Stone samples through the microscope...

Karl E. Deckart

The images published on the following pages were provided by renowned German photographer Karl E. Deckart. He describes his method of capturing these stunning images:

All the specimens were kindly lent by the "Sächsisches Landesamt für Umwelt und Landwirtschaft und Geologie" in Freiberg/Germany. Unfortunately a formerly planned exhibition could not be arranged in Freiberg.

All the pictures were taken by a Nikon Optiphot-Microskope which in my case is a combination of Epi- and Transparent- Construction, also known as metallurgical and biological microscope. In this instance I used a revolving stage.

The camera is a digital Canon 5D MarkII which is adapted to the microscope's Nikon-Bajonet. Since the Canon 5D has a full-frame chip the magnification results from 5x objective and 2.5x internal projective lens, this means total magnification is 12.5x.

The filters used are: polarizer, Lamda 1/4, and a revolving analyzer, sometimes additional clear foil to increase colour intensity (no differential interference contrast!).

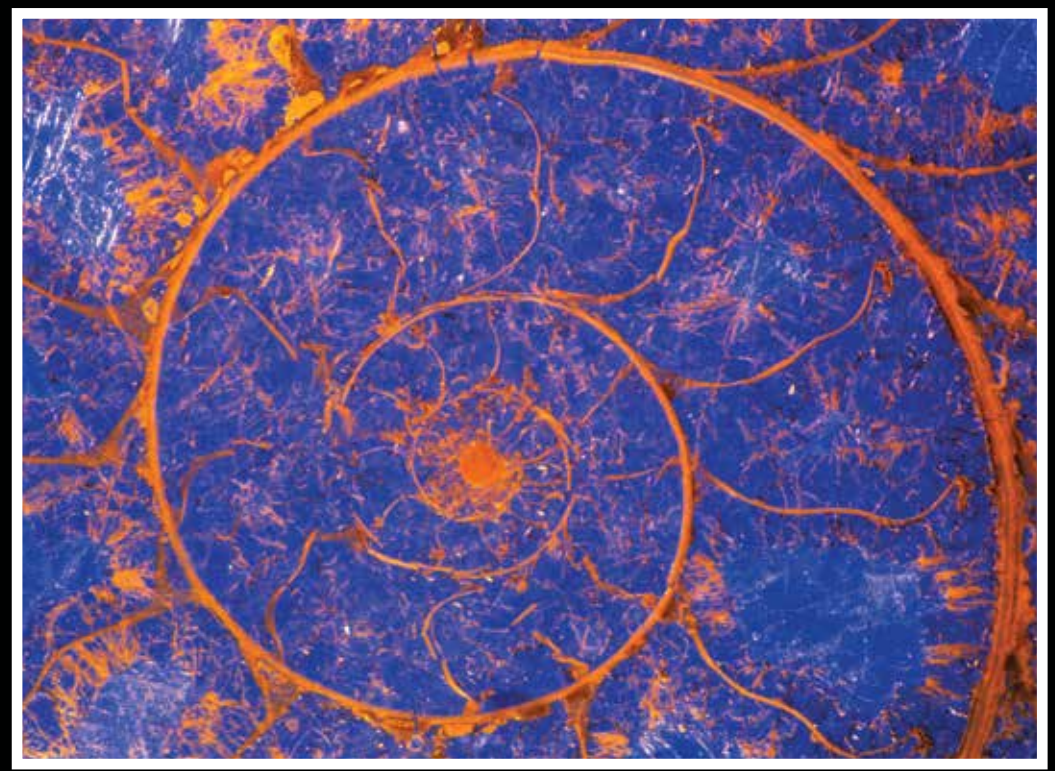
I do not use the microscope's internal focusing scope anymore, but use digital technique to focus and set exposure via the PC monitor. I use a programme by BreezeSys, called "DLSR Remote Pro".

This programme allows a full frame life picture on the monitor to focus even with a 5x magnifying feature. This makes it much easier and more precisely to focus than by the focusing scope.

