

Four-Dimensional Scanning Transmission Electron Microscopy (4D-STEM): From Scanning Nanodiffraction to Ptychography and Beyond

Colin Ophus

Failure Evaluation of a SiC/SiC Ceramic Matrix Composite During In-Situ Loading Using Micro X-ray Computed Tomography

John Thornton, Benedicta D. Arhatari, Mitchell Sesso, Chris Wood, Matthew Zonneveldt, Sun Yung Kim, Justin A. Kimpton and Chris Hall

Electron Beam Effects on Oxide Thin Films—Structure and Electrical Property Correlations

Krishna Kanth Neelisetty, Xiaoke Mu, Sebastian Gutsch, Alexander Vahl, Alan Molinari, Falk von Seggern, Mirko Hansen, Torsten Scherer, Margit Zacharias, Lorenz Kienle, VS Kiran Chakravadhanula and Christian Kübel

Microstructural Features of Recycled Aggregate Concrete: From Non-Structural to High-Performance Concrete

Diogo Pedro, Mafalda Guedes, Jorge de Brito and Luís Evangelista

Examining the Effect of Evaporation Field on Boron Measurements in SiGe: Insights into Improving the Relationship Between APT and SIMS Measurements of Boron

Andrew J. Martin and Brett Yatzor

Quantitative Determination of Low Contents of Manganese in Steels by EPMA

Daoling Wang and Aiqin Sun

Statistically Rigorous Silver Nanowire Diameter Distribution Quantification by Automated Electron Microscopy and Image Analysis

Clifford S. Todd, William A. Heeschen, Peter Y. Eastman and Ellen C. Keene

In Situ High-Temperature EBSD and 3D Phase Field Studies of the Austenite—Ferrite Transformation in a Medium Mn Steel

Hussein Farahani, Gerrit Zijlstra, Maria Giuseppina Mecozzi, Václav Ocelík, Jeff Th. M. De Hosson and Sybrand van der Zwaag

Study of Geometrically Necessary Dislocations of a Partially Recrystallized Aluminum Alloy Using 2D EBSD

Majid Seyed Salehi, Nozar Anjabin and Hyoung S. Kim

Quantitative Measurement of Iron-Silicides by EPMA Using the Fe L α and L β X-ray Lines: A New Twist to an Old Approach

Aurélien Moy, John Fournelle and Anette von der Handt

Reflector Selection for the Indexing of Electron Backscatter Diffraction Patterns

Stuart I. Wright, Saransh Singh and Marc De Graef

Rapid Determination of the Distribution of Cellulose Nanomaterial Aggregates in Composites Enabled by Multi-Channel Spectral Confocal Microscopy

Marcus A. Johns, Anna E. Lewandowska and Stephen J. Eichhorn

Application of Gray Level Co-Occurrence Matrix Analysis as a New Method for Enzyme Histochemistry Quantification

Milorad Dragić, Marina Zarić, Nataša Mitrović, Nadežda Nedeljković and Ivana Grković

Tracking Microscope Performance: A Workflow to Compare Point Spread Function Evaluations Over Time

Anna H. Klemm, Andreas W. Thome, Katarina Wachal and Steffen Dietzel

Removing Stripes, Scratches, and Curtaining with Nonrecoverable Compressed Sensing

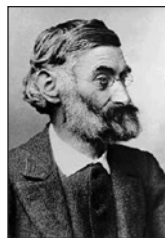
Jonathan Schwartz, Yi Jiang, Yongjie Wang, Anthony Aiello, Pallab Bhattacharya, Hui Yuan, Zetian Mi, Nabil Bassim and Robert Hovden

DSeg: A Dynamic Image Segmentation Program to Extract Backbone Patterns for Filamentous Bacteria and Hyphae Structures

Hanqing Zhang, Niklas Söderholm, Linda Sandblad, Krister Wiklund and Magnus Andersson

Stochastic Modeling of Multidimensional Particle Properties Using Parametric Copulas

Orkun Furat, Thomas Leibner, Kai Bachmann, Jens Gutzmer, Urs Peuker and Volker Schmidt



Dear Abbe

Dear Abbe,

We have many bottles of old or questionable chemicals in our histology lab. Unfortunately it's going to be costly to dispose of them. Any ideas on how to reduce our HazMat inventory inexpensively?

Cheapskate in Chico

Dear Cheapskate,

Heiliger Strohsack! I'm more than happy to expound on creative ways to dispose of waste material. Having expired or unstable chemicals around can be a pain, and it is even worse if they are acutely noxious. It's less hazardous these days to dispose of an unstable/acutely noxious colleague than to dispose of old chemicals! As I have discussed in the past, there are chemical and biological hazardous and, more importantly, administrative hazards. Not long ago a neighboring chemistry lab found some ancient picric acid squirreled away in a cabinet, called it in, and a bomb squad rushed to the lab to dispose of the horrible explosive. They had a nice break as the building was immediately evacuated. This was particularly effective since it disrupted a scheduled administrative meeting with them. Or use my method (if you don't mind the risk of getting caught transporting hazardous materials). A colleague and I discovered several old, crusty cans of ether hidden in the back of a cabinet. A nice rind had formed around the cap of the metal cans, and I talked him into taking them to a fallow field several miles from town. He was a bit puzzled until I had us walk about 50 yards, kneel behind a berm, and insert some earplugs. I pulled out my trusty Mauser rifle and started plinking the cans. My, what fireworks! My friend did not seem amused. Donnerwetter!

Looking for creative ways to escape meetings and interpersonal hazards? Aren't comfortable handling explosive situations? Give Herr Abbe an opportunity to make it more dangerous! Contact him via his unstable assistant at johnshields59@gmail.com.

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Microscopy TODAY

Micrograph Awards Competition

The 25 finalists for these awards are shown
in the gallery at the following website:

https://www.microscopy.org/awards/micrograph_gallery.cfm

You are welcome to view the images
and vote for your favorite.