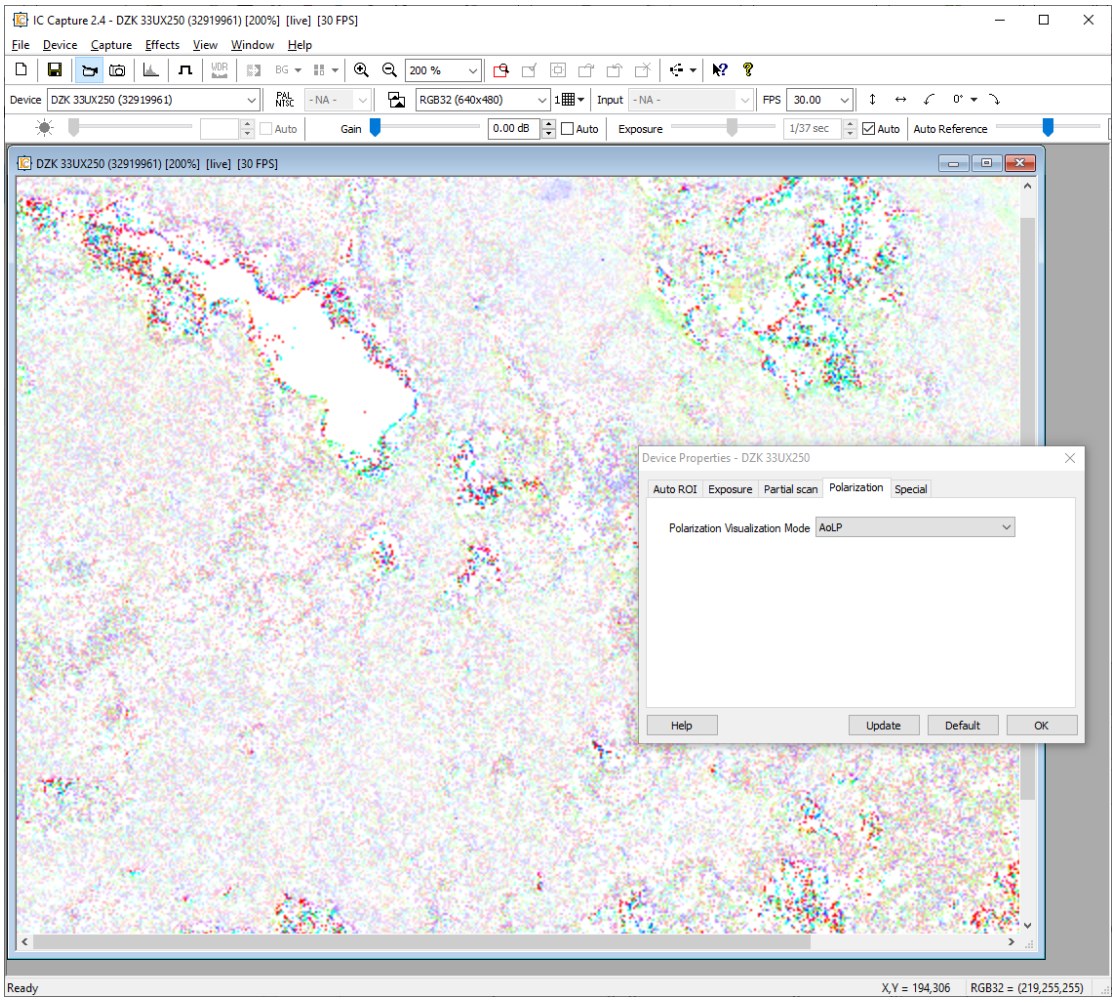
The Imaging Source Helpdesk

Polarsationskameras in IC Capture und C#

S.Geißler - 2021-07-16 - General

IC Capture 2.4 and higher

The visualization of the polarization cameras can be done in IC Capture 2.4 and above as soon as the matching USB or GigE driver is installed. For showing the raw data from the sensor, the Y800 is used. For visualization of the polarization the RGB32 format is to be set. Then the device properties dialog must be shown from "Device" menu, select "Properties". On the tab "Polarization" the modes can be selected:



This image shows some mineral crystals and their angles of reflected polarized light as colors, the so called hue.

IC Imaging Control C# Programming sample

A simple programming sample, that uses IC Imaging Control and Visual Studio C# can be found at https://github.com/TheImagingSource/IC-Imaging-Control-Samples/tree/master/c%23/Polarization-Demo . It uses a frame filter for processing of the data sent by the camera.

We recommend to have a look into the Technical Reference Manual of one of the polarization cameras (https://s1-dl.theimagingsource.com/api/2.5/packages/documentation/manuals-trm/trmdyk33ux250/252f95ea-eb7c-51fa-be57-11d7b24549ac/trmdyk33ux250.en_US.pdf) on the video formats of the processed data, see chapter 5.1

The Bayer pattern of the DYK looks as follows:

B90 B45 G90 G45 ...

B135 B0 G135 G0 ...

G90 G45 R90 R45 ...

G135 G0 R135 R0 ...

The numbers represent the polarization angles.