The most complete image analysis solution

CLEMEX VISION PE

Intelligent systems designed for multiple or complex applications

Customized to meet your needs

Our staff's technical expertise and our software's unique detection methods make Clemex Vision PE the most flexible image analysis system on the market.

Difficult applications made simple

Simplify the image analysis procedure with Clemex Vision PE's advanced toolset and obtain accurate measurement of features in challenging applications.
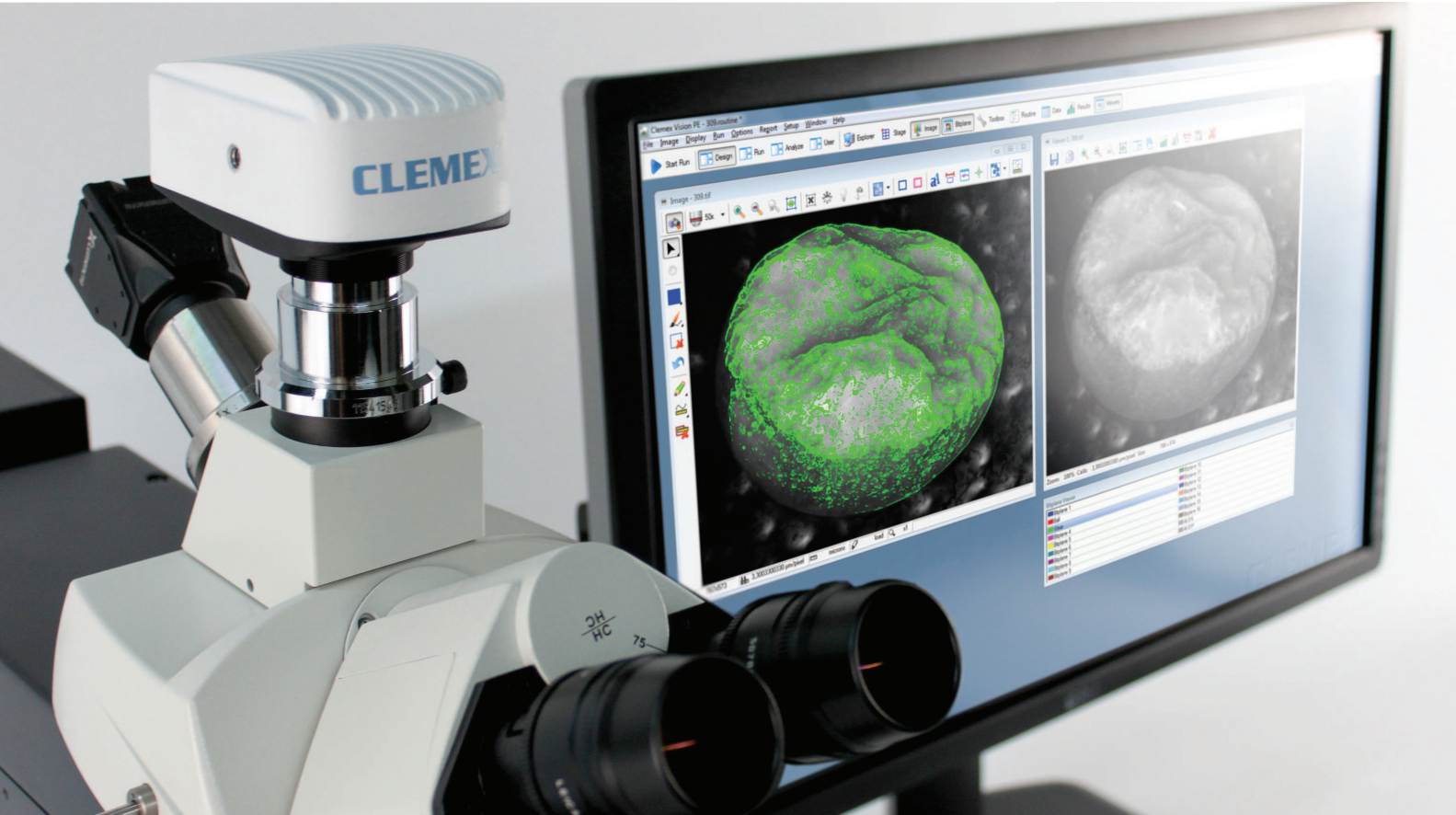
Understanding your challenges

A high throughput environment

Robust enough to work all night on a batch of samples, Clemex systems allow you to leave the lab worry-free and come back to a set of perfectly clear reports and high-resolution images.

Adaptable to future requirements

Whether used in a quality control, research or testing environment, Clemex Vision PE can adapt to changes in your analysis needs or to new industry requirements. Modular upgrades are easy and cost-effective.

Perform a variety of applications

Clemex Vision PE is very flexible so you can use it for any number of completely distinct applications including DAS, layer thickness, grain size, graphite particles, surface roughness, phase percentage and unlimited custom analyses.

Deal with one supplier

We fine-tune every piece of image analysis equipment and software to make your application work. No third party involvement, simply smooth and seamless integration.

