Microscopy Microanalysis

table of contents preview

REVIEW ARTICLE

A Review of Color Blindness for Microscopists: Guidelines and Tools for Accommodating and Coping with Color Vision Deficiency Douglas R. Keene

EQUIPMENT DEVELOPMENT

In Situ Heater Design for Nanoscale Synchrotron-Based Full-Field Transmission X-Ray Microscopy Andrew M. Kiss, William M. Harris, Arata Nakajo, Steve Wang, Joan Vila-Comamala, Alex Deriy, and Wilson K.S. Chiu

High Vertical Resolution Full-field Reflection-type Three-dimensional Angle-Deviation Microscope with Nonlinear Error Compensation

Ming-Hung Chiu, Chen-Tai Tan, Shih-Feng Huang, and Jhao-An Chen

BIOLOGICAL APPLICATIONS

FtsZ1/FtsZ2 Turnover in Chloroplasts and the Role of ARC3

Carol B. Johnson, Rahamthulla Shaik, Rehab Abdallah, Stanislav Vitha, and Andreas Holzenburg Collagen Structure Deterioration in the Skin of Patients with Pelvic Organ Prolapse Determined by Atomic Force Microscopy

Svetlana L. Kotova, Peter S. Timashev, Anna E. Guller, Anatoly B. Shekhter, Pavel I. Misurkin Victor N. Bagratashvili, and Anna B. Solovieva

Analysis of Grayscale Characteristics in Images of Labeled Microtubules from Cultured Cardiac Myocytes Yongming Dang, Xiaodong Lan, Qiong Zhang, Lingfei Li, and Yuesheng Huang Comparative Tissue Stainability of Lawsonia inermis (Henna) and Eosin as Counterstains to

Hematoxylin in Brain Tissues Judith N. Alawa, Gbenga O. Gideon, Bamidele Adetiba, and Clement B. Alawa

Flow Cytometry and Electron Microscopy Study of Staphylococcus aureus and Escherichia coli Treated with Mdc-Hly

Xuemei Lu, Xiaobao Jin, and Jiayong Zhu

- Effects of Tributyltin Chloride on Developing Mouse Oocytes and Preimplantation Embryos Xian-Ju Huang, Ming Shen, Lizhong Wang, Fengxiang Yu, Wangjun Wu, and Hong-lin Liu
- Structural Heterogenity of Intraluminal Content of The Prostate: A Histochemical and Ultrastructural Study Paula Badea, Amelia Petrescu, Lucia Moldovan, and Otilia Zarnescu
- α-Viniferin-Induced Structural and Functional Alterations in Raillietina echinobothrida, a Poultry Tapeworm Bishnupada Roy and Bikash R. Giri

Analysis of Gill Structure from a Fresh Water Fish (Heteropneustes fossilis) Exposed to Bleached Sulfite Pulp Mill Effluents

Sudip Dey Utpal Rajguru, Dinesh Chandra Pathak, and Umesh C. Goswami The Incorporation of Nanoparticles into Conventional Glass-Ionomer Dental Restorative Cements

Elizabeta Gjorgievska, Gustaaf Van Tendeloo, John W. Nicholson, Nichola J. Coleman, Ian J. Slipper, and Samantha Booth

XRMA and ToF-SIMS Analysis of Normal and Hypomineralized Enamel Lisa Melin, Jesper Lundgren, Per Malmberg, Jörgen G. Norén, Fabian Taube, and David H. Cornell

MATERIALS APPLICATIONS

A Tool for Local Thickness Determination and Grain Boundary Characterization by CTEM and HRTEM Techniques

Ákos K. Kiss, Edgar F. Rauch, Béla Pécz, János Szívós, and János L. Lábár

Periodic Artifact Reduction in Fourier Transforms of Full Field Atomic Resolution Images Robert Hovden, Yi Jiang, Huolin L. Xin, and Lena F. Kourkoutis

Robust Focus Measure Operator Using Adaptive Log-Polar Mapping for Three-Dimensional Shape Recovery Ik-Hyun Lee, Muhammad Tariq Mahmood, and Tae-Sun Choi

Total-Scattering Pair-Distribution Function of Organic Material from Powder Electron Diffraction Data Tatiana E. Gorelik, Martin U. Schmidt, Ute Kolb, and Simon J. L. Billinge Characterization of the Thickness and Distribution of Latex Coatings on Polyvinylidene Chloride Beads by

Backscattered Electron Imaging

Clifford S. Todd and Douglas E. Beyer

A Model Ni-Al-Mo Superalloy Studied by Ultraviolet Pulsed-Laser-Assisted Local-Electrode Atom-Probe Tomography

