Volume 28, Number 3 June 2022

Microscopy AND Microanalysis

Includes manuscripts developed from presentations at the XVIIth International Conference on Electron Microscopy, November 30th-December 2nd, 2020.

Guest Editors: Hanna Myalska-Głowacka and Marek Faryna

MSA Microscopy Society of America

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ISSN 1431-9276

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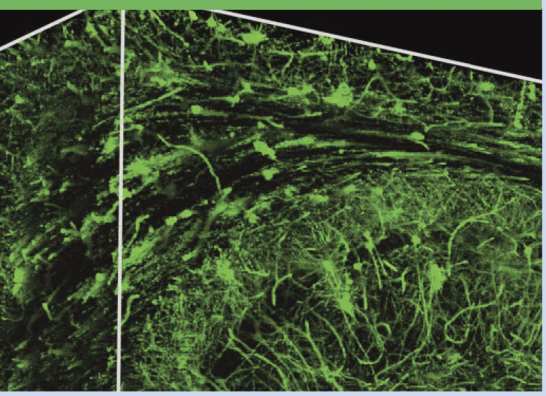

Micro-Optical Sectioning Tomography to Obtain a High-Resolution Atlas of the Mouse Brain Anan Li, Hui Gong, Bin Zhang, Qingdi Wang, Cheng Yan, Jingpeng Wu, Qian Liu, Shaoqun Zeng, Qingming Luo

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

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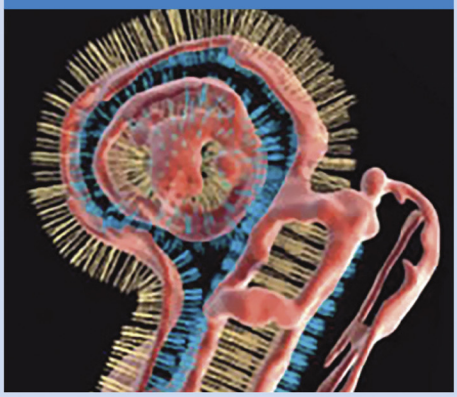

A single slice of a tomogram of an aldehyde fixed and sucrose infiltrated cryosection with a 3D reconstruction. Erik Bos and Peter J. Peters, Netherlands Cancer Institute, Amsterdam. (see: J. Lefman, P. Zhang, T. Hirai, RM. Weis, J. Juliani, D. Bliss, M. Kessel, E. Bos, P.J. Peters, S. Subramaniam: Three-dimensional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

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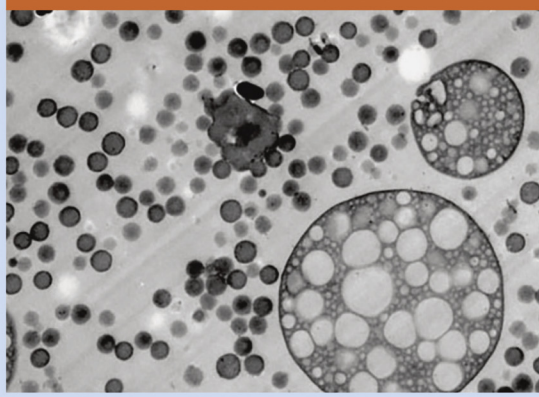

ABS, stained with OsO_4, sectioned at room temperature with the ultra sonic knife, section thickness 50nm. Note the almost perfect spherical shape of the large rubber particles and the preservation of the inclusions inside. Also the smaller dense rubber particles are well preserved. B.Vastenhout, Dow Benelux N.V. Terneuzen, The Netherlands.

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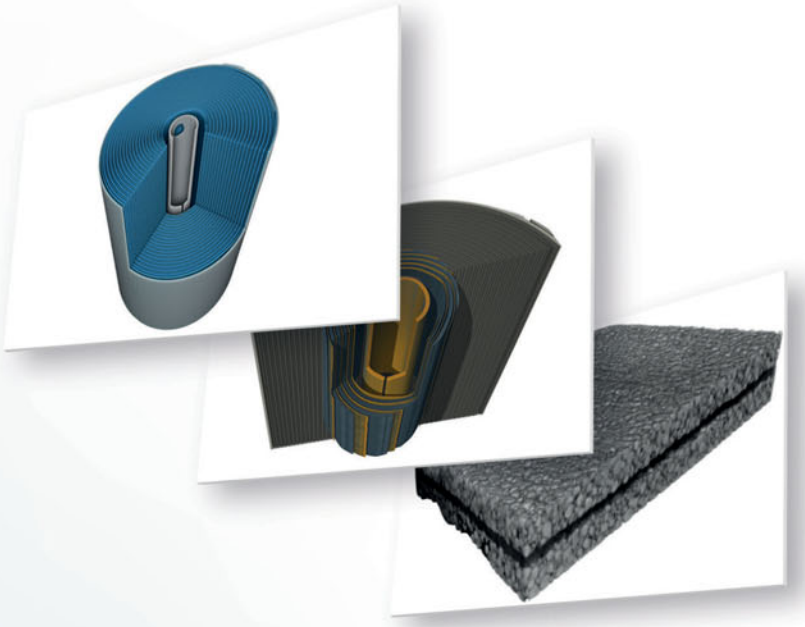