The most complete image analysis solution

The exceptional range of digital functions makes this one of the most powerful multipurpose image analysis systems available. It is a fully integrated system for labs seeking flexibility, efficiency, and accurate results. Even without image analysis expertise, the short learning curve means you will be performing analyses within hours of setup.
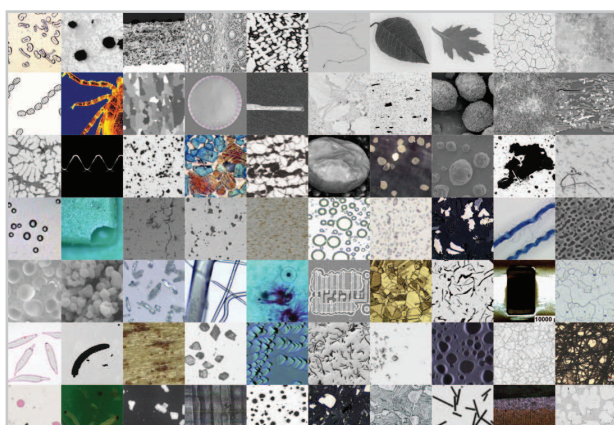
Powerful image processing tools

Flexibility and quicker analysis time are both made possible with this robust software capable of processing thousands of images and generating data all day long.
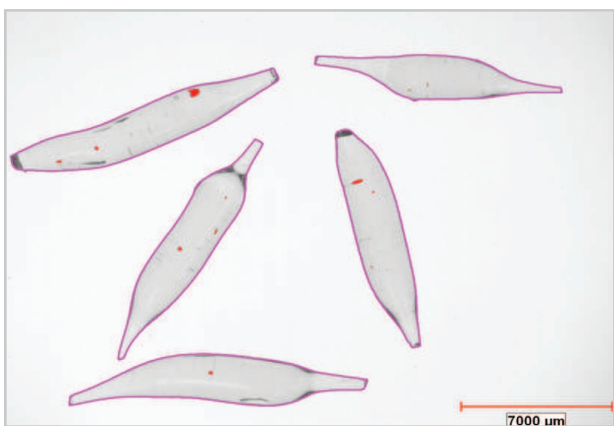
Customized analysis made easy

Detect, characterize and measure phases or objects of interest using the extensive list of toolbox instructions. You can even create your own custom measurements.

Excellent detection in low contrast images

High definition image quality, automated shading correction and an array of imaging instructions make Clemex Vision PE the perfect tool for analyzing faint objects on a filter, thin-walled cells and variable thickness crystals.
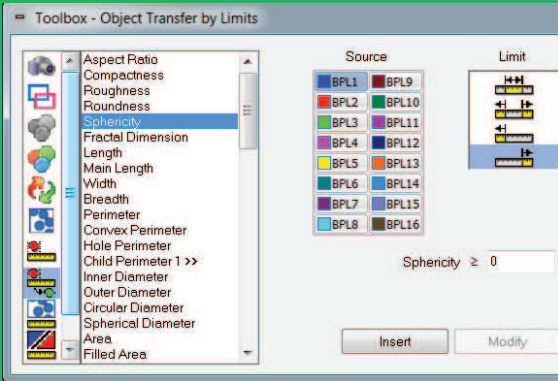
Complex analysis in 3 easy steps

Clemex Vision PE is a top-of-the-line automated image analysis solution. In only 3 easy steps it goes from capturing images to creating detailed reports. By writing analysis routines with the easy-to-use Toolbox a broad scope of morphological measures can be extracted. No programming skills required. Results are tabulated automatically and reports can be created to your specifications.

Step 1 - Capture images

A wide range of ultra-high definition monochrome or color cameras can be used to capture images quickly and easily. Analyze your images using a live feed or save high resolution images for further analysis.
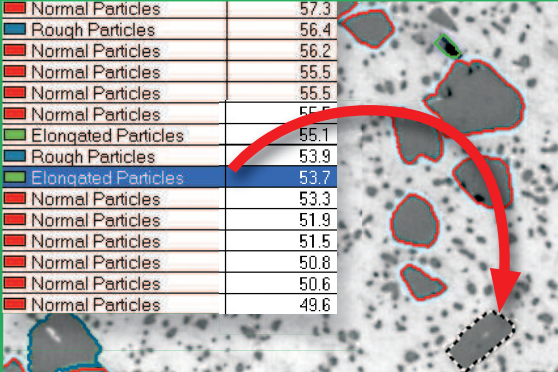
Step 2 - Quantify images

Writing an analysis routine is just a click away, no programming required. Simply establish a list of actions taken from the Toolbox and your Routine writes itself.
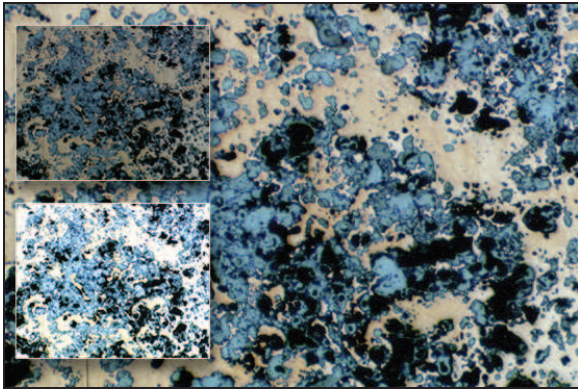
Step 3 - Manage results

Validate your results easily within the Data Browser where each measurement is directly linked to its corresponding feature on the image. Customize printable reports to your specifications and save them in Excel or text format.
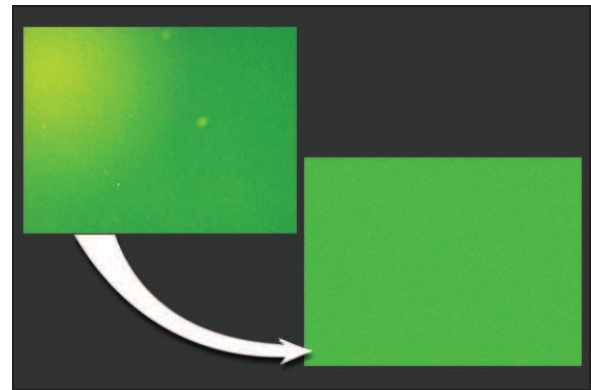
Product Features

Auto Exposure

Once you have set the initial target intensity, you can duplicate lighting conditions any time with a simple click of the Auto Exposure button. Adjusting camera shutter speed manually is not necessary.


