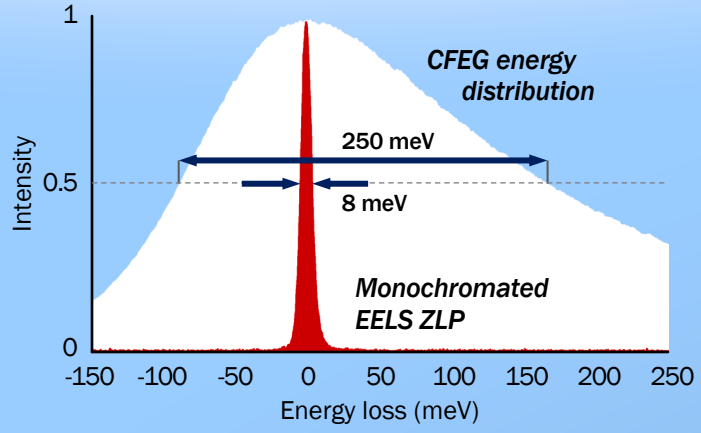
unique tools for materials science

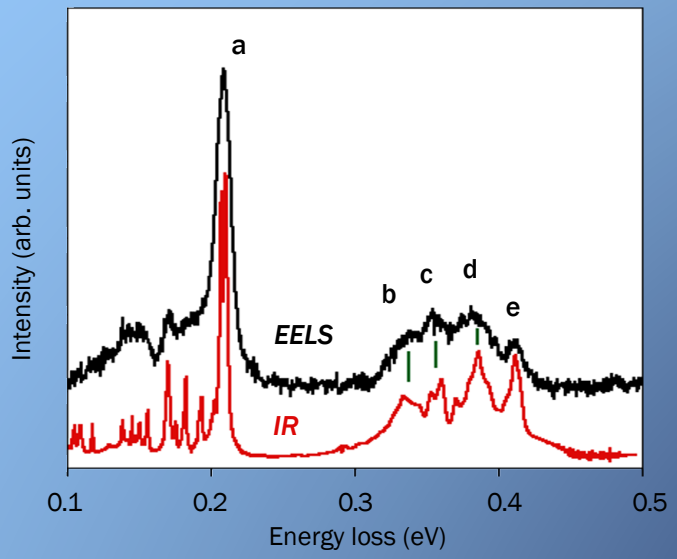
UltraSTEM-MC™



Zero loss peak (ZLP) acquired with Nion UltraSTEM-MC™, 8 ms, 60 keV primary voltage, compared to the unmonochromated ZLP. Courtesy Rutgers U.

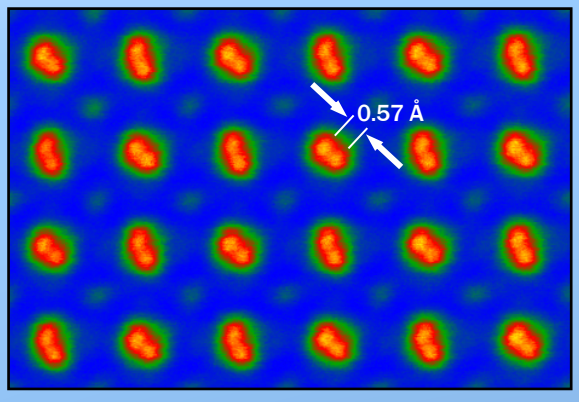
High Energy Resolution Monochromated EELS-STEM

- 40 – 200 keV
- Dispersing-undispersing
- < 10 meV energy resolution (at 60 keV)



EEL spectrum of Guanine acquired with Nion UltraSTEM-MC, aloof mode, 60keV primary voltage, compared with FTIR spectrum. Peaks b-e show vibrations due to different H bonds. Peter Rez et al., Nature Communications 7 (2016) 10945

UltraSTEM 200™



Double Yttrium columns resolved in an HAADF STEM image of a YAP crystal. Alternate double columns have different orientations. Nion UltraSTEM™, 200 keV. Courtesy Dr. M.F. Chisholm, ORNL, and SMRC, U. Tenn.

- 40 – 200 keV
- Ultra-bright CFE electron gun
- Ultra-stable sample stage
- Ultra-high sample vacuum
- 0.6 Å spatial resolution (at 200 keV)
- 0.35 eV resolution EELS
- 0.7 sr solid-angle EDXS

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