



MShot Image Analysis System

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Introdcution

MShot Image Analysis System is independently designed by GuangZhou Micro-shot Technology Co., Ltd special for basic microscope imaging with Mshot cameras.

Fit to Windows Win7/8/10 (32bit & 64bit).

Main Function list

Featured functions

Burst
Timelapse
Smart Denoise
Counting point
Anti-fliker: 50Hz, 60Hz
System logs & account control
Dynamic multi-images merge
Connect 4 cameras ones time
Auto image splicing
Auto extend depth of field

Fluorescence imaging

Histogram
Maximum & Minimum value
RGB channel
Input levels & Output levels
Dynamic multi-image merge
Merge channels
Shifting correction
Split RGB channel
Quickly RGB dye
Line profile
Graying

Image Capture & Video

Exposure controls: Auto exposure, Exposure time, Global & Regional exposure, Gain, Overexposure correction

Color adjustment: Automatic white balance, Global & Regional white balance, Monochrome, Invert, RGB separate adjustment, Saturation

Resolution: Preview resolution& Capture resolution, ROI
Frame rate : Normal speed, high speed
Image Flip : Horizontal, Vertical
Image color depth: 8bit, 12bit (16bit for FIT image)

Imaging processing

Dynamic: Gamma, Contrast, Sharpness, Denoise
Static: Brightness, Contrast, Color phase, Saturation, Gamma, Smart brightness

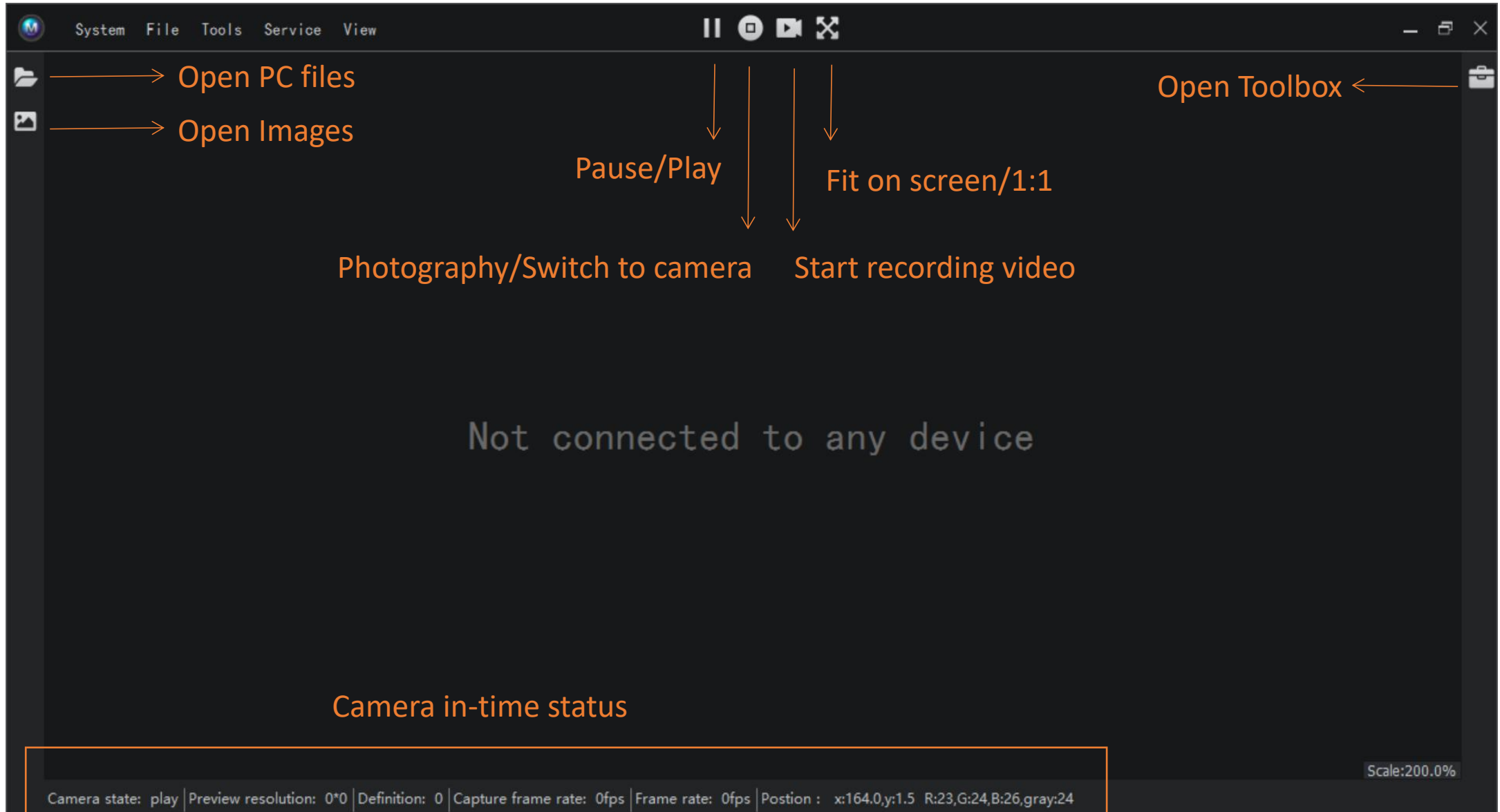
Color adjustment: Automatic white balance, Global & Regional white balance, Monochrome, Invert, RGB separate adjustment, Saturation

