doi: 10.1017/S143192760906603
Microsc Microanal 15(Suppl 2), 2009

Latest developments in today's TEM camera systems

Jason Wickersham*, Jens Krieger**, Christoph Huelk**
* Olympus Soft Imaging Solutions Corp., 200 Union Blvd., Suite 202, Lakewood, CO 80228, USA
** Olympus Soft Imaging Solutions GmbH, Johann-Krane-Weg 39, 48149 Muenster, Germany

How is the performance of an TEM camera system defined? When you read all the specifications listed in a common TEM camera brochure you will find a number of values and names. But: what are these parameters? What are they standing for? What is the "MTF" or the "resolution"? Is it all about the number of pixels, i.e. the more the better? In short: Which parameters are important for a camera system which suits for your application?
If you want to or have to decide for a TEM camera system suitable exactly for your all day work, you need to know what defines these commonly used parameters.
We will give easy to understand but nonetheless comprehensive explanations and demonstrate how these apply to cutting edge TEM camera systems which are suitable for both life sciences and materials sciences applications.

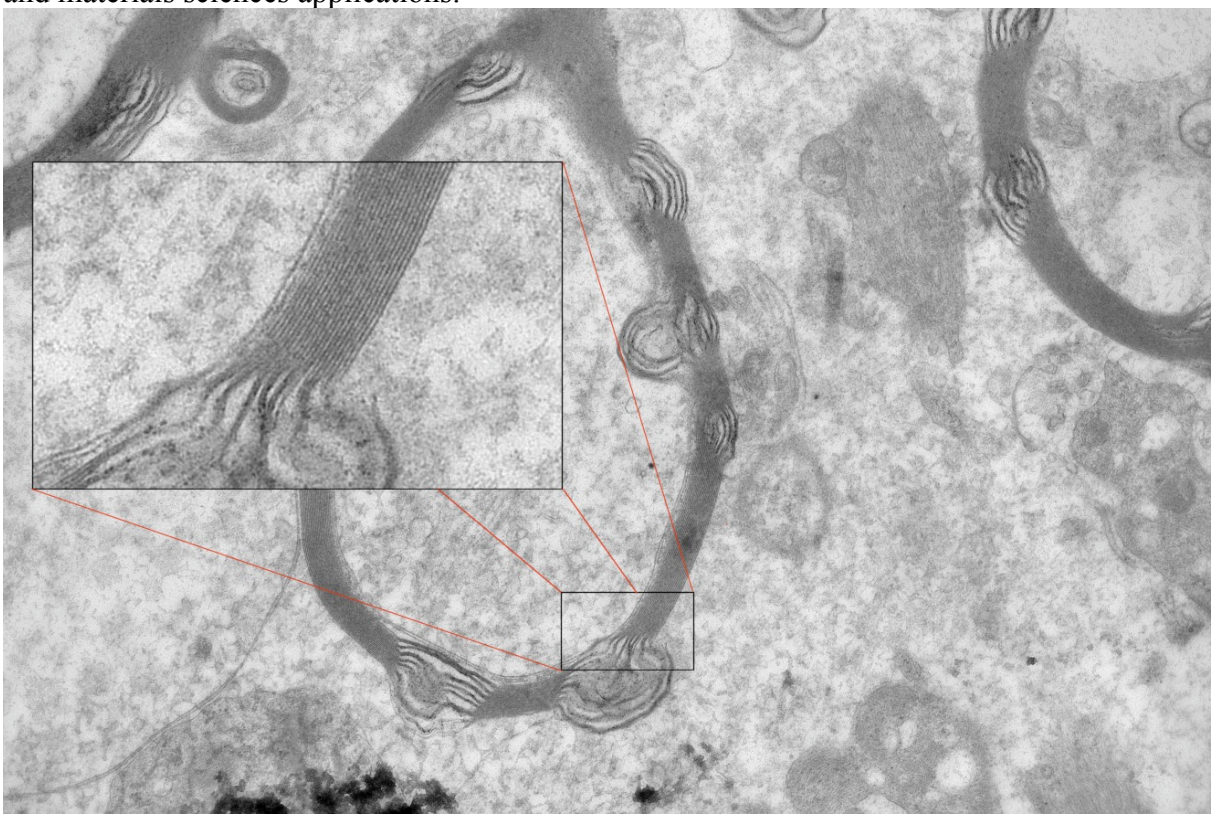

FIG. 1. TEM image at low to medium magnification range of brain sample acquired with CCD camera with large field of view. Inset shows that even at that magnification a current TEM CCD camera is still able to resolve the fine myelin fibres surrounding the nerve.