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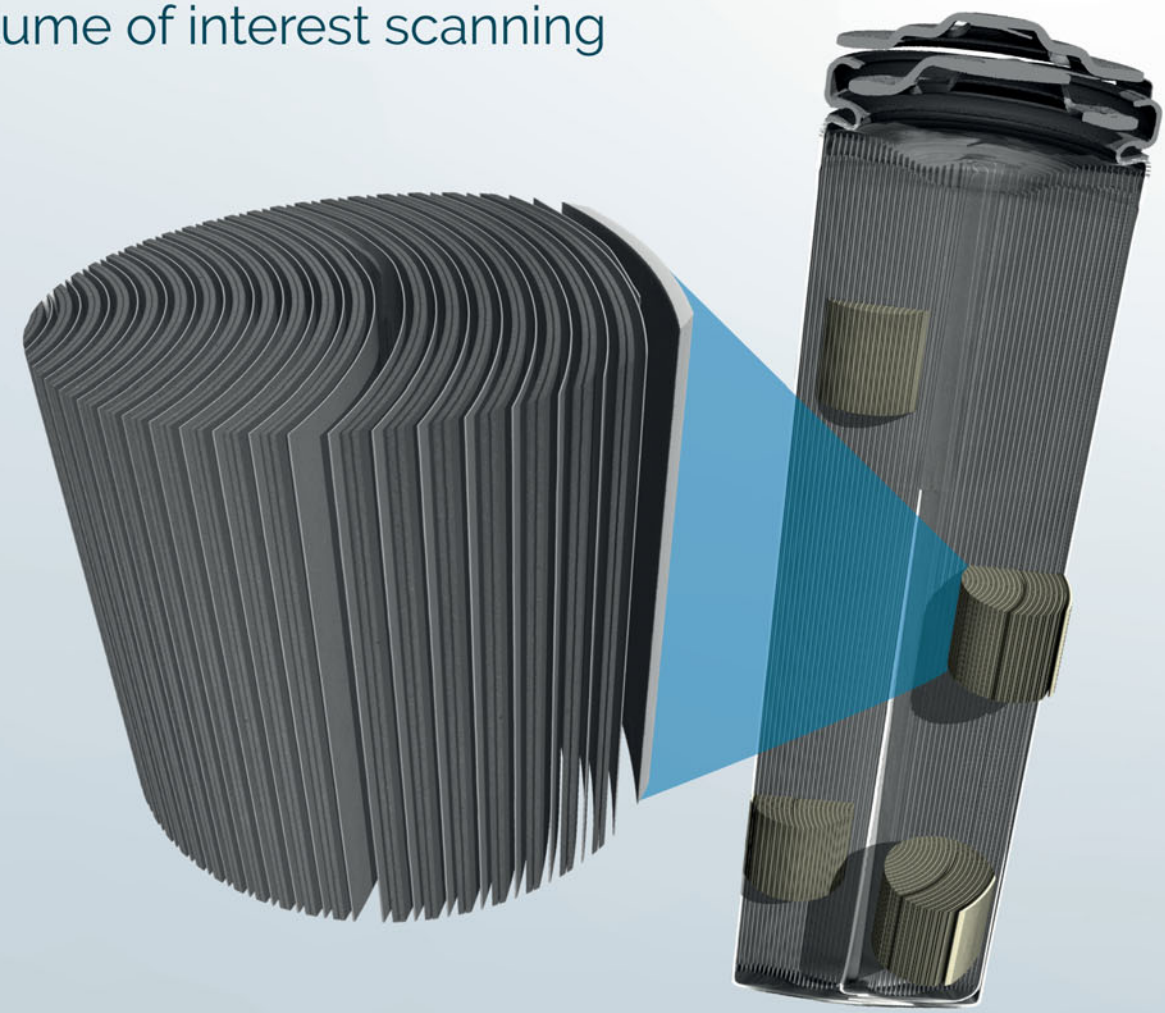

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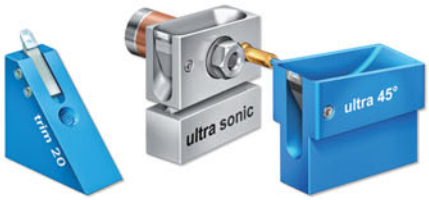

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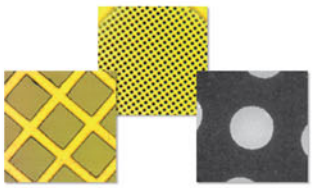

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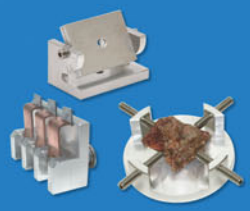

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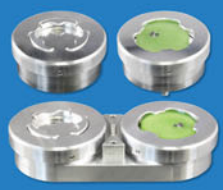

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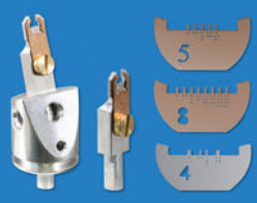

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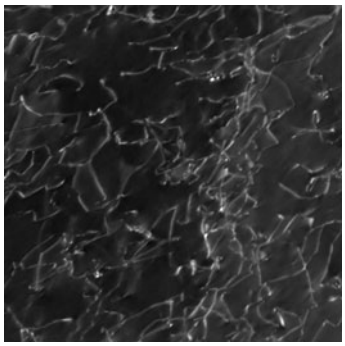

On the Cover: Diffraction Contrast Scanning Transmission Electron Microscopy (DC-STEM) image of dislocations in forged 304L Austenitic stainless steel. The image was obtained in a weak beam diffracting condition, with the diffracted signal collected on an annular darkfield STEM detector in an FEI Titan transmission electron microscope operated at 200 keV. The image is part of a tomographic tilt series for characterizing the three-dimensional arrangement of the dislocation network. Taken from the manuscript by Sills and Medlin, page 641.

Biological Applications

Micrographia

The XVIITH International Conference on Electron Microscopy (EM2020)

Includes manuscripts developed from presentations at The XVIIth International Conference on Electron Microscopy (EM2020) organized jointly by Silesian University of Technology, Association of Graduates of the Metallurgy and Material Science of SUT, and the Polish Society for Microscopy, held virtually November 30th–December 2nd, 2020.
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