Topic: Increasing In Situ Success Through Artificial Intelligence

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Abstract:

Machine vision and Artificial Intelligence technologies are poised to have a significant impact on nearly all areas of electron microscopy. Automating background tasks that are distracting to the microscopist, reducing the skill level required for new users and, most importantly, helping manage the immense amount of data generated in electron microscopy today are just a few of the areas these technologies are expected to impact over the next few years. Protochips AXON software can act as a separate pair of experienced hands, allowing the user to focus on the science of the sample rather than the operation of the instrument. In addition, with new tools like AXON Studio™, users can utilize the vast amount of synchronized metadata to organize and review thousands of images at once, at your desk and on your laptop and more easily create datasets shareable with collaborators. The key is to connect the TEM, imaging detectors and holder systems together utilizing machine vision technology to stabilize images for traditional and *in situ* electron microscopy to elevate the performance, productivity and impact of scientific discovery for TEM.