Measurement & Calibration

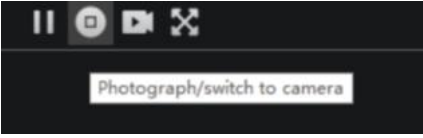
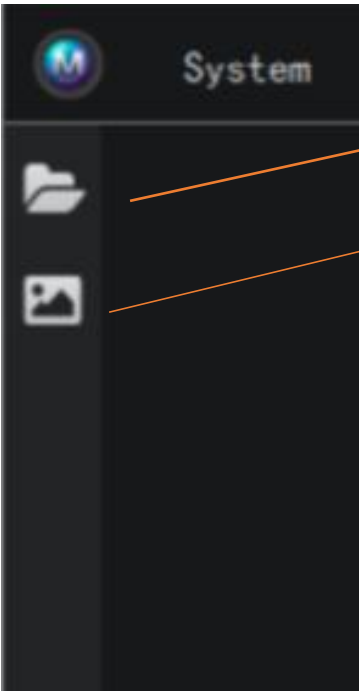
Text, Counting point, Straight Line, Segment Line, Rectangle, Polygon, Angle, Ellipse, Circle, Diameter Circle , Perimeter Circle, Parallel Line, Arrow, Scale Bar, Line Profile, Scale bar

