

Discover the new possibilities of automated petrography



ZEISS Axioscan 7



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Digitize your thin sections with Axioscan 7 – the reliable, reproducible way to create high quality, digitized petrography data in transmitted and reflected light.

Quick and easy thin section digitization with automated image acquisition in multiple light modes



The excellence of the components guarantees the excellence of the image – just as you would expect from a ZEISS device. Axioscan 7 expands the possibilities of automated petrography by combining unique motorized polarization acquisition modes with a rich software ecosystem for visualization, analysis, and collaboration.

Fully automated acquisition now comes with unprecedented speed across even the largest sample collections. Coupled

with trusted ZEISS optical quality this ensures consistent and reproducible imaging and analysis. The ZEN Pol Viewer allows for complex multichannel polarization data to be visualized and interrogated in an intuitive environment as a virtual petrographic microscope. Data can be stored locally or automatically uploaded to the cloud for online visualization, distribution and collaboration, allowing researchers to share their images online and organize entire projects on the go.

Visualize complex digitized petrographic data

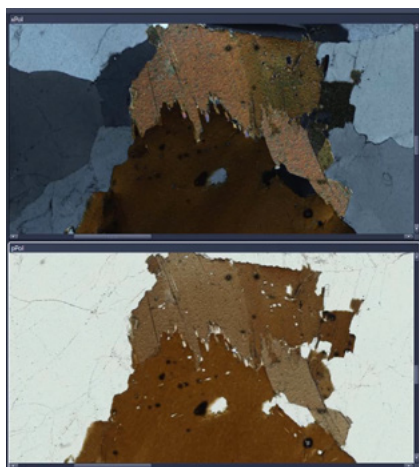
Go beyond the standard petrographic microscope with the new ZEN Pol Viewer to navigate the rich petrographic thin section datasets

A variety of super-fast imaging modes

The innovative motorized stage and image acquisition system allows automatic switching between different imaging modes to adapt to the different requirements of your applications.

High power LED allows for extremely rapid digitization

The new high power VisLED is 4X more powerful than previous systems, allowing for high-speed continuous data acquisition even in polarization illumination modes.



Unique ZEN Pol Viewer allows multiple image modalities to be viewed side by side. This includes simultaneous rotation of the sample in PPL and XPL, giving an exceptional virtual petrographic microscope experience.

*Ppol
(or Plane Pol)*

*Xpol
(or Crossed
Pol)*

*Segmented /
classified image*

*Angular phase
solution*

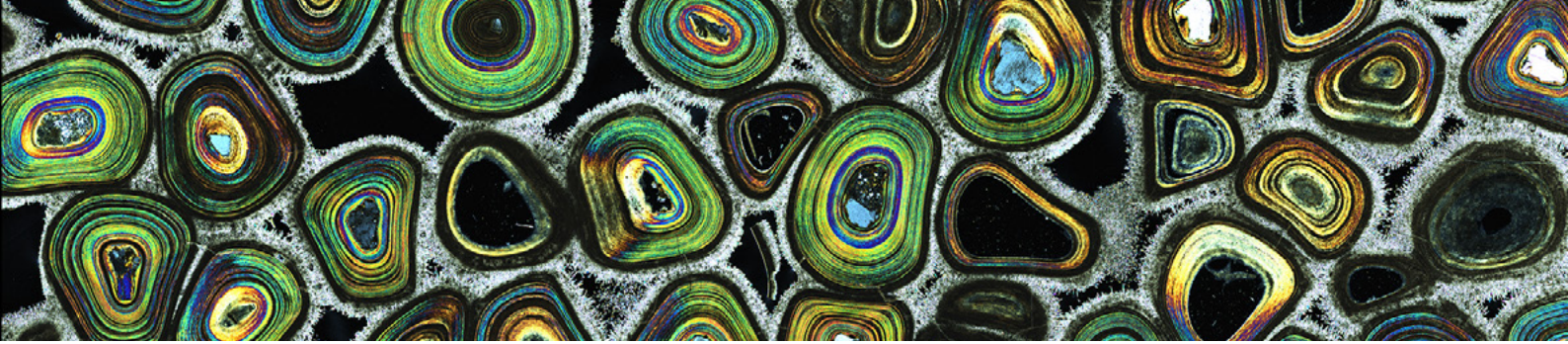
*Identified
crystal grains*



Composite multichannel acquisition of Berea Sandstone, showing Brightfield acquisition (top), crossed polarized (birefringent) acquisition, the result of phase segmentation (center), angular phase solution and identified crystal grains (bottom). Machine learning segmentation is used to classify pore (gold), quartz (light blue), Calcite (dark blue), Micas (red) and opaque minerals (green and yellow).



Fully automated polarization components, coupled with high power illumination, allow for unprecedented digitization of petrographic data.



Applications

- Petrography
- Petrology
- Geoscience
- Geology
- Geochemistry
- Mineralogy
- Mining
- Oil and gas
- Paleontology

Thin section of Karlsbader Sprudelstein, scanned with 10x N-Achroplan 0.45 Pol. A merged image of the cross linear polarized light channels is shown. Sample courtesy of Bernardo Cesare, Università di Padova, Italy

Your Flexible Choice of Components



1 Microscope

- AxioScan 7
- Magazines for 12 or 100 slides
- Trays for four 26 mm × 77 mm slides, two 52 mm × 77 mm slides or 28 mm × 48 mm and 106 mm × 77 mm slides

2 Objectives

- Fluor (5×)
- N-Achroplan Pol (5×, 10×, 20×)
- Plan-Apochromat (10×, 20×, 40×)
- EC Plan-Neofluar Pol (20×, 40×)
- EC Epiplan-Neofluar Pol (5×, 10×, 20×, 50×)
- Other objectives on request

3 Illumination

- Transmitted light: LED (wavelength 400 to 700 nm)
- Fluorescence: LED: 385 nm, 423 nm, 469 nm, 511 nm, 555 nm, 590 nm, 631 nm, 735 nm

Filter wheels:

- 10-position ACR for filter cubes or
- 6-position high-speed excitation
- 6-position high-speed beamsplitter and 6-position high-speed emission

4 Cameras

- AxioCam 705 color
- AxioCam 712 mono
- Hamamatsu ORCA-Flash 4.0

5 Software

- ZEN slidescan
- ZEN lite
- ZEN Intellesis
- ZEN Image Analysis
- ZEN Data Storage & Data Explorer
- ZEISS Solutions Lab