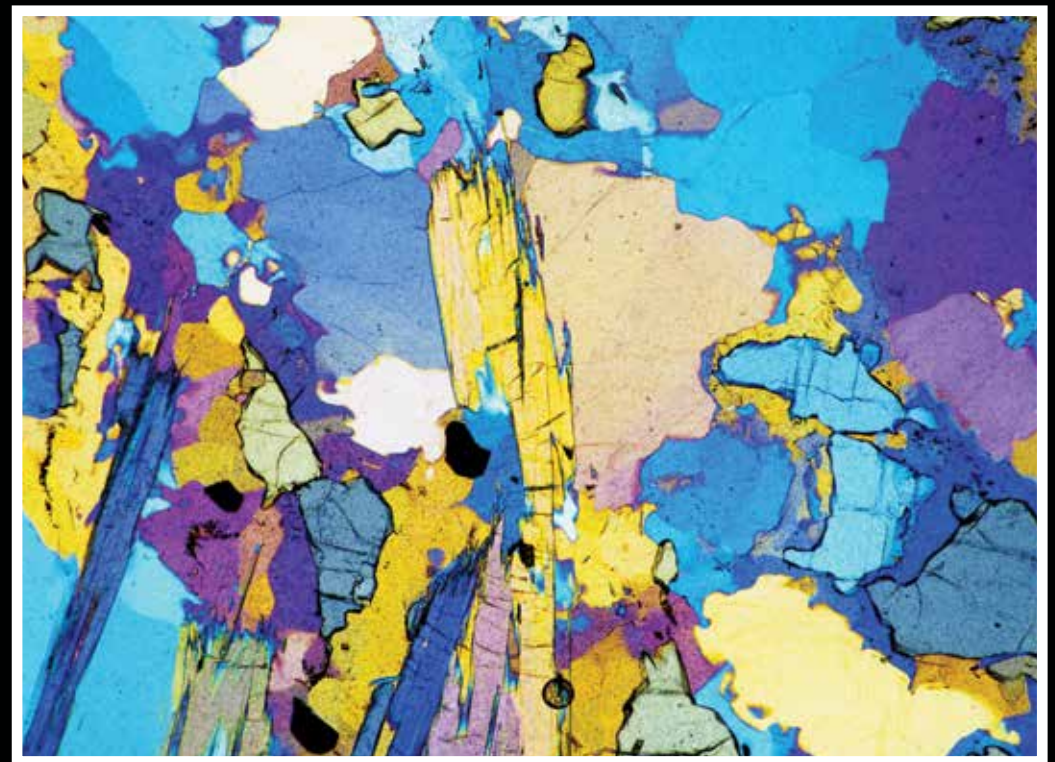
Exposure is also controlled by the programme and a preview as well as the final result can be seen within seconds. Of course you can manually change all the exposure settings.

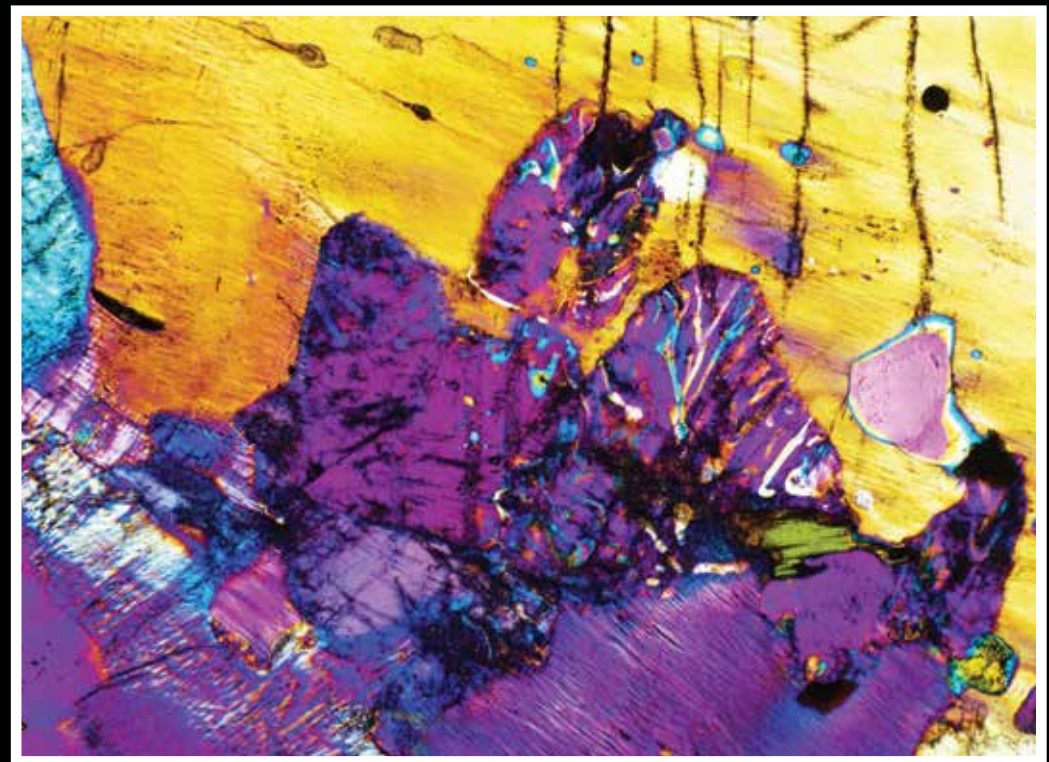
The programme feeds either both PC and the flashcard mutually or one or the other individually.

I take all my pictures as RAW files to have the best original to work with.