Automatic Shading Corrector

Our software's unique fully automated shading correction feature ensures even illumination for images captured using the system's camera. The image on the left was captured without a shading corrector. A pseudo-color LUT was applied to show the differences in gray levels.
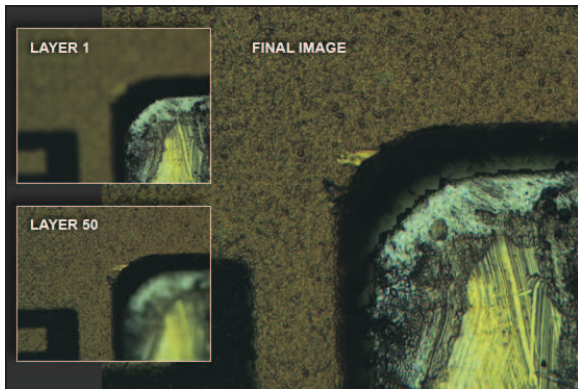
Extended Depth of Field

The Multi-Layer Grab feature allows you to work on a sharp composite image of an uneven surface, made up of several image slices captured at various depths. This function can adapt to either manual or motorized focus systems.
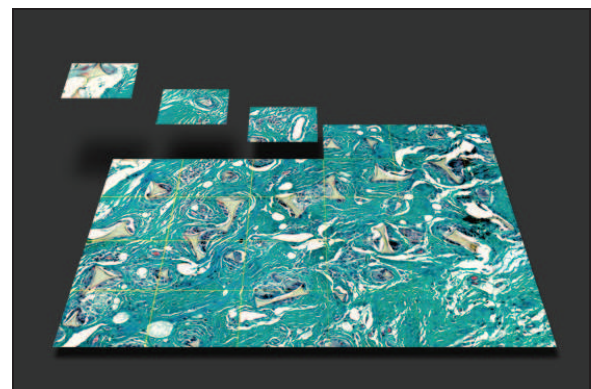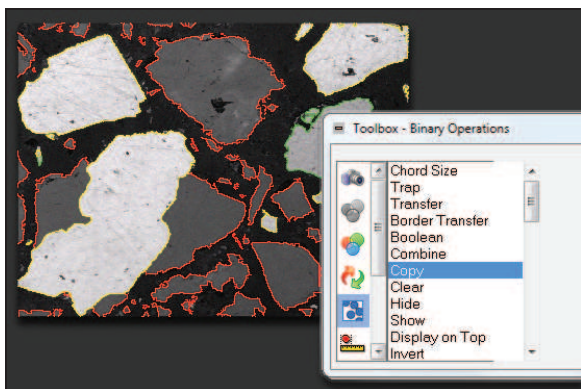

Stitching of Multiple Fields

With the Mosaic feature, Clemex software automatically stitches multiple fields to form a large image of unlimited resolution (memory dependent). This option can be used with a manual or motorized stage.

Product Features

Create Powerful Methods

To obtain accurate results you must first start with an excellent detection. Our Toolbox, an extensive instruction library, allows you to combine any set of commands, making Clemex Vision PE one of the most flexible on the market.


Isolate Long Intersecting Objects

With the Split Long Objects instruction you make sure that your fibers or needles are separated in the right place and are measured as individual objects.
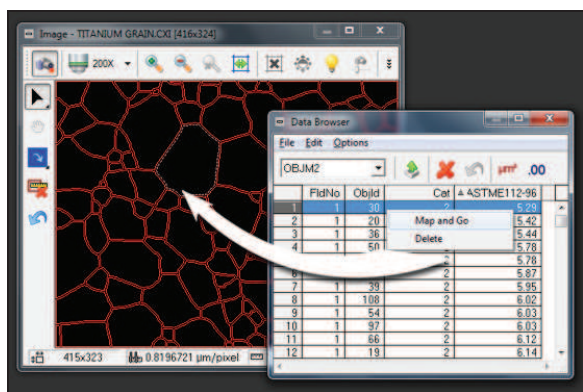

Object Tracking in Data Browser

The Data Browser, a built-in spreadsheet, remembers the positions of all analyzed objects, even in multiple-field environments. You can sort results, validate detected objects, and delete artifacts.
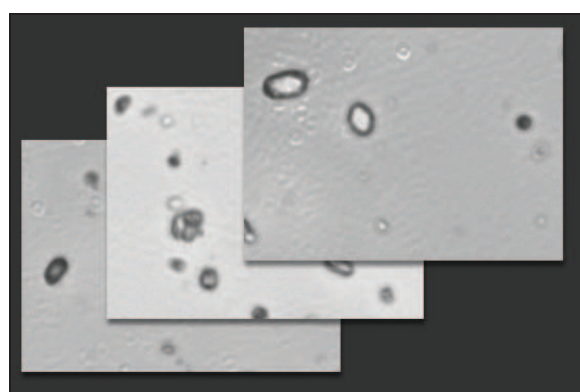
Relative Gray Threshold

The system automatically adjusts threshold when background varies from field to field so that your objects are always perfectly detected.

Product Features
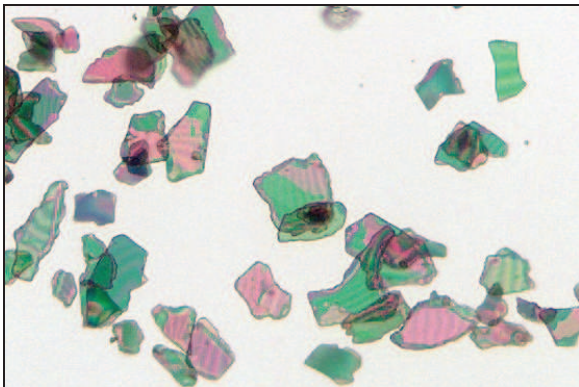
Color Detection

Sometimes your images may need the extra flexibility of a Color Threshold to distinguish phases or objects with a particular hue. The pink phase in the particles in this image can only be detected using Color Threshold.