Yiyou Tu, Elizaveta Y. Plotnikov, and David N. Seidman Nonequilibrium Microstructures for Ag-Ni Nanowires

Rajesh K. Rai and Chandan Srivastava

Investigation of (Fe,Co)NbB-Based Nanocrystalline Soft Magnetic Alloys by Lorentz Microscopy and Off-Axis Electron Holography

Changlin Zheng, Holm Kirmse, Jianguo Long, David E. Laughlin, Michael E. McHenry, and Wolfgang Neumann

Microscopy and Microanalysis of Extreme Case of Salt and Biodegradation in 17th Century Wall Paintings M. Gil, M.R. Martins, M.L. Carvalho, C. Souto, L. Dias, A.S. Longelin, A. Cardoso, J. Mirão and A.E. Candeia:

Assessment of In-Depth Degradation of Artificially Aged Triterpenoid Paint Varnishes Using Nonlinear Microscopy Technique

George Filippidis, Meropi Mari, Lambrini Kelegkouri, Aggelos Philippidis, Aleksandros Selimis, Kristallia Melessanaki, Maria Sygletou, and Costas Fotakis

On the Use of the Unusual Green Pigment Brochantite (Cu4(SO4)(OH)6) in the 16th-Century Portuguese- Flemish Paintings Attributed to The Master Frei Carlos Workshop

Sara Valadas, Rita V. Freire, Ana Cardoso, José Mirão, Cristina B. Dias, Peter Vandenabeele, and António Candeias

Utilization of Optical Polarization Microscopy in the Study of Sorption Characteristics of Wound Dressing Host Materials

Miha Devetak, Zdenka Peršin, Karin Stana-Kleinschek, and Uroš Maver

µ-XRF Analysis of Trace Elements in Lapis Lazuli-Forming Minerals for a Provenance Study Debora Angelici, Alessandro Borghi, Fabrizia Chiarelli, Roberto Cossio, Gianluca Gariani, Alessandro Lo Giudice, Alessandro Re, Giovanni Pratesi, and Gloria Vaggelli

BOOK REVIEW

Biomineralization Sourcebook: Characterization of Biominerals and Biomimetic Materials, Elaine DiMasi and Laurie B. Gower (Eds) Michael T. Postek

Microscopy and Microanalysis website: http:journals.cambridge.org/MAM Indexed in Chemical Abstracts, Current Contents, BIOSIS, and MEDLINE (PubMed)



DearAbbe

Dear Abbe.

I have been happily using Zamboni's fixative on cryosections for years. It's excellent for proteins, but the picric acid causes our safety officer to blanch. What can I do? Agitated in Allentown

Dear Agitated,

You have encountered one of the many hazards of research, one we don't talk about (vom Teufel spricht and all). This is not a chemical hazard as you think, nor even a biological hazard, but rather an administrative hazard. Your error was in letting people know you're using a chemical fixative! You should instead have just told them that you are using Zambonis to produce cryosections! The administrators will then imagine your lab is doing cutting-edge research (read: lots of grant dollars) inventing nano machines to plane the ice of the cryosections. Be resourceful, Photoshop an image of this, and post it in your lab.

Dear Abbe,

I have been asked to moderate a session at a national meeting. Unfortunately there are several individuals scheduled that are notorious for going overtime. Are there some hints, advice, or tricks you might have to keep sessions on time? Irritated in Istanbul

Dear Irritated.

Schwerenot! If I had a Rentenmark for every session talk or board meeting that went over its prescribed time, I wouldn't be wasting my time writing advice columns. I'd be gallivanting around the Riviera hobnobbing with the Royalty! Your problem is confusion over what "moderation" means. Probably because of soppy old phrases like "all things in moderation." Humbug! There is no need to be moderate when windbags can't empty themselves in the time generously given. I have used several tricks myself in the past, such as a squirt gun, to liberally water the offending speaker's crotch as they drone on past their limit. You can bet there were few that dared to cross that line again without a fresh pair of knickers. I have also used the Shrinking Platform (Pat. Pend. W. Gromit, Inc.). With this, the speaker is lowered behind the podium as time expires. Many times they are too wrapped up in reading their PowerPoint slides to grasp what's happening. I have also "borrowed" an idea from the psychology conferences: operant conditioning. Dangle a grant in front of the speaker and slowly withdraw it as they near their time limit. Yank it away when time is up. Other ideas are probably illegal but equally satisfying. If nothing else works, require verbose speakers who go over their time to treat everyone at the bar after the session is over. The implied threat of spending money on academic enemies and grad students usually enforces time limits.

If your list of rewards and punishments needs some updating, consult with Herr Abbe's faithful assistant at jpshield@uga.edu.

- Мт