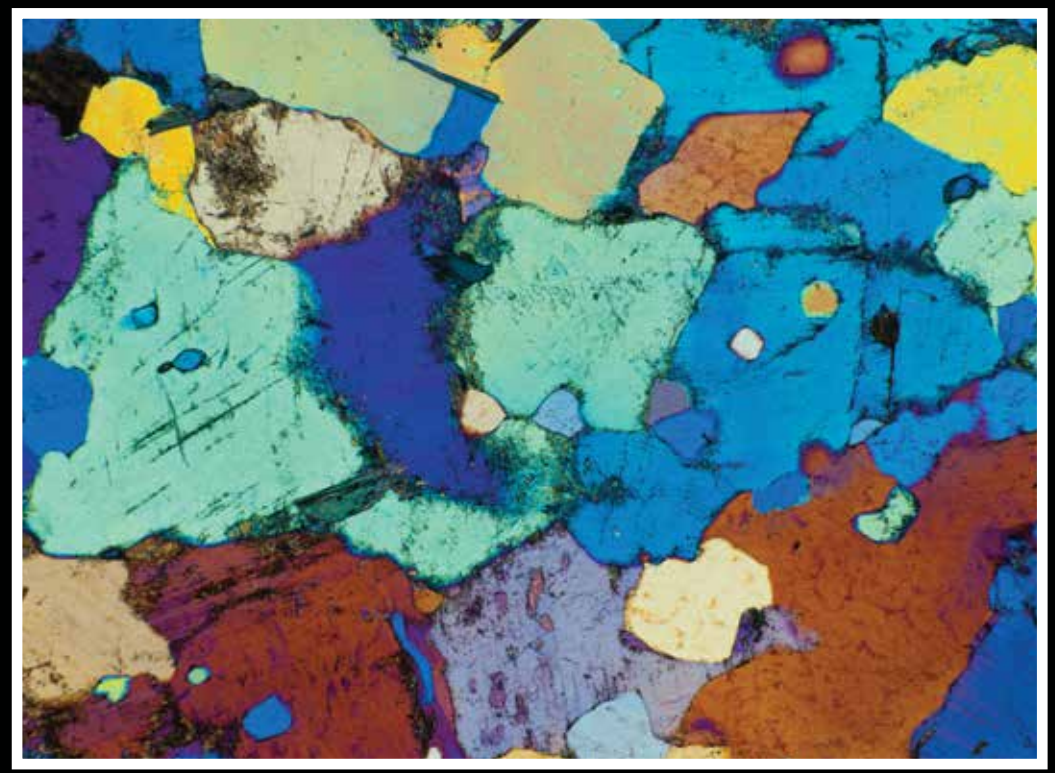


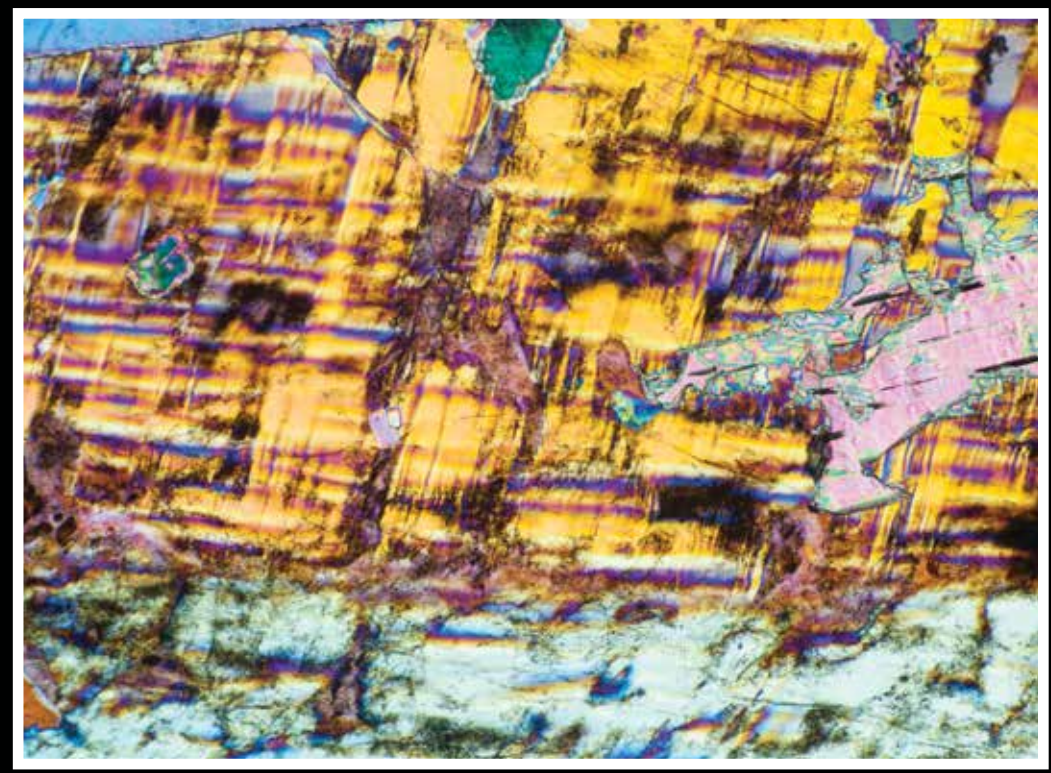


