

IMAGE GALLERY

Cornell Announces Results of 2003 Materials Images Competition

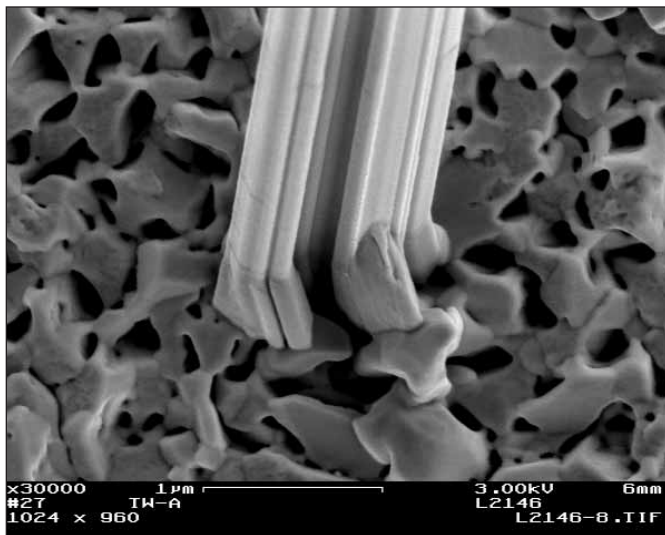
Cornell University's Student Chapter of the Materials Research Society, in collaboration with the Department of Materials Science and Engineering (MS&E), announced the results of its second annual Microscopy Image Competition: Images in the Material World. Three awards

were given in each of two categories: Most Scientifically Significant Image and Most Artistic Image. Prizes of digital cameras were provided by the Eastman Kodak Company.

The competition was promoted to undergraduate students in the United

States and Canada. Entries were judged by Cornell MS&E professors Stephen Sass and Christopher Ober, who is also director of the department. More information on the contest is available at Web site www.mse.cornell.edu/imagescontest.

Most Scientifically Significant Image
1st Place



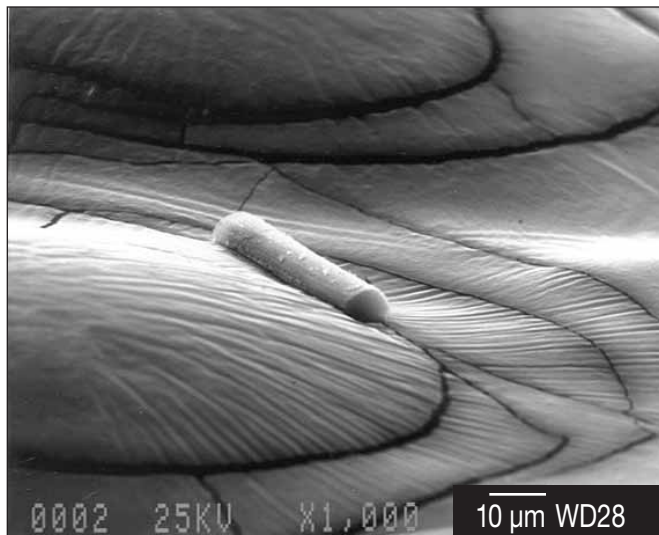
Tin Whisker

Joel LeBret, Washington State University

Imaging: Scanning Electron Microscope

Description: This SEM image of a tin whisker indicates the origin of striations or grooves on the surfaces of these long-time electronics hazards (i.e., when the tin whisker grows out at the surface, it acts like a wire creating a short-circuit in the electronics). The porous surface of the underlying tin grains directly produces the channels, which continue the entire length of the whisker.

Most Artistic Image
1st Place



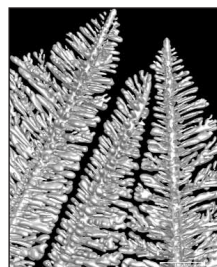
Lone SiC-Coated Carbon Fiber

Tatiana Russell, Rensselaer Polytechnic Institute

Imaging: Scanning Electron Microscope

Description: SEM image of a single SiC-coated carbon fiber on carbon mounting tape.

2nd Place



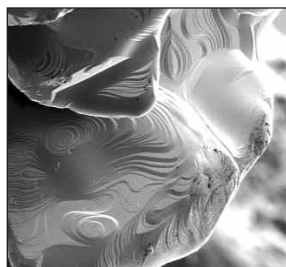
Higher-Order Dendritic Growth

Erhan Altinoglu
Northwestern University

Imaging: Optical Microscope

Description: Reconstruction of aluminum dendrites based on 110 serial sections taken at 4.75 μm intervals in an aluminum copper eutectic liquid.

3rd Place



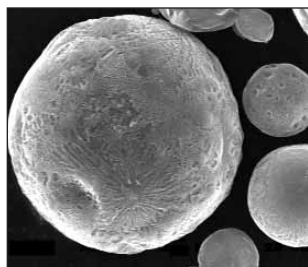
Etched Precious-Metal Alloy

Timothy Troutman
California Polytechnic State University, San Luis Obispo

Imaging: Scanning Electron Microscope

Description: Etched precious-metal-alloy electrode designed to exhibit low polarization in stimulation and sensing (patent pending).

2nd Place



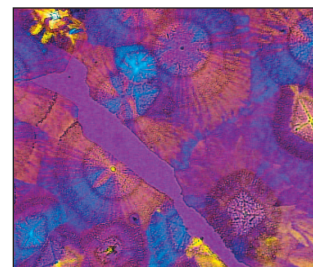
Asteroids

Amber Schneeweis
Iowa State University

Imaging: Scanning Electron Microscope

Description: Atomized particles of Al-15wt%Si deeply etched in nitric/phosphoric acid to reveal the unique microstructures that form during rapid solidification.

3rd Place



Circles & Squares

Javier Gutierrez
University of Florida

Imaging: Polarized Light Microscope

Description: Shape-retention of calcite crystals in CaCO₃ film formation.