

Axioplan 2 imaging

The Universal Microscope System



Digital, versatile, future-oriented.
The ideal material tester.



Axioplan 2 imaging

Sets New Standards

In Materials Microscopy.

As we start a new millennium we also enter a new age of materials engineering. The need for materials having entirely new properties challenges researchers and engineers to the utmost. Testing processes and working methods are subject to drastic changes, and so is microscopy. Here again, as with all major milestones in the history of microscopy, Carl Zeiss is at the forefront of progress.

To meet the challenges of tomorrow, we have created a flexible, future-oriented microscope system. A universal solution that can be tailored to every application. A microscope controlled by computer, with images captured and stored by computer, that communicates with other computers – a truly digital microscope from start to finish: the **Axioplan 2 imaging**.

Brilliant: The Light Trap

Higher contrast comes from innovative design. **Axioplan 2 imaging** features the patented "Light Trap" technology, which minimizes the interference of stray light – an ideal feature for low-contrast specimens.

Versatile with full field of view: 8-place reflector turret

With eight filter positions in the newly designed turret, the full 25 mm field of view is not compromised. A combination of reflector and filter modules, Optovar modules and other ancillary components to fit the turret are readily available.

Pull, push and click: Change of modules

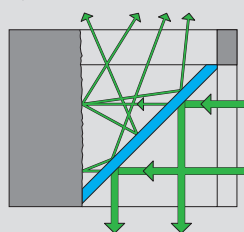
Where eight methods are not enough, simply pull out one or more reflector modules and push in others. When they have clicked in, you are ready to go.

Ergonomics: Comfort and convenience

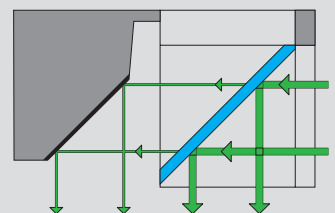
Great care has been taken in the design of the **Axioplan 2 imaging** to ensure maximum user comfort and convenience. Essential controls are at your fingertips. An optimized stage design and height-adjustable ergonomic binocular tubes allow you to assume a strain-free posture for comfortable operation.



*Ray path
in conventional
reflector cube*



*Ray path
with Light Trap*



Axioplan 2 imaging

Digital Imaging for Excellent Results.

Stay in control with AxioVision.

To obtain the best from a digital microscope, precise control is needed. In the **Axioplan 2 imaging**, this is handled by a dedicated software: **AxioVision Control**. It permits setting of all motor-driven functions of the microscope and automatically displays its current status. It is easy to operate and user friendly. The system is ideal for multi-user environments. Each user can save the 20 most frequent microscope settings and simply activate them by pushing a function key. Reproducibility at a keystroke.

The complete **AxioVision** system provides much more than just microscope control. It is the basis for image capture, image processing, archiving and annotation. Extend this a step further with modules for full image processing and analysis. With the microscope totally integrated into image processing, you can automate your processes – exactly, reliably and reproducibly.

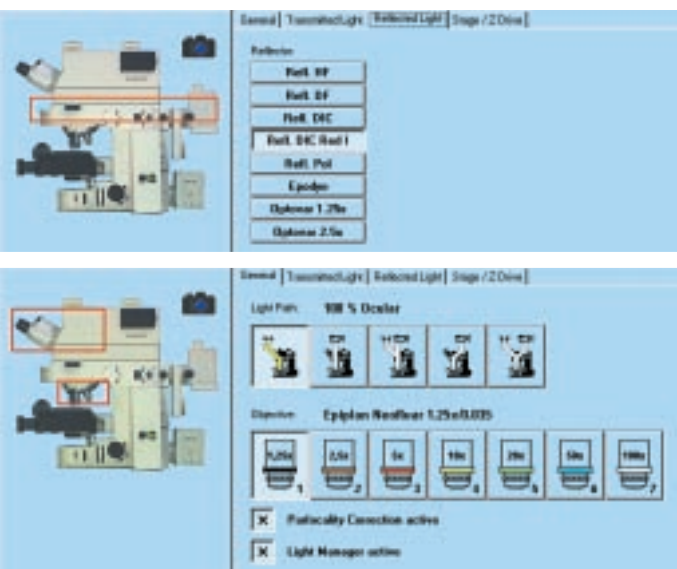
Special tasks - no problem.