Contrast Threshold

Transparency, low contrast and more or less perceptible outlines make some objects hard to distinguish. Contrast Thresholding is ideal for faint objects on a filter, thin-walled cells and variable thickness crystals.
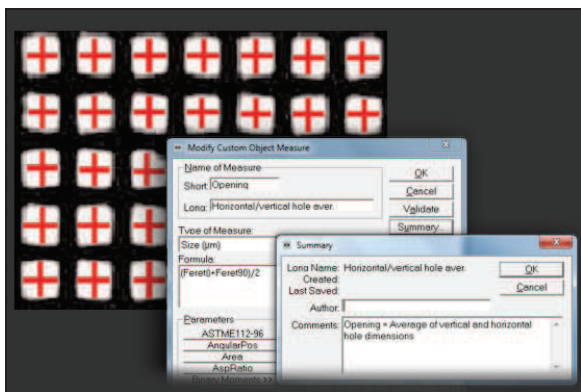

Create Your Own Measurements

Choose from our extensive library of built-in measurements to create your own custom measures. Measurements can also be written from scratch using formulae designed according to standards in your industry.
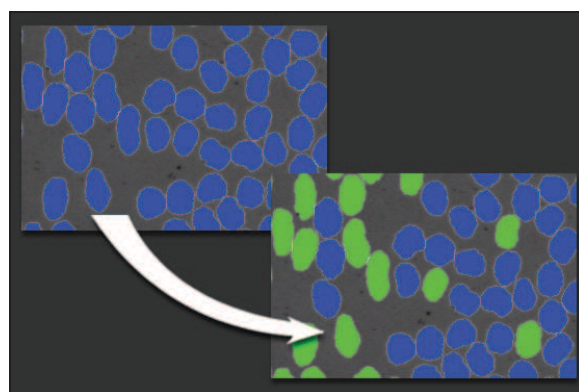

Isolate Objects

Clemex software offers you the possibility to isolate objects and measure them separately. The transfer can be based on morphology, color or size. Some common parameters include sphericity, aspect ratio, roughness, length, area and hue.

Product Features
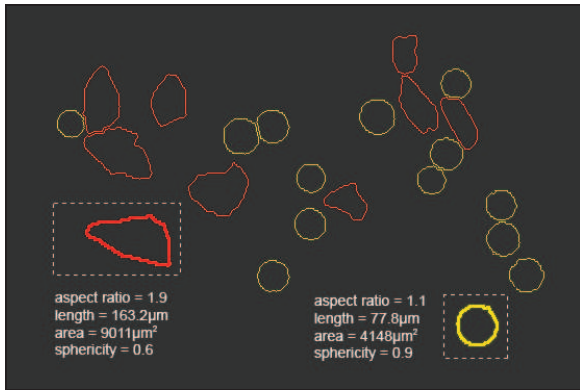
Characterize Objects

After detecting the objects of interest in your image you can use any number of custom or standard measurements to further classify objects. Produce and export raw and statistical data for each category of particles, fibers, spheres or irregular objects.
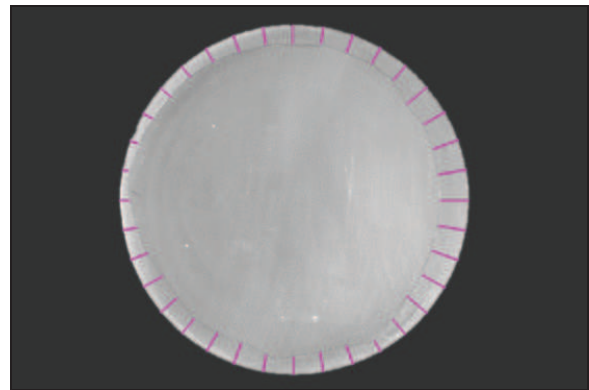

In-Object Grid Measurement

The Radial Grid instruction allows you to measure the thickness of round objects and rings automatically. Useful in Coating Thickness, Wall Thickness, Wire Concentricity, Disk Shape and Artery Layer applications.
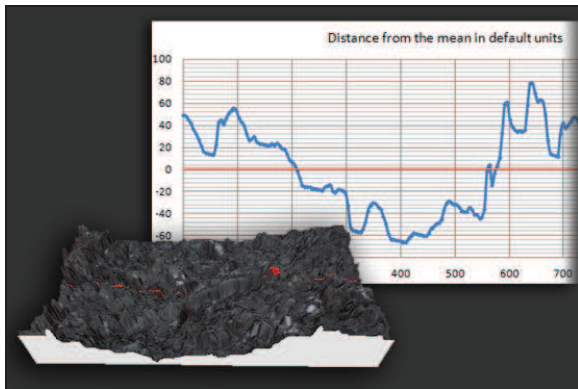
Measure 3-D Topographic Images

Specifically designed for non-destructive surface roughness applications, the 3D module produces results based on depth. Measurements for 3D topographic images include area roughness, linear roughness, volume, and depth distribution.
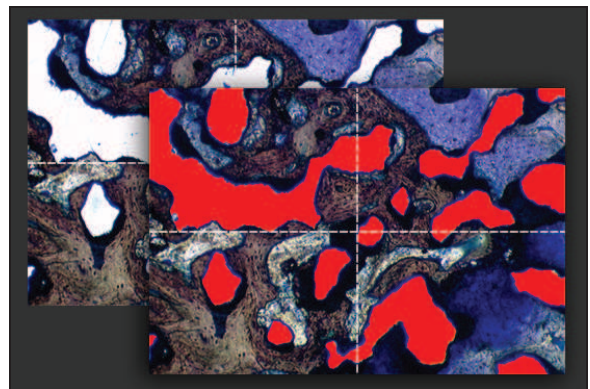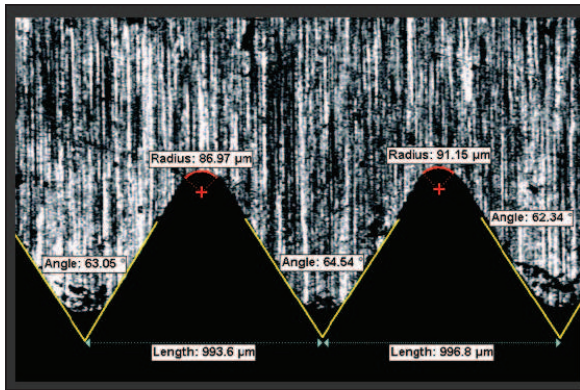

