

Ease visual overload with a thin section defect lab

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Microscopy is the “hardest thing” for students in a Mineralogy course. The myriad of different mineral habits, textures, and colors makes the process of understanding rocks microscopically seem nearly impossible—too slow for routine use. One must be fast at optical mineralogy to want to use it in routine petrography. A partial solution is: Do something else: The addition of a short microscopy exercise early in the lab sequence, devoted entirely to thin section defects, gives nascent mineralogists something they can easily recognize in an otherwise complex field of view—something that is obvious, attention-grabbing, but of no petrographic importance.

This thin section defect lab saves students a lot of time they would otherwise mistakenly spend trying to figure out optically striking ersatz “minerals” or “textures.” These defects include incorrect thin section thickness—too thick or thin, partial or complete grain plucking, rock disruption, carborundum dust above or below the rock slab, air bubbles, strained grains, etc.. After being shown examples of thin section defects in a short lab exercise, students can then avoid being distracted by them and wasting time on them. Thus adding a lab exercise can actually shorten the time it takes to complete more meaningful lab work.

The role of optical crystallography in the preparation of the new McCrone Atlas of Microscopic Particles

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Following in the tradition of the printed and CDROM editions of The Particle Atlas, the new McCrone Atlas of Microscopic Particles is intended primarily as an online resource for the microscopical identification of unknown particulate matter, regardless of nature or origin. The first group of substances to be described and illustrated is White Powders, which are of particular concern for the Civil Support Teams, Weapons of Mass Destruction (WMD) first-responders, fire-fighters, crime lab personnel, and other hazardous material handlers, but by no means confined to them. The first McCrone College of Microscopy course in the Microscopical Identification of White-Powder Unknowns to use this Atlas in beta release was held in January 2005, and the www.mccroneatlas.com website will be available for public subscription 1 April 2005. How this new web-based Atlas differs from printed versions of the past, especially with regard to the practical applications of optical crystallography, and how it is used in teaching, will be the subject of the presentation.