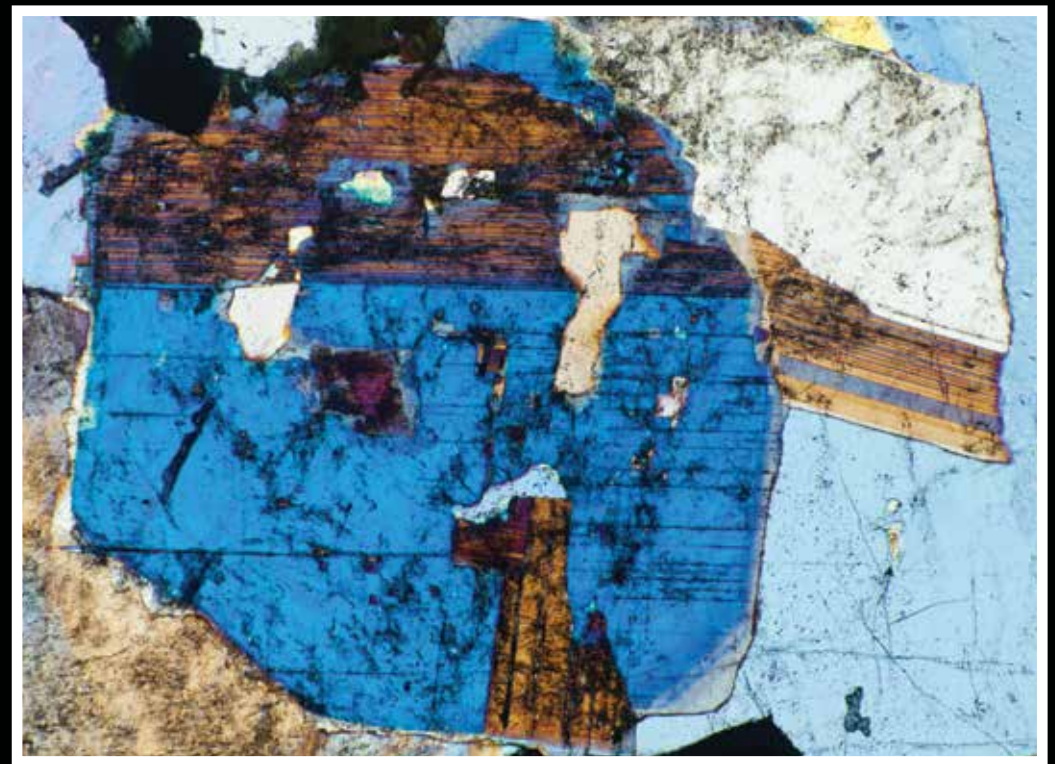


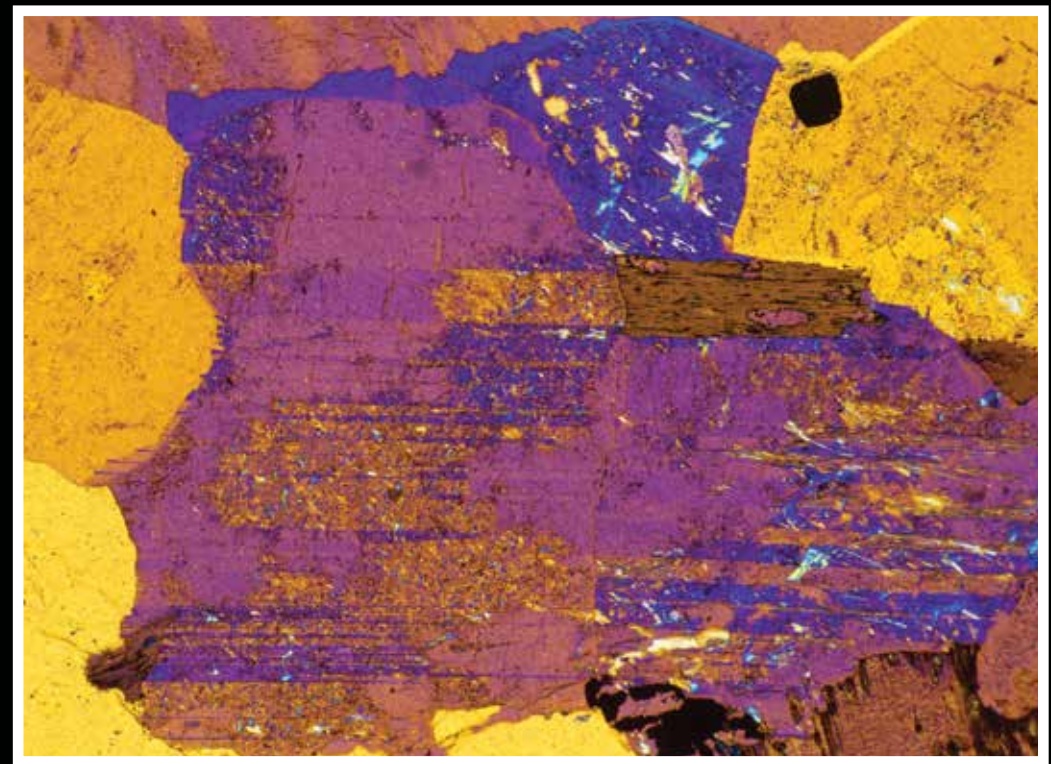


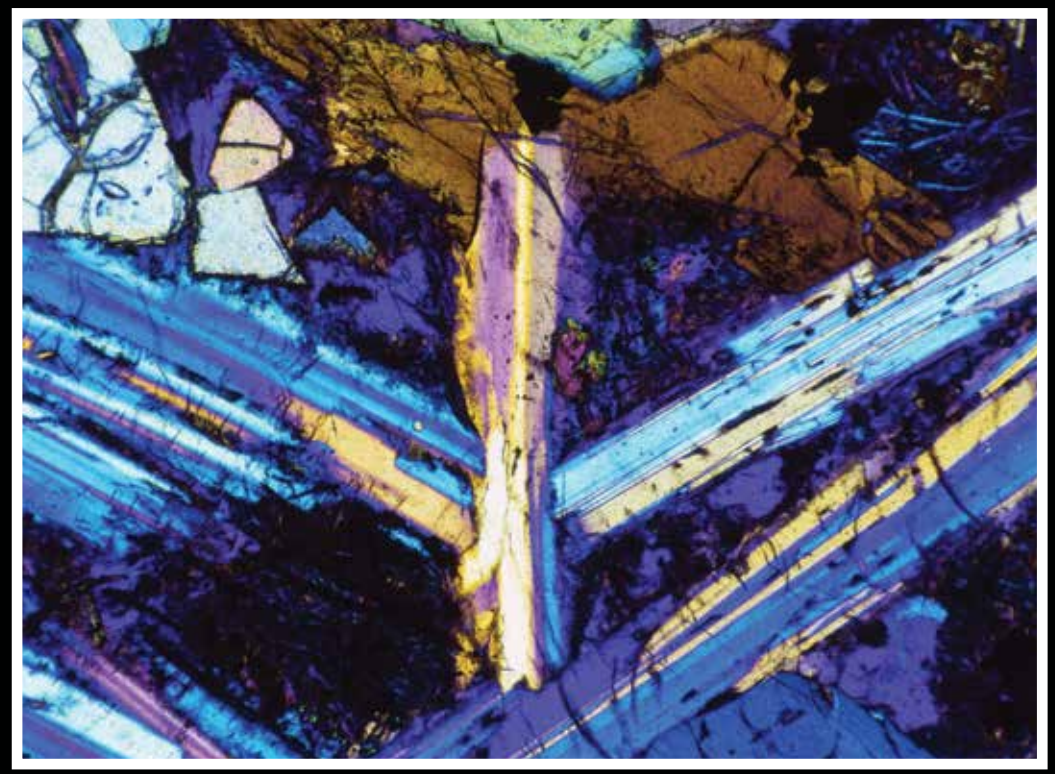
** All samples were the following size: 2.7mm x 2.7mm (with a diagonal length of 3.3mm)*