Grain-size analysis in metals, purity assessment, analysis of cast iron, particle-size analysis in powdered materials – none of these is a problem. Routine programs provide the desired measurement results with speed, ease and precision. Tools you can use efficiently even if you are not an image analysis expert.

The choice is yours.

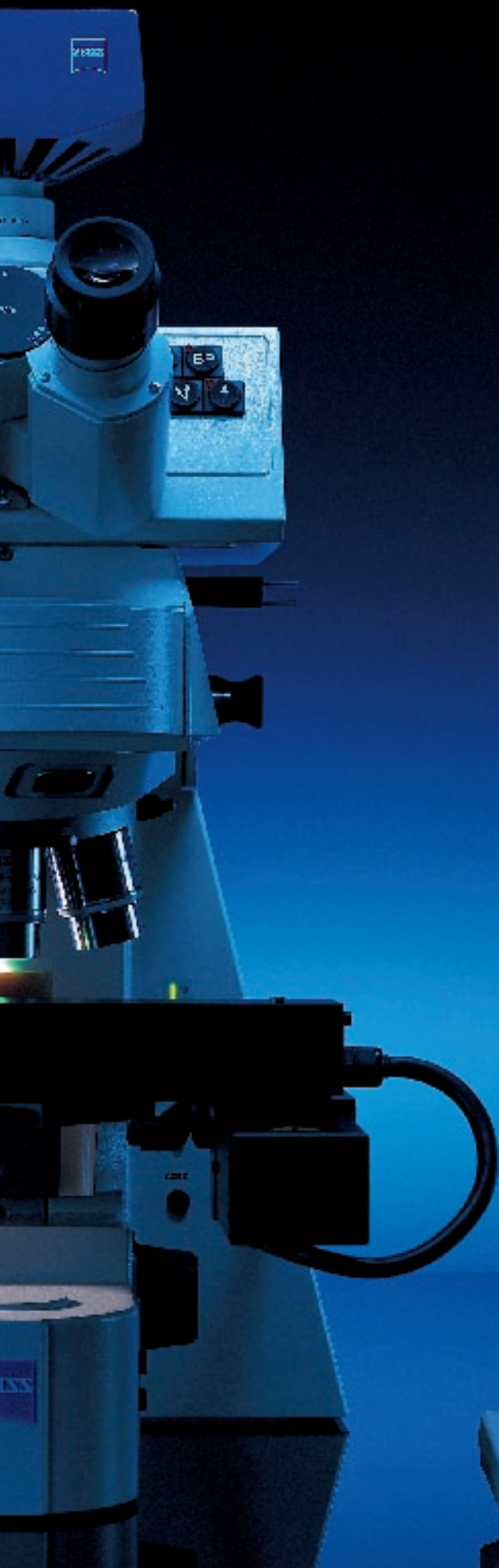
The flexibility of the **Axioplan 2 imaging** concept offers a choice of configurations to meet your specific requirements. You can choose between classical manual control and a motorized version. If you opt for the latter, you can even decide which functions you want motorized. On the fully motorized configuration you can operate the system through the software or through the button controls on the microscope. Full manual control is always possible.

Of course the motorized **Axioplan 2 imaging** is the perfect platform for confocal microscopy. Its flexibility in design gives you the flexibility you need in use.



Axiocam





ICS Optics: Limited Only By The Laws Of Physics.

ICS stands for Infinity Color-corrected System, the advanced version of the Zeiss SI (System Integration) design concept. No matter whether resolution, contrast, working distance or absence of strain is the most important factor for your application, there is always an ICS objective to meet your requirements.

