

# Microscopy TODAY

## 2020 Buyers' Guide



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## Welcome to the **Microscopy** TODAY Buyers' Guide.

The guide is published in print and online at [www.cambridge.org/mto](http://www.cambridge.org/mto). For such a guide to be truly useful, it must be comprehensive. Thus, the editors have assembled an index identifying hundreds of products listed under more than 300 categories.

### HOW TO USE THIS GUIDE:

**Print version:** (1) Look up the product category in the Products and Services Index.  
(2) View the product descriptions in the Microscopy Product Vendors section.  
(3) View more complete product descriptions at the company website.  
(4) View the scope of certain companies in the Company Profile section.

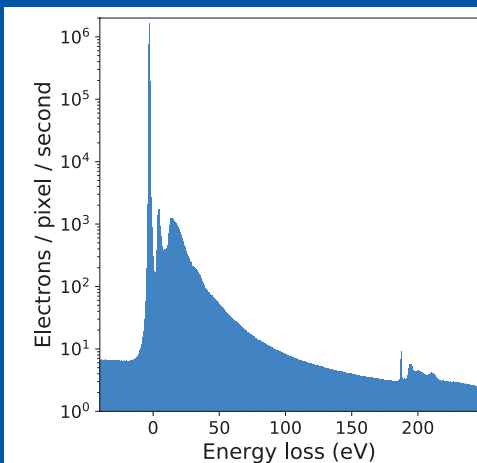
**Online version:** (1) Go to [www.cambridge.org/mto](http://www.cambridge.org/mto).  
(2) Click on "2020 Buyers' Guide."  
(3) View an exact replica of the Buyers' Guide and use the search box in the upper right to find a particular kind of product.  
(4) Use the Company Index section to find a particular company (page numbers here refer to Company Profiles and Major Listings).

### To companies not listed in this guide:

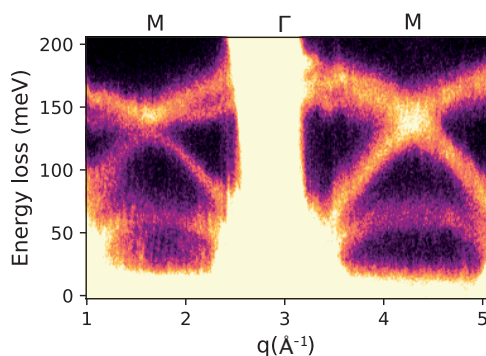
To list your company and promote your products in our next edition, please contact Kelly Miller at [kmiller@mrvica.com](mailto:kmiller@mrvica.com) or 856-768-9360.

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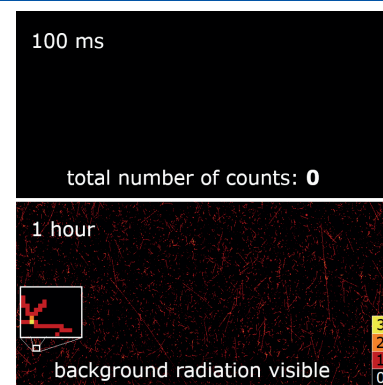




EELS of hexagonal boron nitride (h-BN).  $E_0=100\text{keV}$ , beam current=170 pA, 10s exposure, 0.28 eV/ch. Raw data (no dark subtraction or gain normalization).



Momentum-resolved EELS of h-BN showing phonon dispersion curves  $S(q, \omega)$  acquired in 6.7 minutes (100 frames x 4 seconds, aligned) using a slot entrance aperture.  $E_0=60\text{keV}$ , beam current=10 pA, energy resolution 10 meV.



Detector sensitivity test with no signal. Top: With short exposure times, there is no background. Bottom: With long exposure times, cosmic rays (typically muons) are detected.

# DECTRIS ELA on Nion Iris EELS

## A new direct detector for 30-200 keV EELS

### DECTRIS hybrid pixel detector

- 1030 x 516 pixels of 75  $\mu\text{m}$  each
- 2,250 full frames/s and faster for sub-areas
- PSF @ 100 keV ~ 1.3 pixels, better at lower keV
- DQE ~ 0.8 (without super-resolution)
- Dynamic range >  $10^6:1$
- Can use >100 pA while counting single electrons
- Optimized for 30-200 keV operation