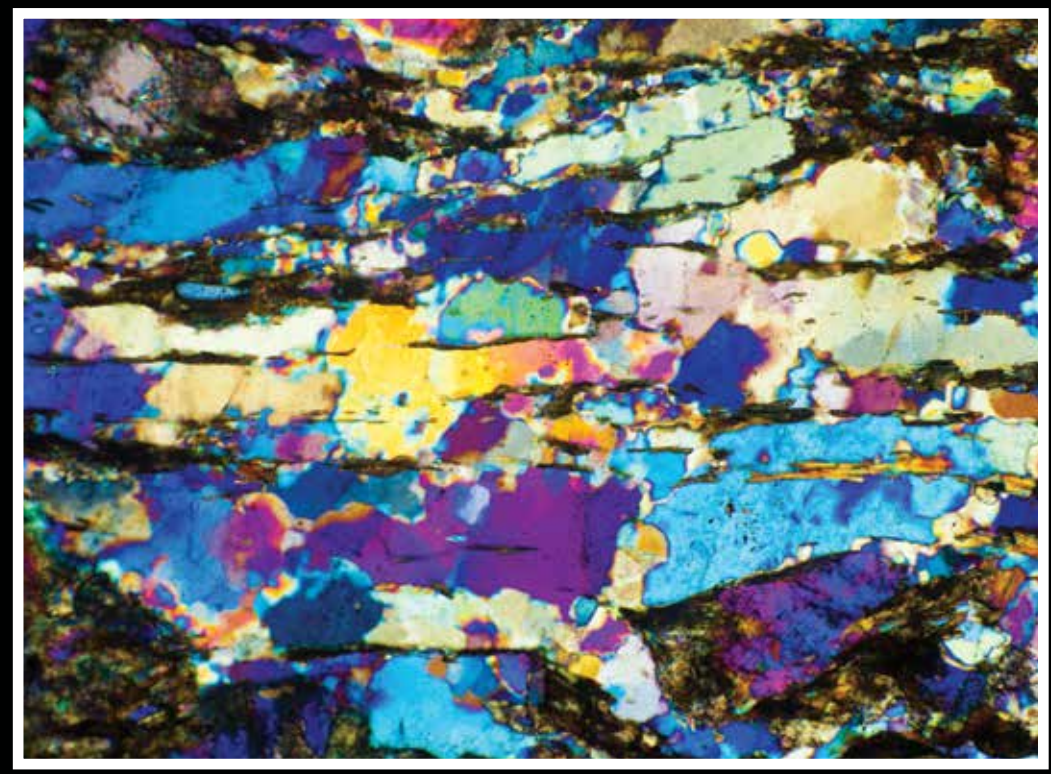


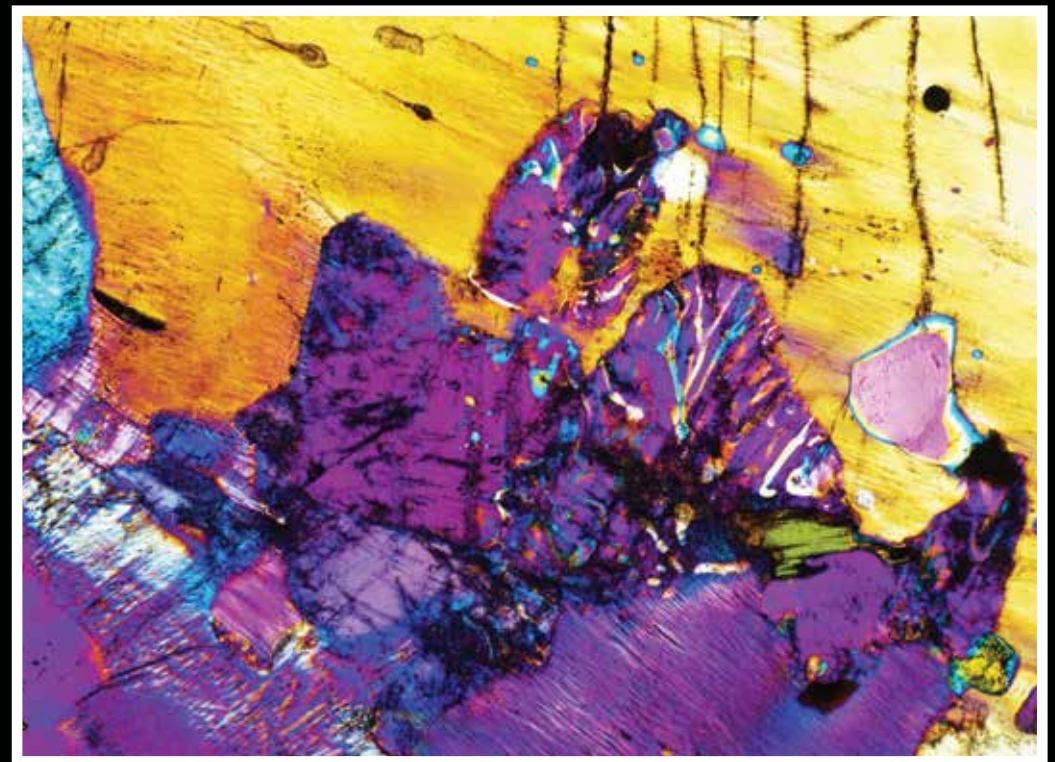


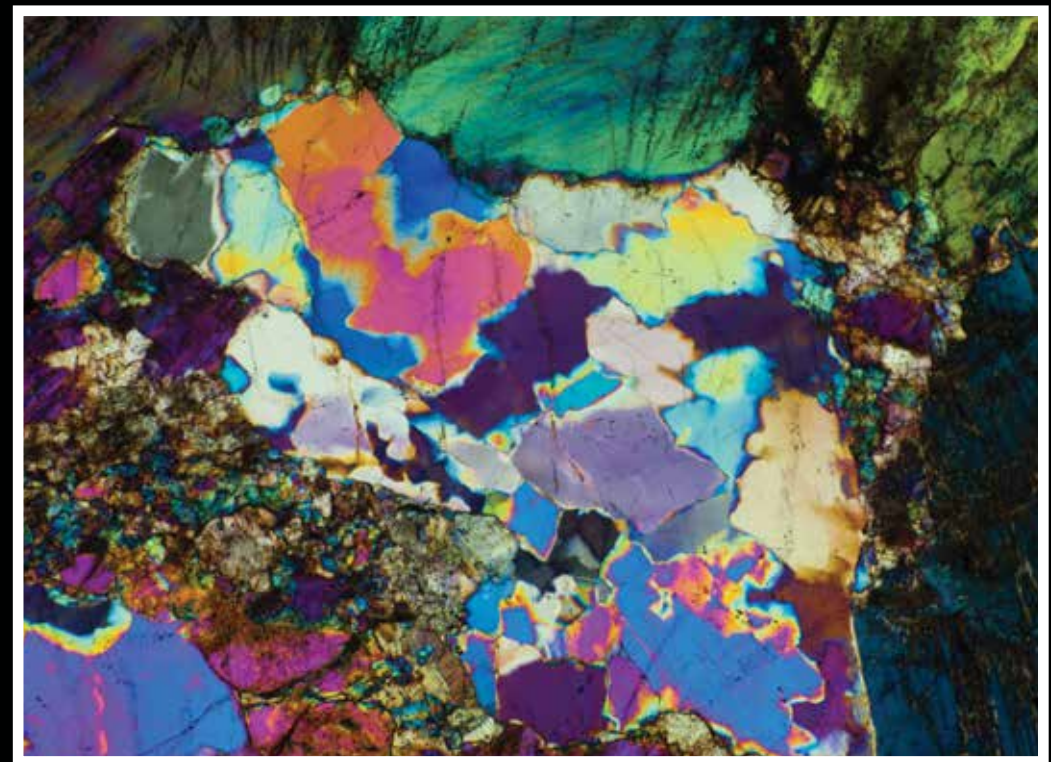


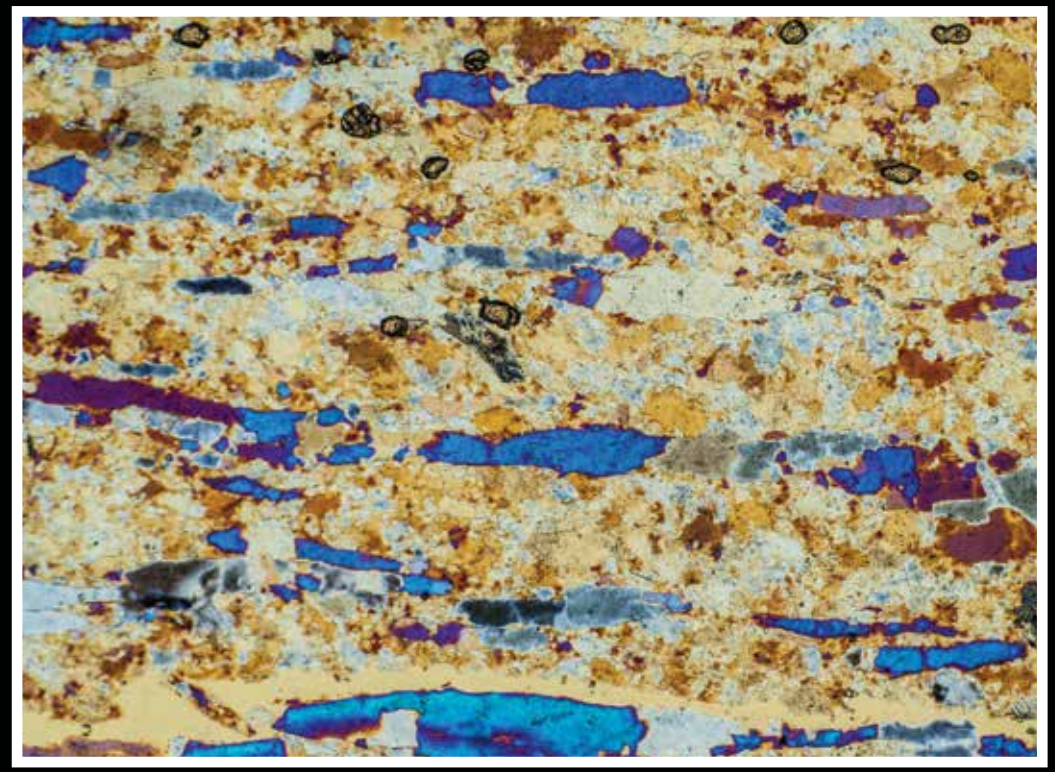


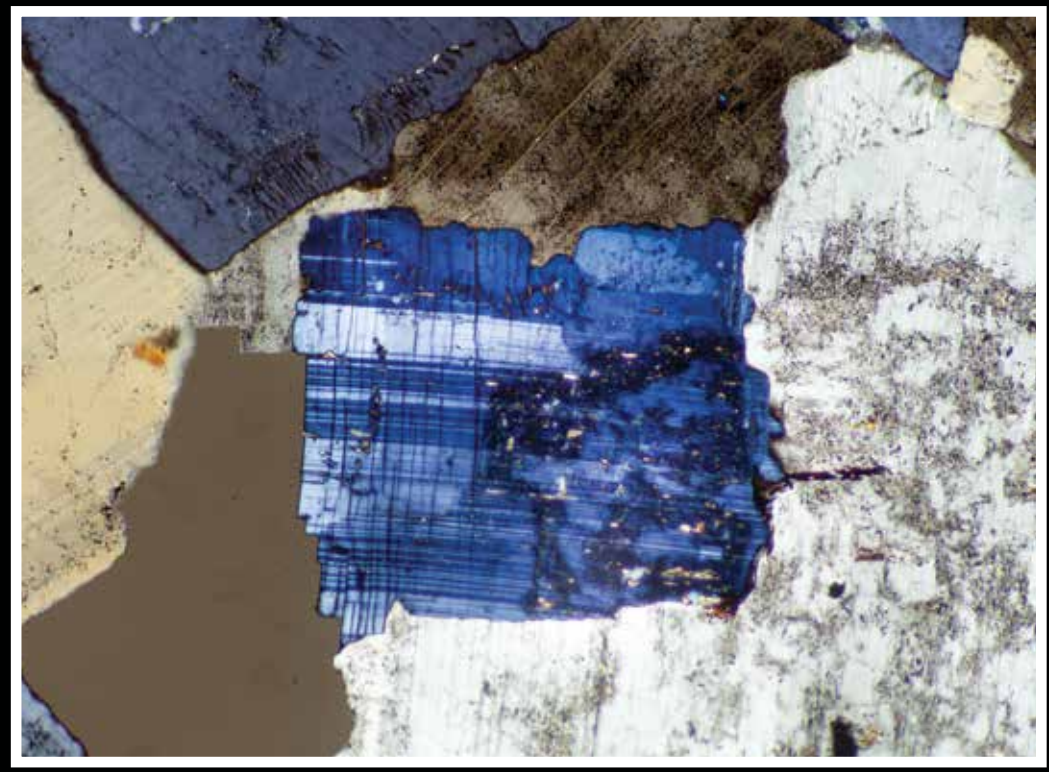


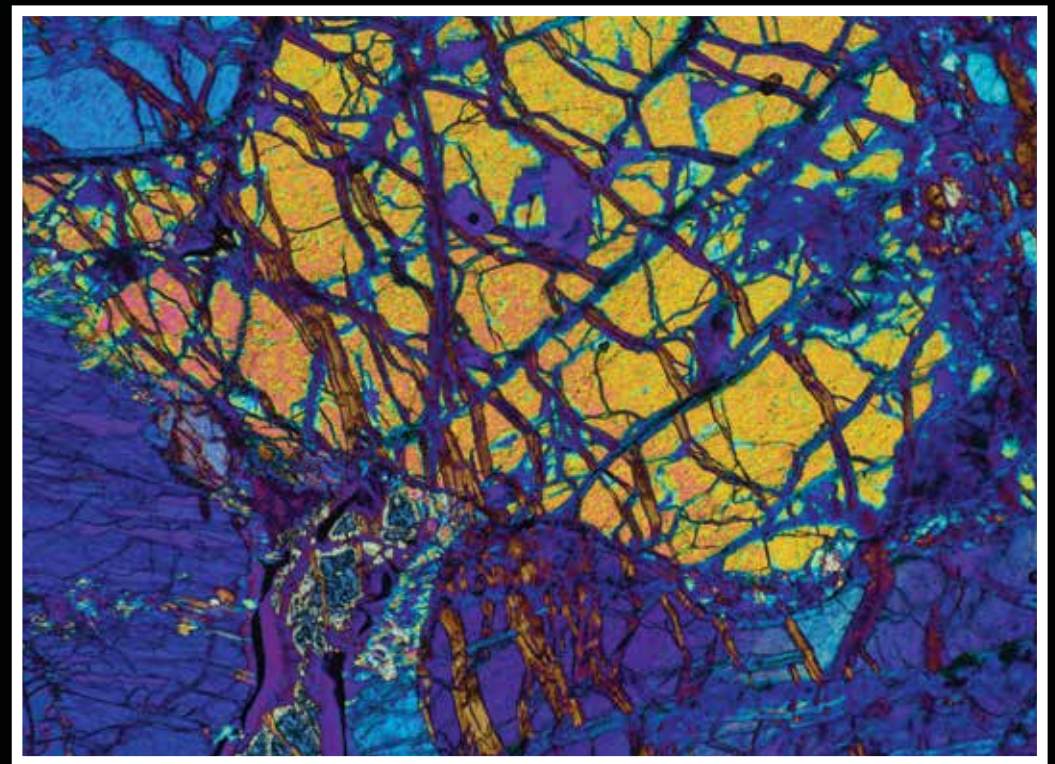












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Karl holds a master's degree in Electrical Engineering and has published over 50 articles in photography periodicals and over 2000 images in various media, including calendars, posters, television and commercial video. His images have been on display or used in printed form in Germany, Greece, India, Japan and the United States. During his career, Karl has designed and constructed a wide angle medium format camera as well as hand-held 4 x 5-inch format camera. He has also developed and patented a medium format camera designed specifically for photomicrography. Karl is a member of the German Photography Society (DGPh) and a Fellow of the Royal Microscopical Society.

