# **Company Profile**

# ZEISS

ZEISS is a leading international technology enterprise operating in the optics and optoelectronics industries. The ZEISS Group develops and distributes semiconductor manufacturing equipment, measuring technology, microscopes, medical technology, eyeglass lenses, camera and cine lenses, binoculars, and planetarium technology. With its solutions, the company constantly advances the world of optics and helps shape technological progress. The Research Microscopy Solutions business group is the world's only one-stop manufacturer of light, X-ray, and electron microscope systems. Its portfolio compromises solutions and services for life sciences and materials research as well as industry, education, and clinical practice.

- **FIB-SEM and Ion Microscopes:** Combine 3D imaging and analysis with focused ion beam and femtosecond laser milling to include nanotomography, nanofabrication, and sample preparation with ZEISS Crossbeam.
- Scanning Electron Microscopes: Acquire high-resolution surface information and superior materials contrast for applications in nanotechnology, materials analysis, semiconductor failure analysis, life sciences, and quality assurance.
- **X-ray Microscopes:** Experience nondestructive 3D imaging with industry-best resolution and contrast. With sub-micron and nanoscale 3D XRM systems, realize synchrotron-quality tomographic imaging in your laboratory.
- **Correlative Microscopy:** ZEISS ZEN Connect lets you overlay and organize images from any source to connect multimodal and multiscale data. ZEN Connect has a sample-centric interface that always shows data and metadata in context to support navigation and detailed sample understanding.
- **Confocal and Superresolution Microscopes:** The revolutionary ZEISS Airyscan 2 detector for confocals improves imaging with better signal-to-noise, speed, and resolution. The ZEISS Elyra 7 offers flexibility and gentle superesolution imaging. ZEISS Elyra 7 with Lattice SIM<sup>2</sup> provides gentle, high-speed superresolution images. ZEISS confocals for materials can provide roughness measurements and topographical characterization.
- Automated Imaging Systems: Digitize specimens and create high-quality virtual slides with ZEISS Axio Scan.Z1. Automate live cell imaging with ZEISS Celldiscoverer 7. Imaging well plates and dishes in fluorescence and brightfield has never been easier.
- **Compound Microscopes:** From routine microscopes to fully motorized platforms for simple inspection and advanced research, ZEISS upright and inverted microscopes are configurable to your specific imaging needs.
- Stereo and Zoom Microscopes: These stereoscopic and macroscopic products offer large object fields and allow extended working distances, ideal for observing large biological samples or analysis of a variety of materials.
- **Digital Microscopes:** ZEISS Smartzoom 5 is your smart digital microscope, ideal for quality control, quality assurance, and failure analysis applications in virtually every field of industry.
- Lightsheet Microscopy: The new ZEISS Lattice Lightsheet 7 makes volumetric imaging of subcellular structures and dynamics over hours and days with minimal photodamage easily accessible through automation and the ability to use standard sample carriers. ZEISS Lightsheet 7 achieves fast and gentle multiview imaging of large living and cleared specimens such as whole model organisms or even whole mouse brains.

# ZEISS





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# meknive

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# **NEUROSCIENCE**

Micro-Optical Sectioning Tomography to Obtain a High-Resolution Atlas of the Mouse Brain Anan Li, Hui Gong, Bin Zhang, Qingdi Wang, Cheng Yan, Jingpeng Wu, Qian Liu, Shaoqun Zeng, Qingming Luo

Britton Chance Center for Biomedical Photonics, Wuhan National Laboratory for Optoelectronics–Huazhong University of Science and Technology, Wuhan 430074, P. R. China.

# **CRYO**

A single slice of a tomogram of an aldehyde fixed and sucrose infiltrated cryosection with a 3D reconstruction. Erik Bos and Peter J. Peters, Netherlands Cancer Institute, Amsterdam. (see: J. Lefman, P. Zhang, T. Hirai, RM. Weis, J. Juliani, D. Bliss, M. Kessel, E. Bos, P.J. Peters, S. Subramaniam: Three-dimensional electron microscopic imaging of membrane invaginations in Echerichia coli overproducing the chemotaxis receptor Tsr. J. Bacteriol. 2004 Aug; 186(15): 5052-61.)

## MATERIALS

ABS, stained with 0s04, sectioned at room temperature with the ultra sonic knife, section thickness 50nm. Note the almost perfect spherical shape of the large rubber particles and the preservation of the inclusions inside. Also the smaller dense rubber particles are well preserved. B.Vastenhout, Dow Benelux N.V. Terneuzen, The Netherlands.

Ultra-Wet 35° • Ultra-Dry 35° • Ultra-Semi 35° • Ultra Maxi 35° Ultra Jumbo 35° • Ultra Sonic 35° Ultra ATS 35° Ultra-AFM 35° Ultra-Wet 45° • Ultra Jumbo 45° • Cryo 25° • Cryo Immuno 35° Cryo-Dry 35° • Cryo-Wet 35° • Cryo-Dry 45° • Cryo-Wet 45° Cryo-AFM Histo 45° • Histo Jumbo 45° • Histo-Cryo Dry 45° Histo-Cryo Wet 45° • Trimtool 20 • Trimtool 45 • Static Line II







o cryo 35°