Measure Stitched Images

Perform automated or direct measurements on stitched images made up of several or many fields of view. Particularly useful when measuring objects which extend beyond the field of view of your chosen magnification.
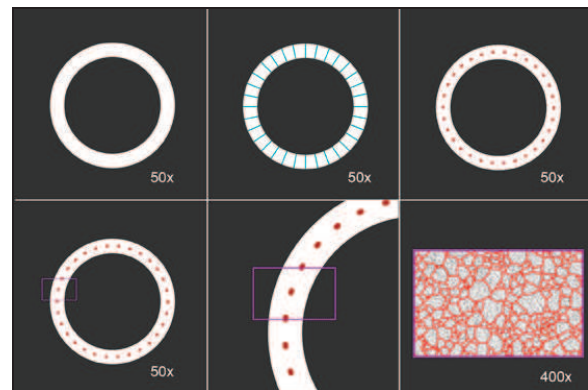
Product Features

Direct Measures

Especially useful in applications such as Welding or Thread analysis, manual measurements are immediately updated in the Data Browser (built-in spreadsheet). Typical measurements include Length, Angle, Radius and Perimeter.


Dual Magnification

The system detects and measures the object at low magnification and automatically generates a pattern for a second, more in-depth analysis at a higher magnification.
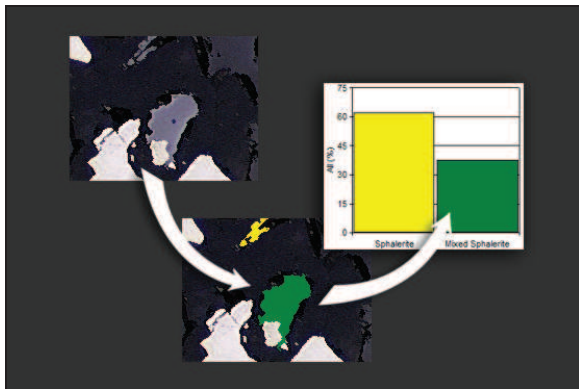
Percentage of Phase

Clemex Vision PE excels at giving you exactly the type of information you seek, regardless of the number of phases to be analyzed. Extract data such as the % of a phase within a phase of interest or mineral liberation % using customized scripts.
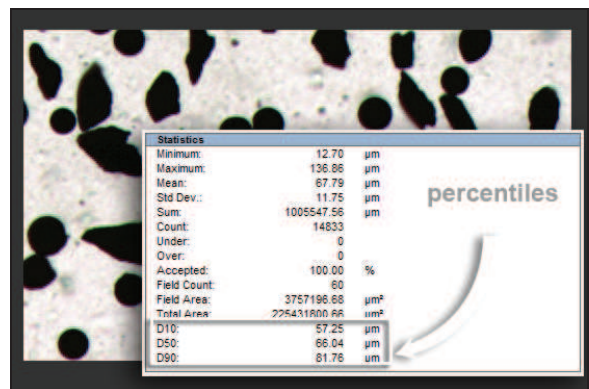

Percentiles for Particle Size

These statistics are compiled automatically and are available for all object measures. Particulartly useful when measuring the size and shape of particles – be it length, sphericity, aspect ratio, roundness, roughness, spherical volume or compactness.

Product Features

Camera and Microscope

Cameras and automated microscopes can be controlled directly within an imaging script. Automating this step means the following can be changed during analysis without any manual adjustments: 1. calibration / intensity | 2. magnification | 3. illumination / contrast
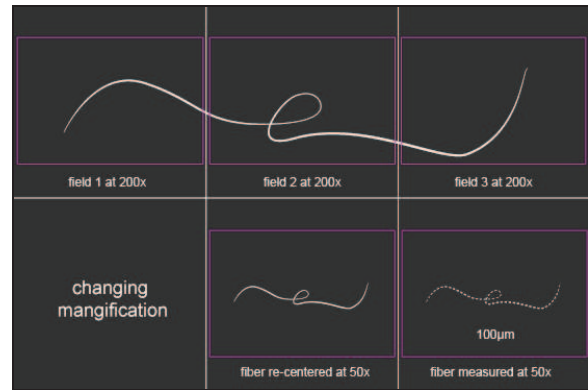

Conditional Tools - Long Objects

After a scan of the sample, objects that are longer than a field of view, such as fibers, are measured by automatically lowering the magnification and re-centering the objects. They can thus be viewed entirely for accurate measurement in one single data set.
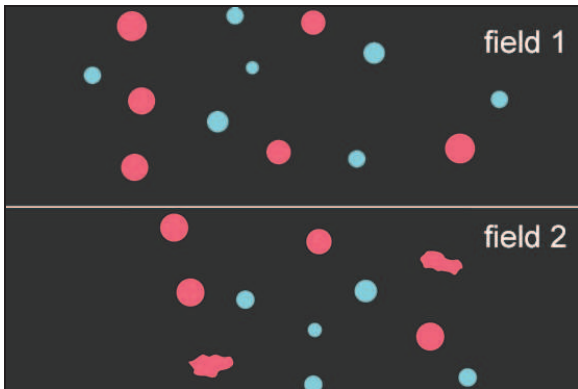
## Conditional Tools - Unusual Objects

