Microscopy_{and} Microanalysis

preview of some upcoming articles

Low Doses of Simvastatin Potentiate the Effect of Sodium Alendronate in Inhibiting Bone Resorption and Restore Microstructural and Mechanical Bone Properties in Glucocorticoid-Induced Osteoporosis

Priscila L. Sequetto, Reggiani V. Gonçalves, Aloísio S. Pinto, Maria G. A. Oliveira, Izabel R. S. C. Maldonado, Tânia T. Oliveira, and Rômulo D. Novaes

Segmenting Microscopy Images of Multi-Well Plates Based on Image Contrast Weiyang Chen, Bo Liao, Weiwei Li, Xiangjun Dong, Matthew Flavel, Markandeya Jois, Guojun Li, and Bo Xian

Synchrotron X-ray Microtomography with Improved Image Quality by Ring Artifacts Correction for Structural Analysis of Insects

Shengkun Yao, Yunbing Zong, Jiadong Fan, Zhibin Sun, Jianhua Zhang, and Huaidong Jianga

Atomic Force Microscopy Study of the Anti-inflammatory Effects of Triptolide on Rheumatoid Arthritis Fibroblast-like Synoviocytes Zhanhui Su, Han Sun, Man Ao, and Chunying Zhao

Structural and Chemical Analysis of Hydroxyapatite (HA)-Boron Nitride (BN) Nanocomposites Sintered Under Different Atmospheric Conditions *Feray Bakan, Meltem Sezen, Merve Gecgin, Yapincak Goncu, and Nuran Ay*

Transmission Electron Microscopy Studies of Electron-Selective Titanium Oxide Contacts in Silicon Solar Cells

Haider Ali, Xinbo Yang, Klaus Weber, Winston V. Schoenfeld, and Kristopher O. Davis

Orientation Relationships in Al0.7CoCrFeNi High-Entropy Alloy Leo T.H. de Jeer, Václav Ocelík, and Jeff T.M. De Hosson

Quantitative Studies of Endothelial Cell Fibronectin and Filamentous Actin (F-Actin) Coalignment in Response to Shear Stress

Xianghui Gong, Xixi Zhao, Bin Li, Yan Sun, Meili Liu, Yan Huang, Xiaoling Jia, Jing Ji, and Yubo Fan

Optimization of 3D Chemical Imaging by Soft X-ray Spectro-Tomography Using a Compressed Sensing Algorithm

Juan Wu, Mirna Lerotic, Sean Collins, Rowan Leary, Zineb Saghi, Paul Midgley, Slava Berejnov, Darija Susac, Juergen Stumper, Gurvinder Singh, and Adam P. Hitchcock

Microstructural Characterization of Solid State Reaction Phase Formed During Sintering of Hexagonal Boron Nitride with Iron

Kaline Pagnan Furlan, Deise Rebelo Consoni, Breno Leite, Matheus Vinícius Gouvêa Dias, and Aloisio Nelmo Klein

Development and Application of a Sample Holder for In Situ Gaseous TEM Studies of Membrane Electrode Assemblies for Polymer Electrolyte Fuel Cells *Takeo Kamino, Toshie Yaguchi, and Takahiro Shimizu*

Three Dimensional Nanoscale Mapping of State of the Art finFETs Pritesh Parikh, Corey Senowitz, Don Lyons, Isabelle Martin, Ty J. Prosa, Michael DiBattista, Arun Devaraj, Ying Shirley Meng

High-Resolution FESEM Imaging of Cellulose Microfibril Organization in Plant Primary Cell Walls Yunzhen Zheng, Daniel J. Cosgrove, and Gang Ning

3D Nanometrology Based on SEM Stereophotogrammetry V. N. Tondare, J. S. Villarrubia, and A. E. Vladár

Ultrastructural, Elemental and Mineralogical Analysis of Vascular Calcification in Atherosclerosis

Ida Perrotta and Edoardo Perri



DearAbbe

Dear Abbe,

Lately, between social media and re-makes of old TV shows into movies, I've gotten this feeling that there isn't any new or original material being produced. Is this a problem in your field also?

Cynical in San Jose

Dear Cynic,

Tatsächlich, I get that perception, too. I suspect that old Solomon was correct in stating that there is nothing new under the sun. I also get an itchy rash when I wear too much polyester, but we're not talking about unfashionable fabrics, are we? It also seems that my latest young lab assistants have a peculiar style of horse sense. Big steaming piles of it. It's hard work to get them to realize that there are several decades of published science before 1969, when library scientists starting scanning documents for digital retrieval. There are always new results being produced by science, but many times we end up reiterating what is already known. Someday I hope to cash in on this trend of repeating myself, if someone doesn't beat me to it.

Dear Abbe,

I was rereading my biography of Paul Erdös and recalled how mathematicians covet a low Erdös number (1 = co-authored a paper with Erdös, 2 = co-authored a paper with someone who co-authored a paper with Erdös, etc.). Microscopy has many savants whose names would lend themselves to such measures. I myself have a Zaluzec number of 3! But I have never seen an "Abbe number." Why is this?

Puffed in Peoria

Dear Puff-Daddy,

Personally, I have an Erdös of -1 since I got to know his parents while he was still an approximation theory waiting to happen. When he was just a boy, I sensed he was clearly a prodigy in mathematics. As a young man he was said to be an eccentric social practitioner of math, which makes sense after spending so much time with Uncle Ernst. The world isn't ready for Abbe numbers since they are primarily irrational. Because of my long history of productivity (having moved on to running a product lab wherein my discoveries are proprietary and hopefully profitable), I frequently have to squash any potential Abbe numbers—sometimes with the Lab Bat when a bribe is insufficient.

Once you've stepped in the knee-deep residue of debatable science, it's time to contact Herr Abbe to dig you out. Contact him ASAP at jpshield@uga.edu.

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