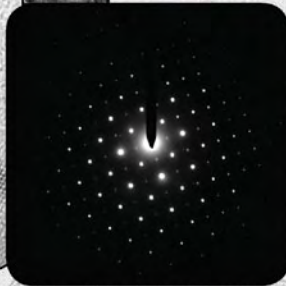
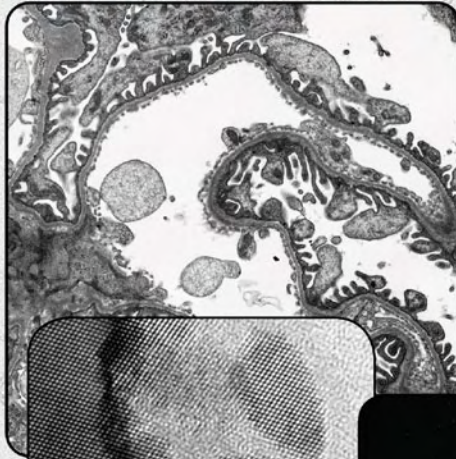


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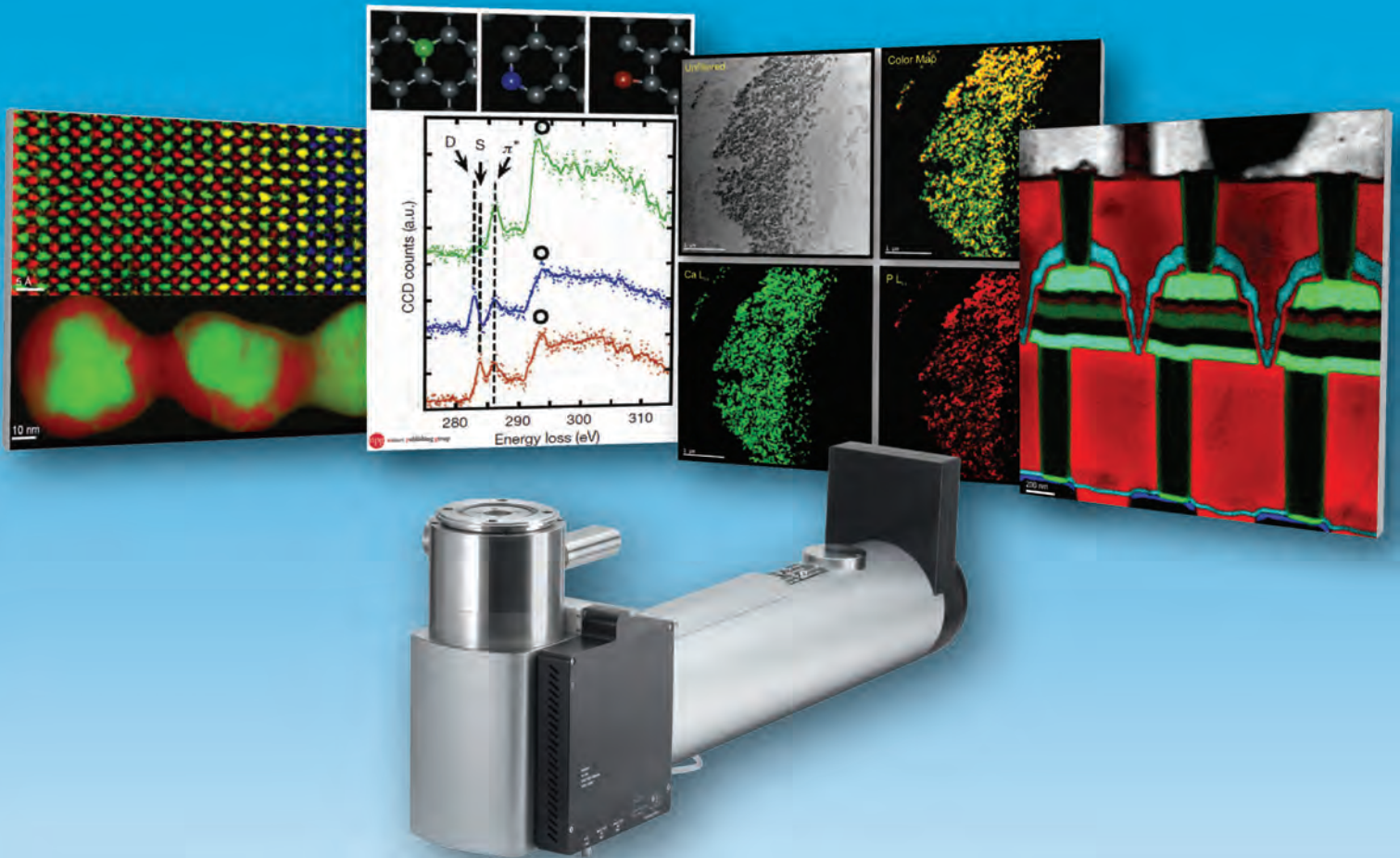
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Images, left to right:

- (Top) Colonized elemental map showing Sr  $L_{2,3}$ -edges (green), Ti  $L_{2,3}$ -edges (red), La  $M_{2,3}$ -edges (yellow), and Mn  $L_{2,3}$ -edges (blue). Image captured using a Gatan Enfinium™ER. Sample courtesy of Prof. David Smith, Arizona State University.
- (Bottom) RGB composite EELS SI image of Au/Pd nanoparticle; Au  $M_{2,3}$ -edges at 2206 eV in green and Pd  $L_{2,3}$ -edges at 3173 eV in red. Low and high-loss regions of the EELS spectrum can be simultaneously acquired in DualEELS™ mode. Absolute quantification of the atoms is now possible for Au. Images captured using a Gatan GIF Quantum™ER. Sample courtesy Dr. Jianfang Wang of The Chinese University of Hong Kong.
- Figure 1 from: K. Suenaga et al. Atom-by-Atom spectroscopy analysis at graphene edge; Nature 468, 1088–1090 (23 December 2010). ELNES of individual atoms in graphene. Different states of atomic coordination are illustrated at top. ELNES of carbon K (1s) spectra shown on bottom. Green, blue and red spectra correspond to the normal  $sp^2$  carbon atom, a double-coordinated atom and a single coordinated atom, respectively. Images captured using a Gatan Quantum™ER Low-Voltage Special. Data courtesy of K. Suenaga and M. Koshino (AIST, Tsukuba, Japan). Permission to use Figure 1 granted by K. Suenaga and Nature Publishing Group. Copyright © 2010, rights managed by Nature Publishing Group.
- Unfiltered, conventional TEM image and elemental maps of a capillary blood vessel captured using a Gatan GIF Quantum™ER. The Ca and P elemental maps were extracted from an EFTEM-SI dataset, acquired using Gatan's DigitalMicrograph® software. EFTEM-SI is capable of revealing relative concentrations below 1% as shown in the P elemental map. Sample courtesy of Dr. Wenlang Lin, Mayo Clinic.
- High-speed STEM EELS mapping of a commercial semiconductor device. Grey: Cu  $L_{2,3}$ -edges; Red: O K-edge; Blue: Co  $L_{2,3}$ -edges; Green: Ti  $L_{2,3}$ -edges; Light Blue: N K-edge. Data were extracted from a  $520 \times 520$  EELS spectrum image (2. GB dataset) acquired in 5 minutes at 1000 spectra per second, high-speed EELS acquisition mode. Image captured using a Gatan GIF Quantum™ER EELS system mounted on a 200 kV LaB6 STEM.



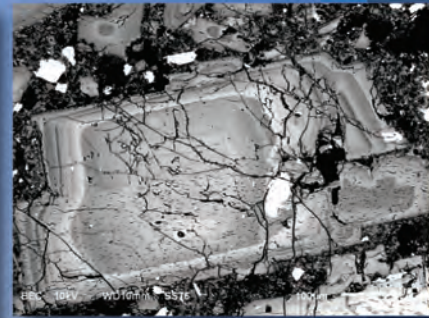
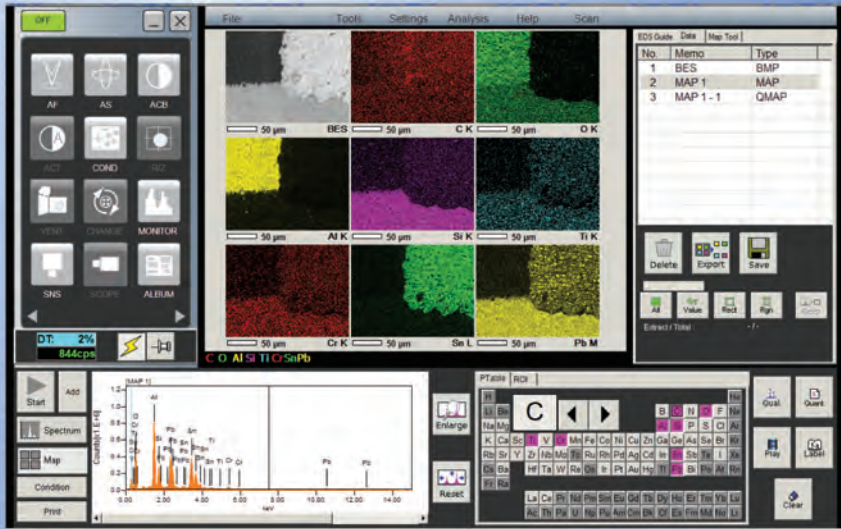
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