Objects are first detected and measured. If there are no uncommon objects in a field, the analysis continues on to the next field. If uncommon objects were detected, a second analysis is then executed to perform additional measurements specifically on those objects.
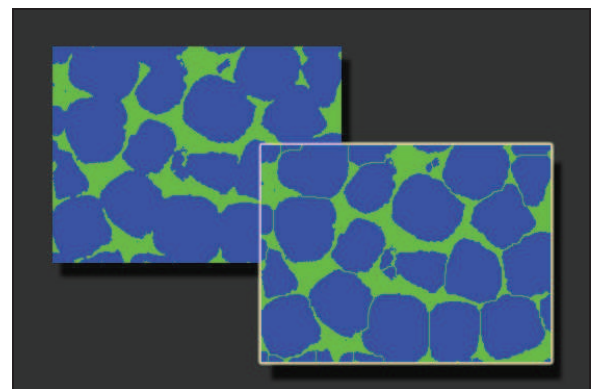

Separate Adjacent Objects

Particles that touch each other can be easily separated with a variety of automated tools. The end result being that each object is counted separately, yielding more precise results.

Product Features
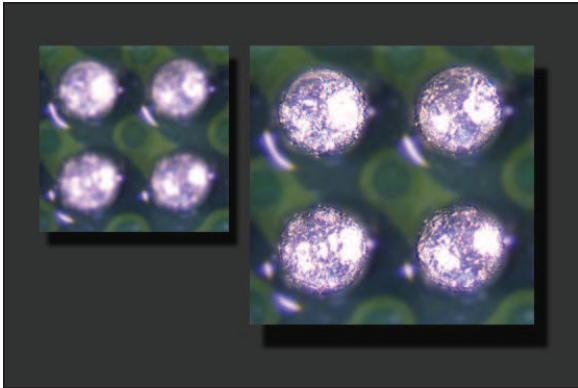
Auto Focus

No need to focus manually, automated focusing offers precision and speed. Quality results depend on image clarity and with Clemex that is what you get. With the Auto Focus you will always end up with a perfectly detailed image to rely on for your measurements.
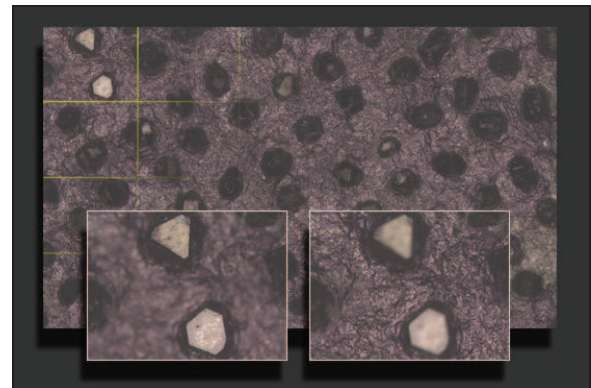
Automated Image Stitching

Clemex software can automatically stitch multiple fields to form one large image. Furthermore, this function can be combined with the multi-layer grab to reconstruct a completely focused image. Perfect for uneven oversized samples.
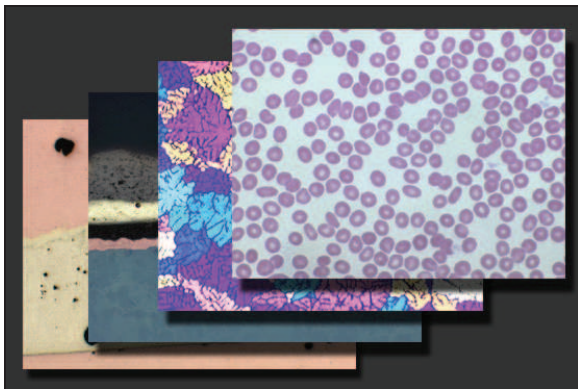
Pre-built Imaging Routines

For frequently used analyses Clemex offers pre-built Routines that can be bought separately. They are pre-programmed and can be modified to suit your own guidelines.
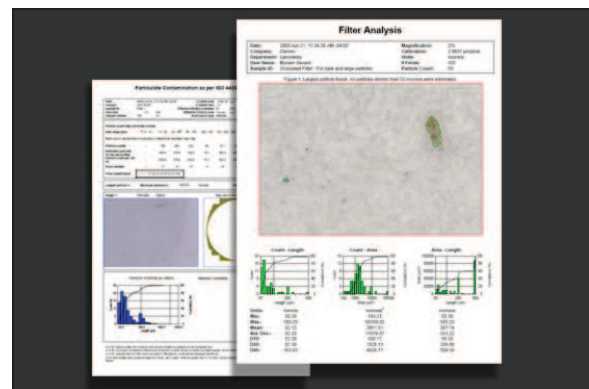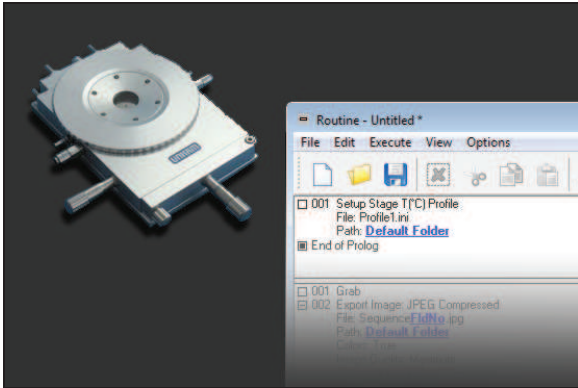
Professional-Looking Reports