Epiplan-Neofluar and Epiplan

Epiplan-Neofluar objectives from 1.25x to 100x. Flat fields up to 25 mm, low strain, for brightfield, interference contrast, polarization, fluorescence.
Epiplan objectives from 5x to 100x for routine jobs.
Well-flattened fields of view up to 23 mm.
Epiplan LD objectives for long working distances.



Epiplan-Neofluar HD and Epiplan HD

Same as Epiplan-Neofluar and Epiplan, but with added reflected-light darkfield capability.
Magnifications:
Epiplan-Neofluar HD from 2.5x to 100x,
Epiplan HD from 5x to 100x.



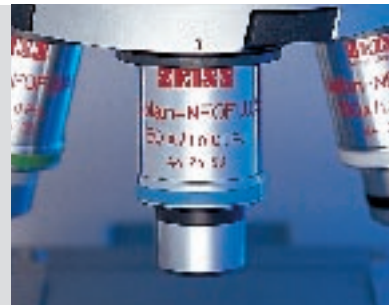
Epiplan-Neofluar HD DIC and LD-Epiplan HD DIC

Nearly strain-free objectives from 5x to 100x for brightfield, darkfield, interference contrast, polarization and fluorescence.
LD-Epiplan HD DIC objectives of 10x, 20x and 50x are available for long working distances.



