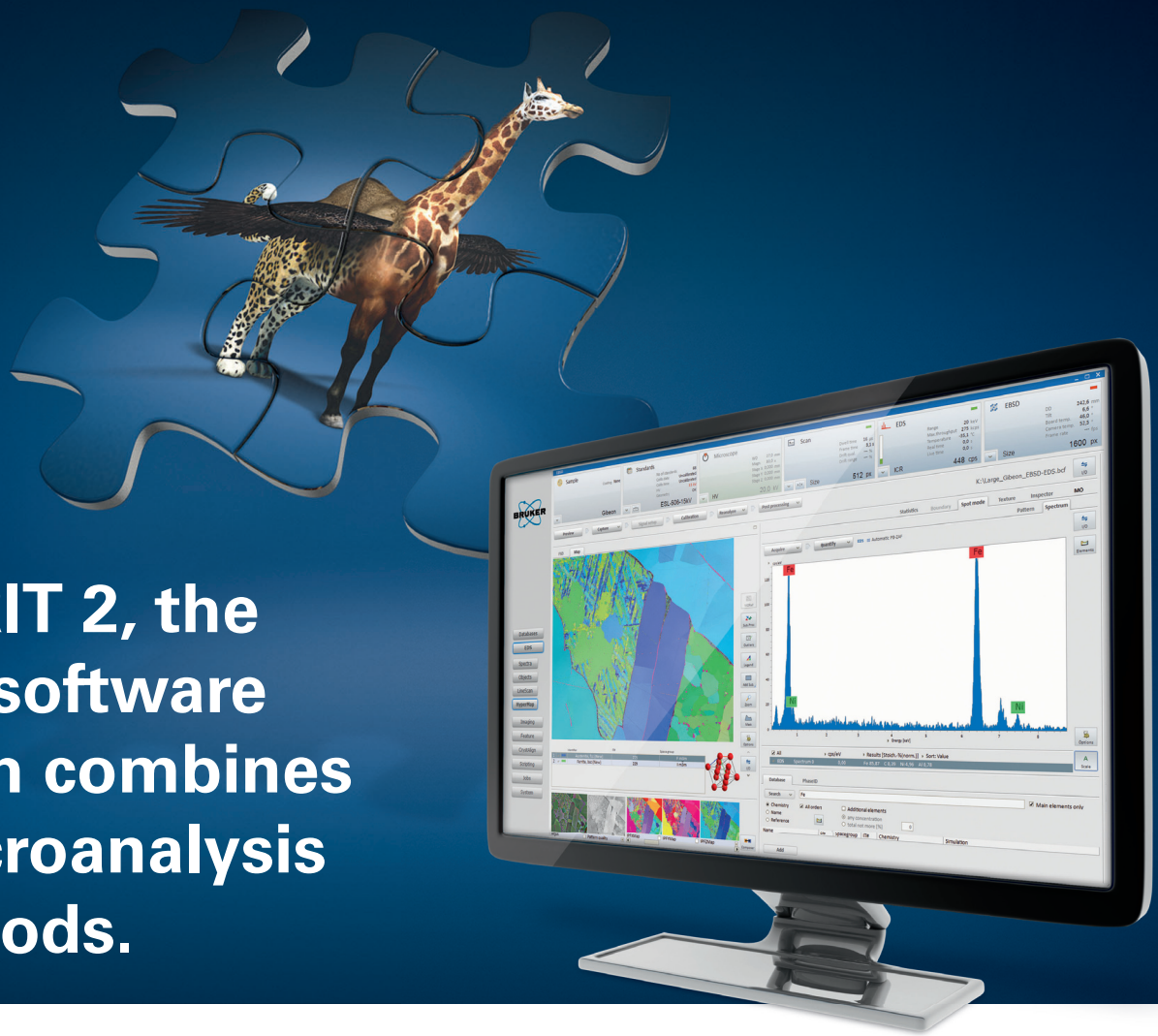

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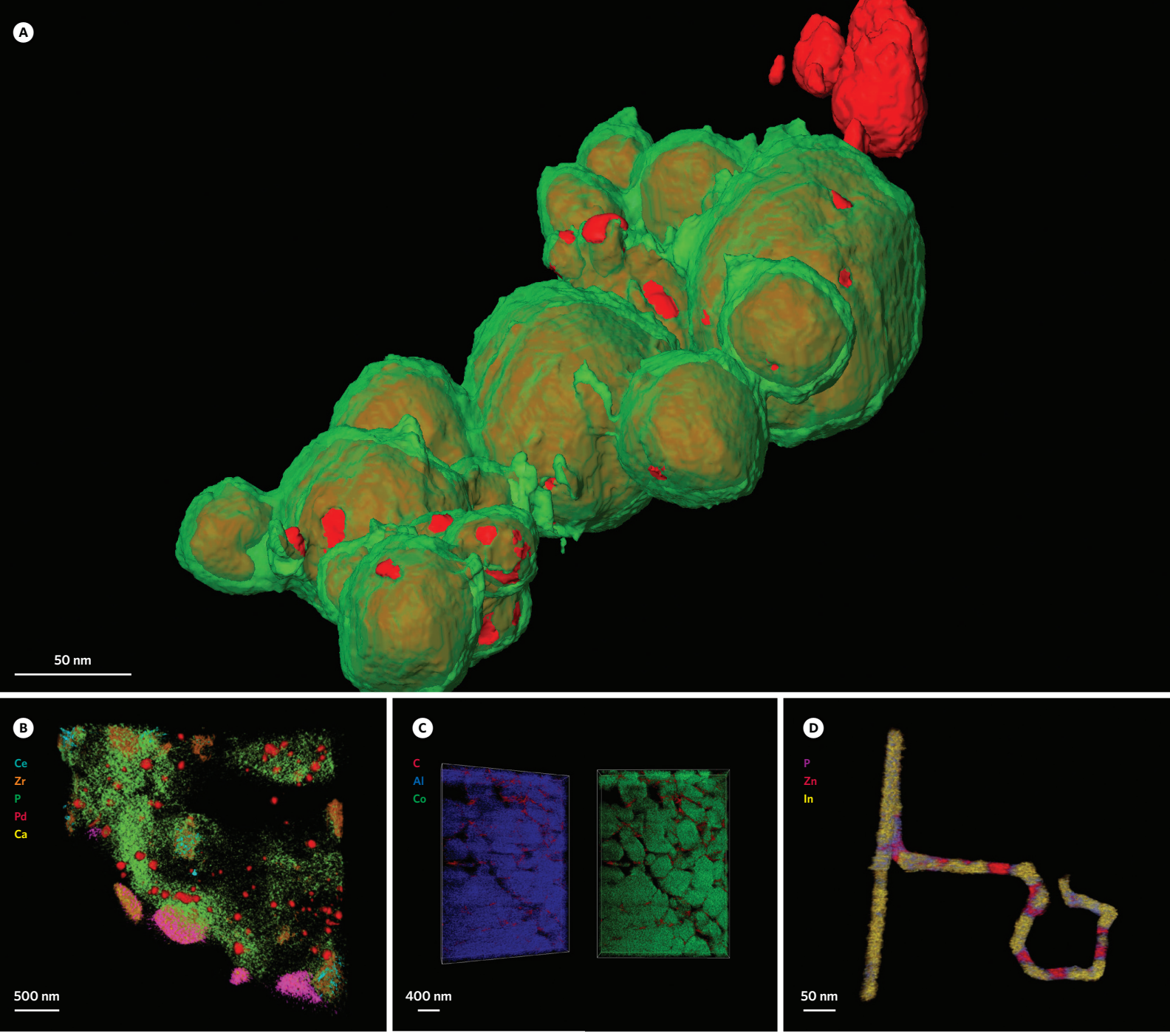

A: EDS tomogram of Ag-Pt core-shell nanoparticles. Ag cores are shown in the false color of red, covered by green-colored Pt shells, only a few nanometers in thickness. Sample courtesy Prof. Yi Ding and Prof. Jun Luo, Center for Electron Microscopy, Tianjin University of Technology. **B: Vehicle-aged automotive catalyst.** EDS tomogram showing the distribution of Palladium particles (red) relative to other elements. **C: Battery anode material.** EDS tomograms of Carbon-Cobalt and Carbon-Aluminum. **D: EDS tomogram of P-Zn-In nanotubes.** Sample Courtesy of Dr. Reza Shahbazian Yassar, Michigan Tech University.

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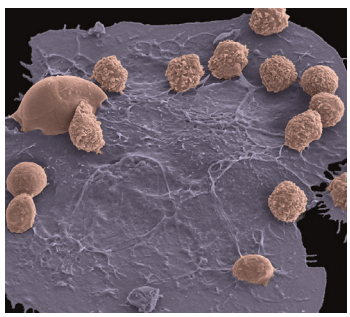

On the Cover: SEM of flat erythroblastic island. For further information please see Yeo et al., pages pp. 368–378.

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