Reports are generated automatically after each analysis and can be customized to suit your needs. You can add a company logo, images taken during analysis, graphs and charts, statistics and results.
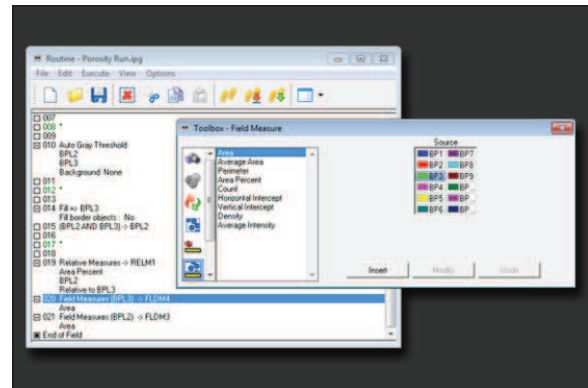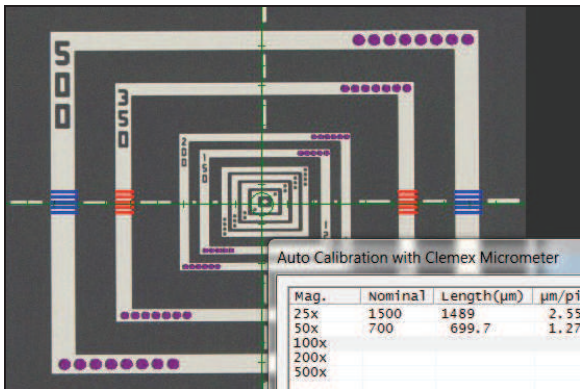
Product Features

Hot or Cold Stage

The Clemex Vision PE software works in conjunction with hot and cold stage software, accumulating data as the temperature rises and falls and producing results once the analysis is over.
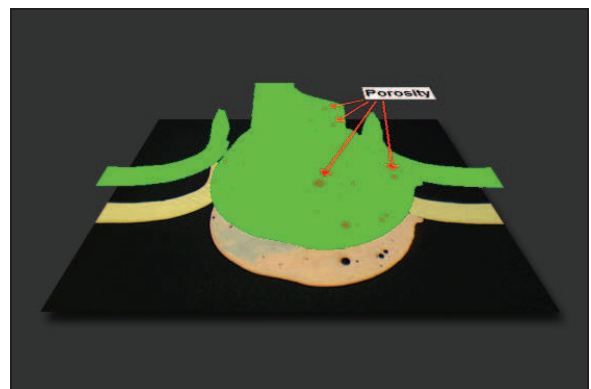

Imaging Routines

Build routines using an intuitive toolbox, helping you through every step to produce the results you need.


NIST-Traceable Auto Calibration

Using our NIST traceable micrometer, Clemex software automatically calibrates each lens, eliminating operator subjectivity. The system returns accurate, reproducible and traceable results.

## Non-Destructive Annotations

Annotations, be they logos, text, arrows, or any other shape, are not burned into the underlying image, so they can be turned on to be added in a standard report, or turned off to view the pristine image.

Product Features
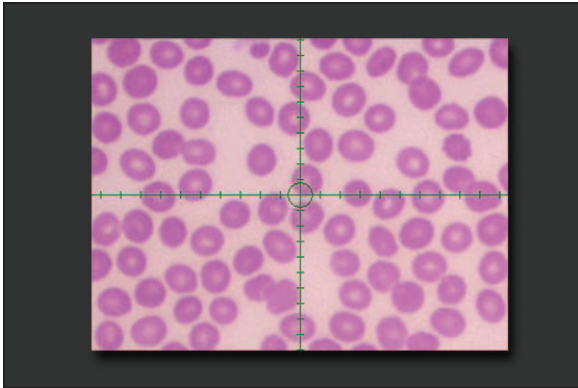
Centering Tool

The Centering Tool allows you to keep desired features in the center of the image field when switching magnification.
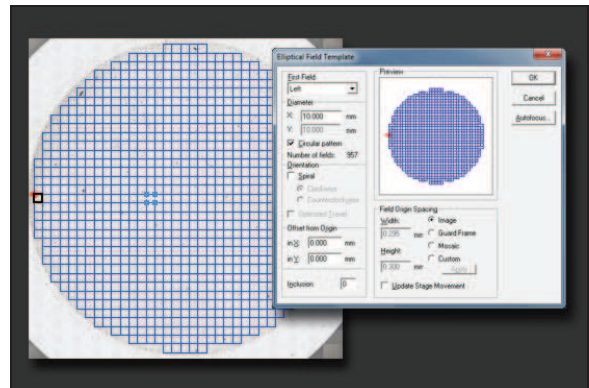

Circular Stage Pattern

This feature helps you to easily create rounded stage patterns when analyzing membrane filters or wafers. You control variables such as size, shape, and the number of fields while the software does the rest.
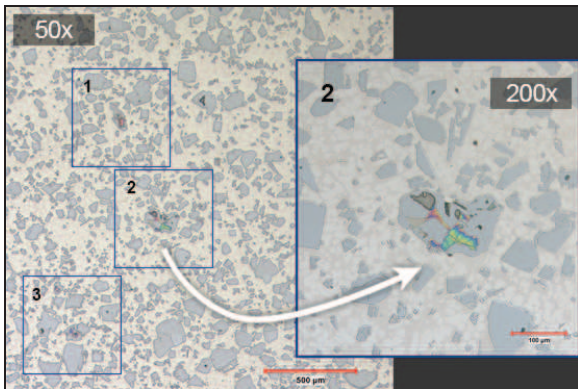

Smart Patterns for More Precision

The system saves time by scanning the entire sample at low magnification to detect areas which need to be analyzed with greater precision in a second step. A custom stage pattern is automatically created to analyze the objects of interest at a higher magnification.
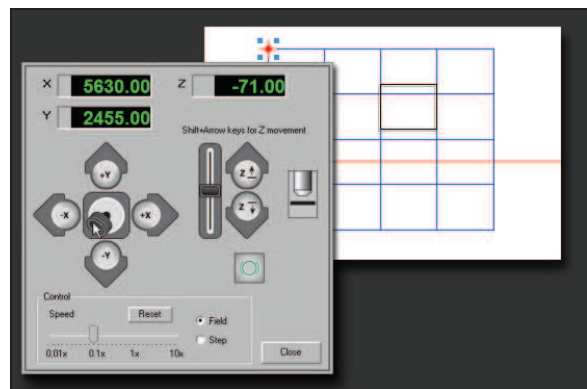

Virtual Joystick

The Motorized stage can be controlled through the software with a virtual joystick that allows you to move the stage in all directions, focus manually, or trigger auto-focus events.