Epiplan-Neofluar Pol

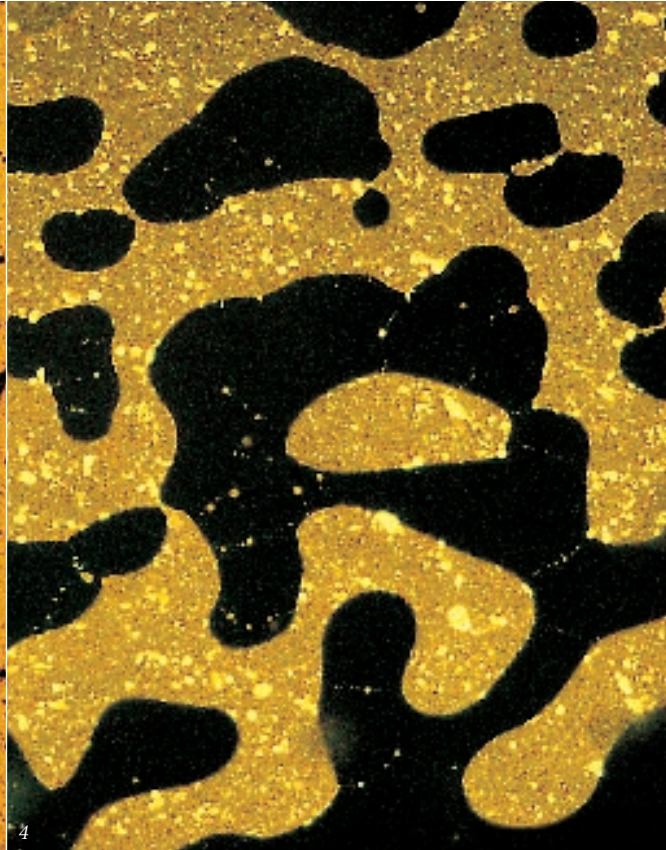
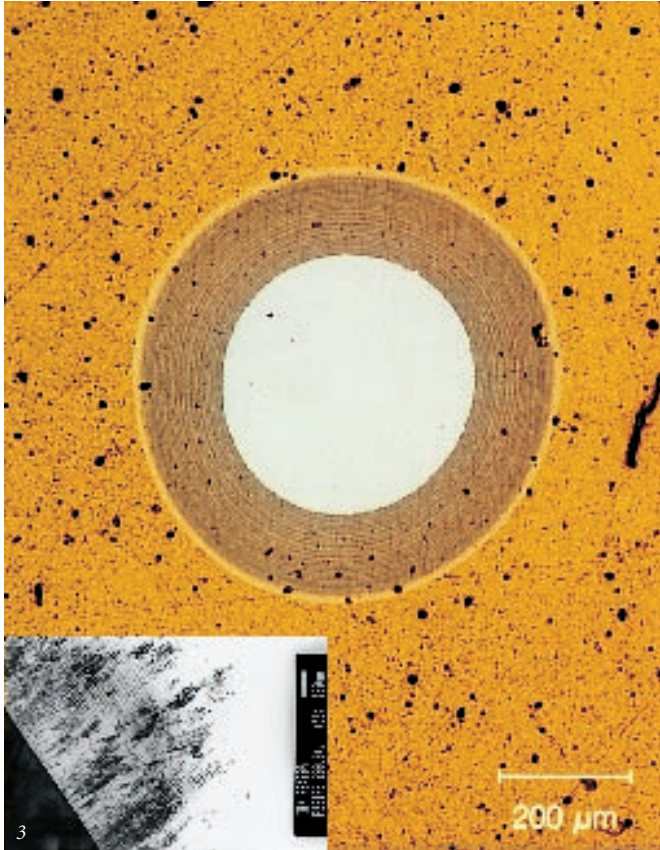
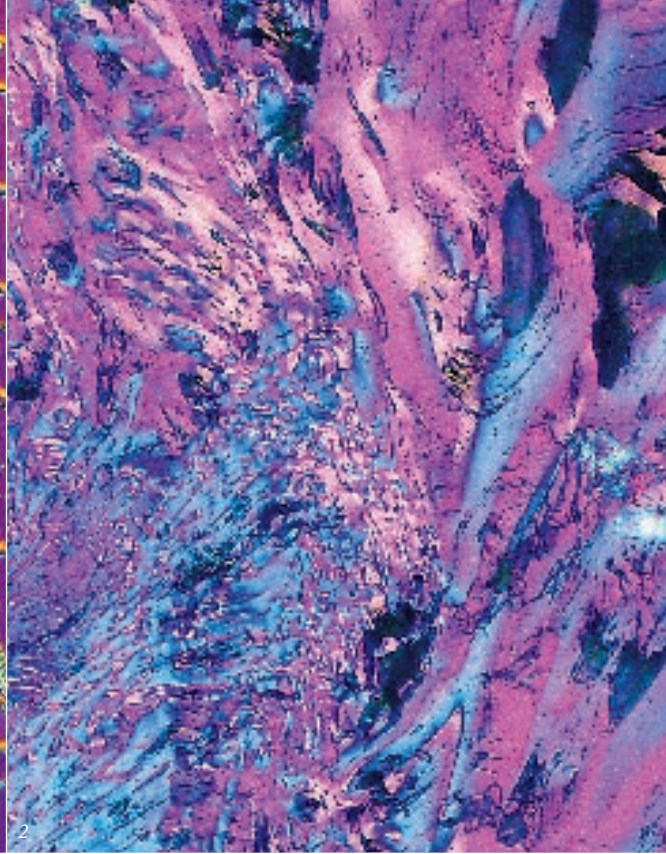
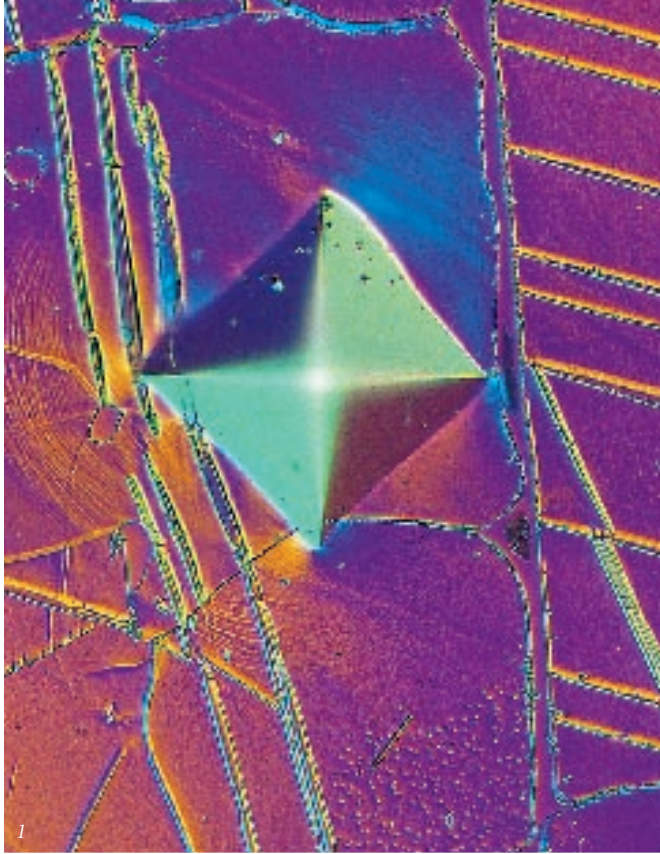
Magnifications 2.5x to 100x.
Ideal for brightfield, interference contrast, quantitative polarization and fluorescence.
Epiplan-Neofluar Pol objectives are strain-free to satisfy exacting demands.
Strain-free oil immersion objectives are available for extremely critical applications.



