# Nano Eye

Program for automatic classification and characterization of microscopy images

CINKARNA

Microscopy images contain wealth of information that is clearly visible to human eye, but when it comes to automatic classification and characterization of objects in images, current software solutions often fail to deliver satisfactory results, especially when processing images of agglomerated samples. Considerable amount of work effort has to be invested in either preparation of samples or manual detection of objects in images.
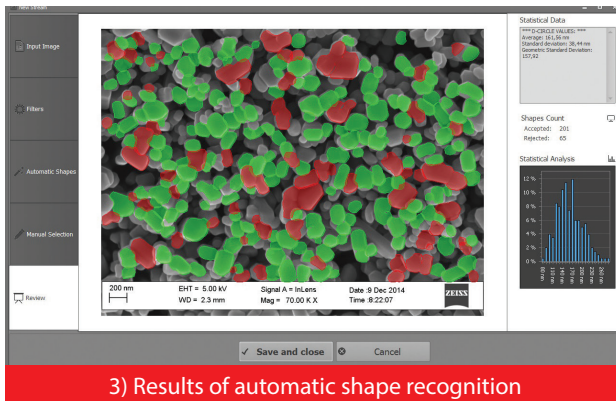
NanoEye is a **Windows**© based software solution designed to speed up classification and characterization of microscopy images. It allows the user to complete full image analysis from importing image to exporting final report in few intuitive steps and in a matter of minutes.
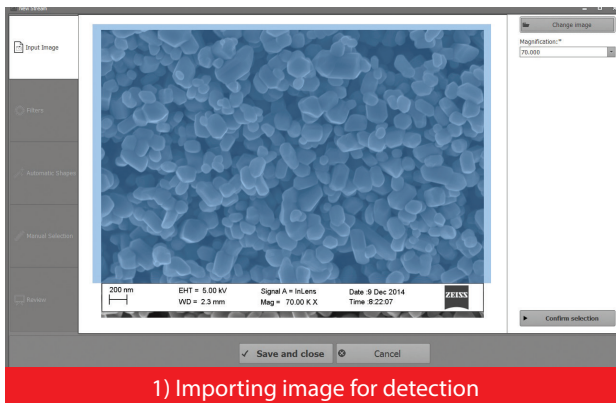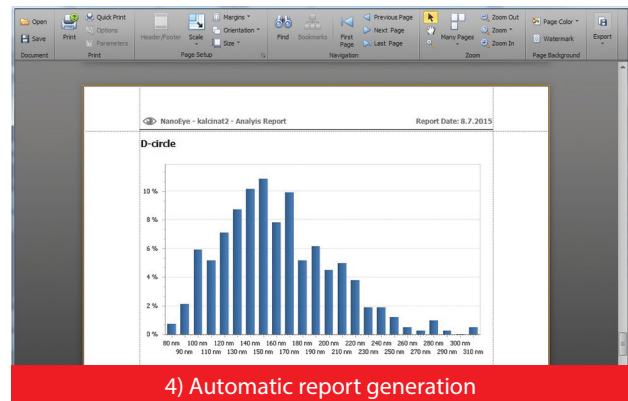

1) Importing image for detection
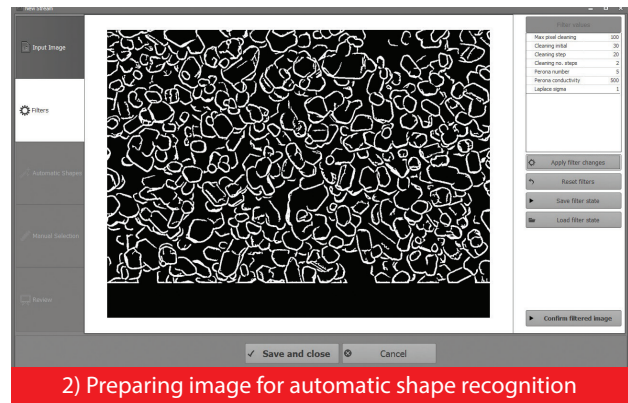
2) Preparing image for automatic shape recognition

3) Results of automatic shape recognition


4) Automatic report generation

In order to achieve best results a custom image filter for image classification and custom object characterization procedure has to be adopted/developed for each material type. User can manually add/remove shapes that were not correctly classified by automatic algorithm. Modular design of **NanoEye** allows us to quickly incorporate new image filter/shape recognition combinations and deliver you a strong image analysis tool that is tailored to your needs.

Specialization of workflow to customer's needs means that NanoEye can be productively used with very little training and allows you to start extracting valuable information from your microscopy images.

NanoEye was developed by **C3M** in collaboration with **Cinkarna Celje** for analyzing images of powder particles (calculating statistical distributions of several geometric properties such as particle size, elongation, etc.), but due to modular design it can be used for any material type (powders, metals, biological samples…) as shown in examples below:
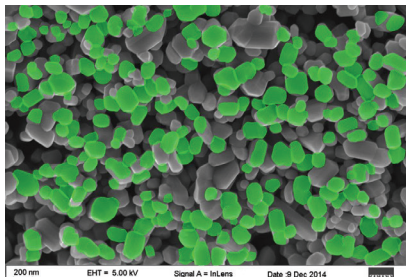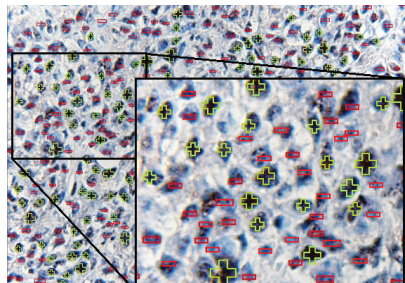

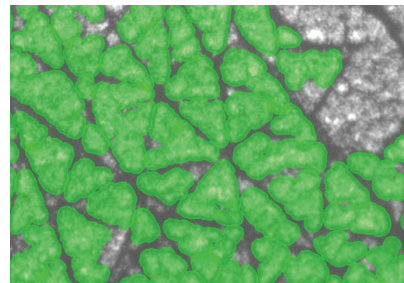Detection of agglomerated powder particles
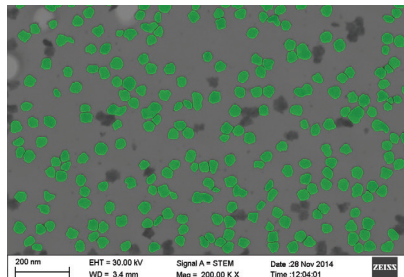
Detection of particles dispersed in fluid medium
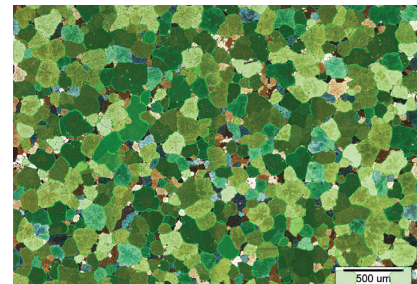
Detection of metal domains

Detection of brown and violet cell nuclei

Detection of skin epithelial cells

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