Product Features
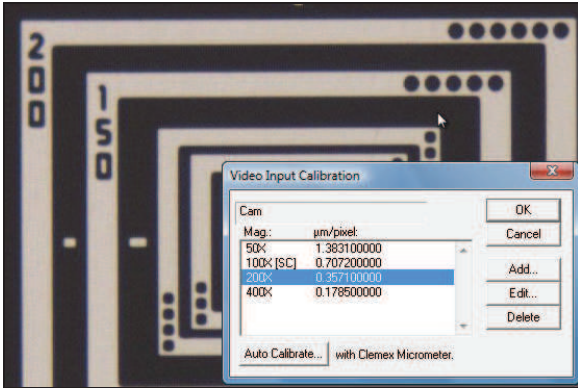
Calibration Settings

Calibrate your system manually or automatically. Associate different calibration settings for each objective lens or camera. Store an unlimited number of settings to be used later at the touch of a button.
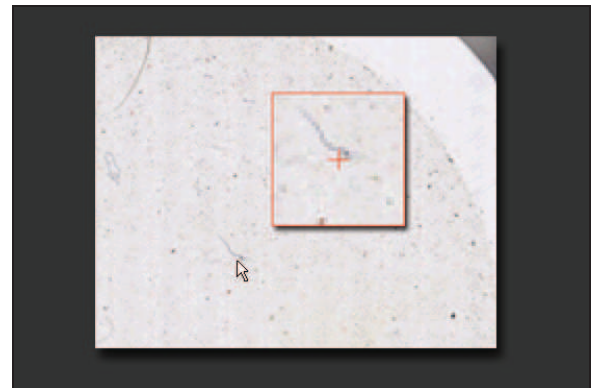
Magnifying Glass Tool

The tip of the cursor can act as a magnifying glass to enhance portions of the image and help in identifying particles or anomalies.
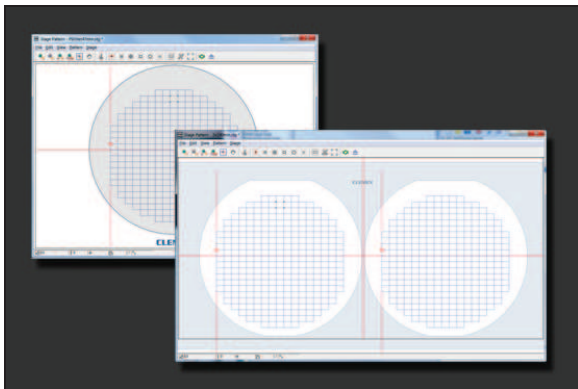

Outline of Sample Holder

A virtual stage can be made to appear in the Stage Window, allowing you to position stage patterns with precision.


User Rights Management

Complying with CRFR21, the Clemex User Administration module allows management to add users and follow the work's progress in a manner which is secure and reliable while providing traceability for all analyses.
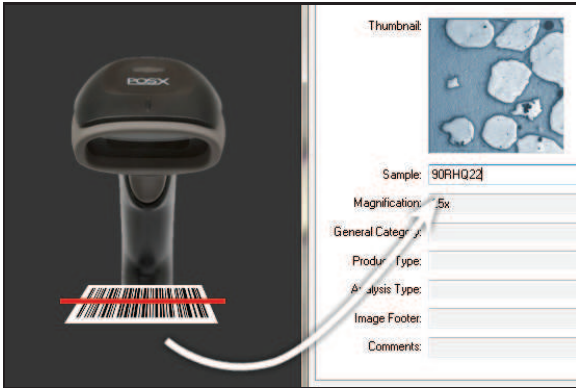
Barcode Scanner Use

Barcode use is becoming more common-place in laboratories. The integration of this technology into automated sample processing by image analysis will give you an advantage over more time consuming and error-prone manual sample name input.
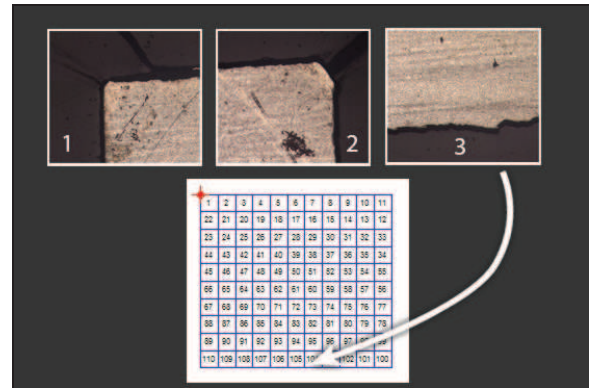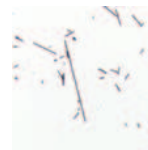

Define Region

The system defines a region to analyze based on three coordinates set by the user. A stage pattern (circular / rectangular) is automatically created to encompass the whole region. An automatic plane is created, meaning all points within the region to be analyzed will be in focus.
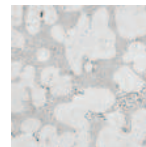
Related Web Reports
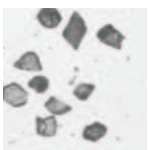
Angularity of particles

Carbon fibre length distribution

Ceramic ball wear

Magnesium Silicide particles in aluminum

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