Epiplan-Apochromat

The ultimate objectives for inspection tasks in materials testing and microelectronics.
Resolving power at the physical limit, perfect color rendition, superbly flat images, for fields up to 25 mm. Magnifications:
50x/0.90 HD DIC, 100x/0.95 HD DIC and 150x/0.95. For the most critical applications, there is the Epiplan-Achromat 150x/1.25 W for water immersion.





1 Iron-nickel meteorite from Toluca (Mexico). Differential interference contrast, Vickers microhardness indentation. Specimen: Courtesy of H.-H. Cloeren, Struers, Willich

2 Coke. Polarization. Specimen: Courtesy of G. Bieg, Ruhranalytik, Herne

3 Polished section through a spherical component with a multilayer hard TiAlN-TiN coating. Brightfield. Inset: TEM micrograph; coat thickness 10 nm. Pictures: Courtesy of Dr. H.-J. Klaar, GFE-RWTH Aachen

4 Asphalt with waste polymer filler. Fluorescence

Axioplan 2 imaging

New Doors To The World Of Imaging.

Axiophot 2. **Unlimited flexibility.**

Fit an **Axiophot 2** photomodule to your **Axioplan 2 imaging** and open up new approaches to documentation. Two 35 mm camera positions for conventional photomicrography alongside two additional ports for a large-format camera and/or digital cameras offer ultimate flexibility, not only for conventional photomicrography. Add one or two port replicators to further increase the possibilities. Whatever your needs are, **Axiophot 2** will provide a solution.

*Motorized
2-TV tube
with XYZ adjustments*



AxioCam. **Photography without film.**

Add an **AxioCam** to your **Axioplan 2 imaging** for digital photography at its best. Capture your image instantly and at scaleable resolutions up to 3900 by 3090 pixels, in real color, and without any interpolation procedure. This digital camera provides you with image files suitable for publications or your digital image archive. It is ideal also for modern image communication via e-mail and the Internet.

AxioCam is the perfect digital choice for documenting images obtained with all contrasting techniques – bright- and darkfield, phase contrast, DIC, polarization and fluorescence. It performs exceptionally in imaging weakly birefracting materials in polarized light.

Combine **AxioCam**, **AxioVision** and the **Axioplan 2 imaging** for a complete, fully integrated digital imaging platform system.

*AxioCam and Light Trap are trademarks of Carl Zeiss.
Axioplan is a registered trademark of Carl Zeiss.*



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