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Physikalisches Kolloquium
Einladung

Physics Colloquium
Invitation

Monday, 06 November 2023

Lecture Hall N24/H13, at 16:15
Coffee and cookies will be served in front of the lecture hall from 16:00

The World's Fastest Electron Microscopes – ZEISS MultiSEM

Dr. Dirk Zeidler

Carl Zeiss MultiSEM GmbH, Oberkochen, Germany

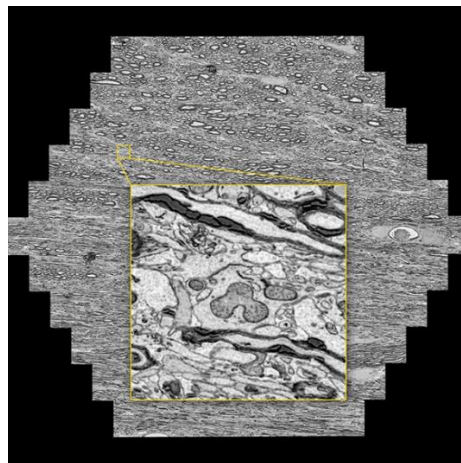
 www.zeiss.com/multisem



Single beam scanning electron microscopes can acquire high-resolution images of small sample regions, typically in the range of several micrometers. They are limited in their ultimate data acquisition rate at a given resolution by statistical electron-electron interaction.

However, there is an increasing need for large area imaging or even volume imaging of biological tissues at nanometer resolution. This calls for high-throughput electron microscopes. We increased imaging speed dramatically by using multiple electron beams and parallel detection.

We give an introduction to the ZEISS MultiSEM, discuss the bottlenecks multibeam technology tackles, and present an overview of current application fields and scientific results achieved by the MultiSEM.



*Mouse brain section, maximum acquisition speed of 1.22 gigapixels/second.
Courtesy of J. Lichtman, Harvard University, Cambridge, MA, USA.*

Host: Prof. Dr. Ute Kaiser, Electron Microscopy Group of Materials Science

Organisation: Prof. Dr. Jens Michaelis, Institute of Biophysics, jens.michaelis@uni-ulm.de, +49-731-50-23050