The Information You Need...When You Need It.

Optical Microscopy

Optical Microscopy (OM) encompasses all of the laboratory techniques that use visible light, including macro camera, stereo binocular, and compound microscopes.

OM Applications Include:

- Photo Documentation
- Correlative Imaging in combination with monochromatic techniques, such as Correlative OM/SEM
- Materials Evaluation and Development
- Failure Analysis and Quality
- Art and Advertising

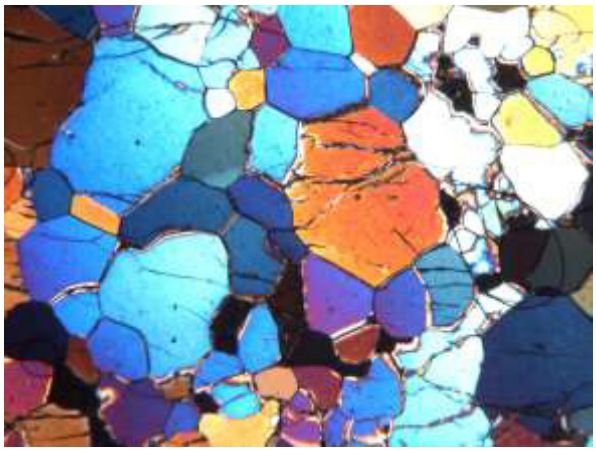
Data Presentation:

Optical Microscopy produces a micrograph: a picture of the sample under normal or enhanced conditions. Photos may be annotated with text and measurement data.

Sample Constraints:

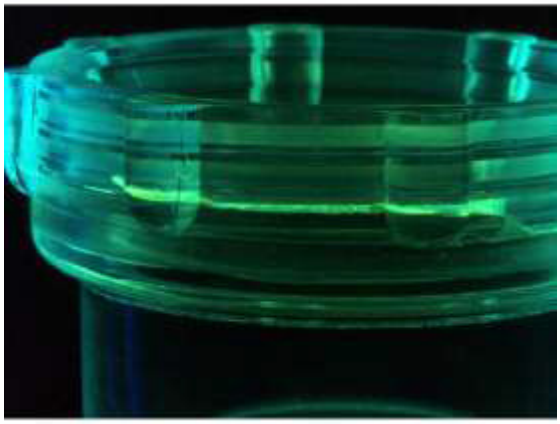
Samples may be examined as-is, crushed, ground and polished, or cut into very thin slices. Samples may be as large as square feet or as small as a few particles. Because many OM techniques consume sample, or add other materials, the order in which analyses using multiple techniques are done is important.

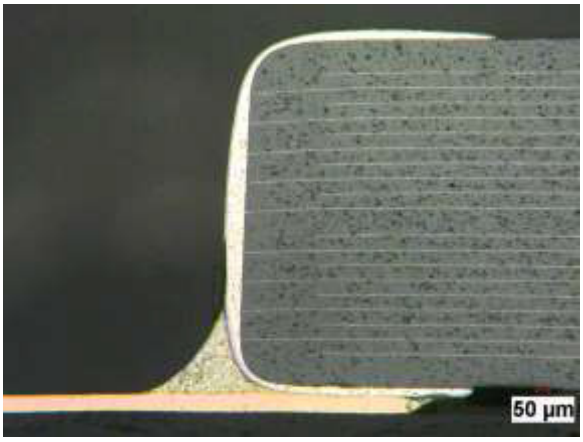
Examples of Data:



Micrograph of a visually transparent, colorless mineral sample using polarized light technique. The colors are due to optical wave interference. (Left)

Macro image of a crack in a transparent plastic housing which has been infiltrated with a fluorescent dye, revealed by ultraviolet illumination. (Right)



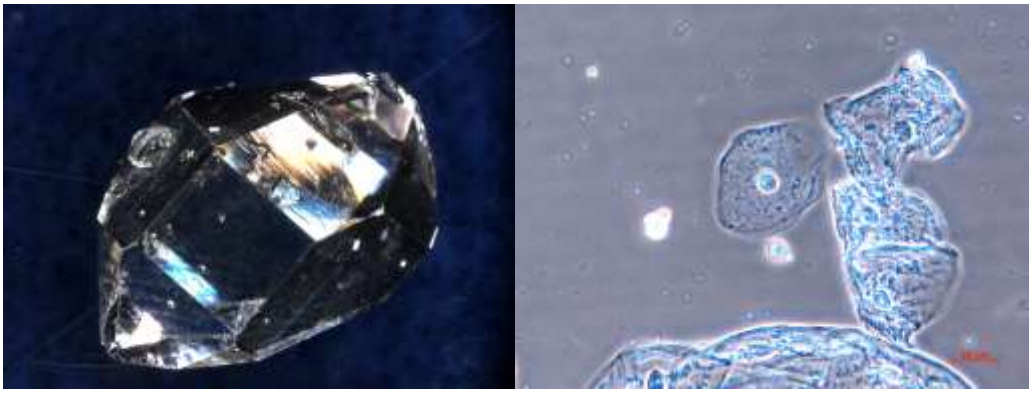


Polished section of a ceramic capacitor soldered to a printed wiring board. (Left)

Low magnification view of a fractured wire, preliminary to SEM-EDS. (Right)

Oblique view of a printed wiring board, using extended-focus technique. (Left)

Macro photo documenting the setup for the extended focus photo Left below: Low magnification view of a natural quartz crystal from Herkimer, New York. (Right)



Phase contrast image of oral epithelial cells, a microscopic "selfie"! (Above right)