Export data to Excel

Simplified UI



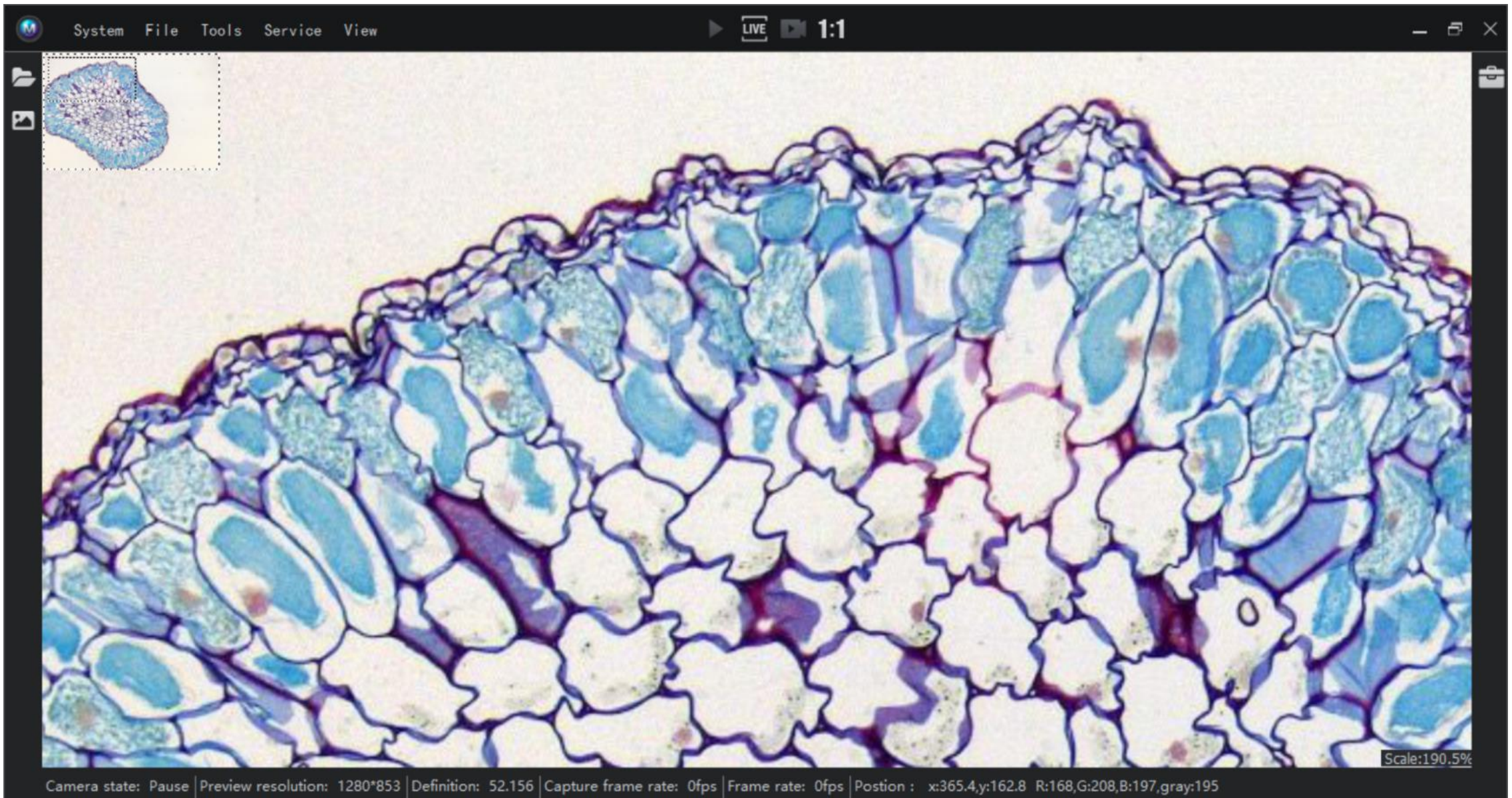
Live view and capture image in PC files



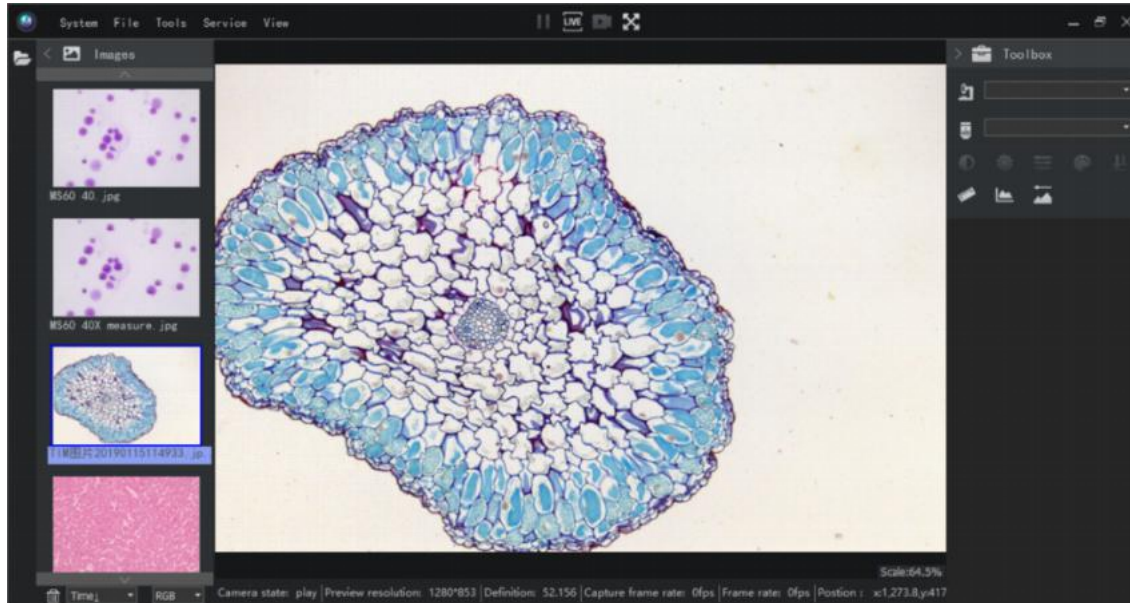
Smart menu remark

A screenshot of a software interface. The top bar has 'System File Tools Service View' and 'LIVE' indicators. The left pane shows a 'File directory' with folders like 'MF52-LED', 'MF52效果图', 'MF53', 'MI10效果图', 'MI12效果图', 'ML31-B', 'ML31效果图', 'ML32效果图', 'MS23', 'MS31', 'MS50-C-TV0.5...', 'MS60', '小图', 'MS80', 'MSH05测试图片', 'MSH12测试图片', 'MSX10', 'MSX2 效果图', 'MZ101', 'MZ61 效果图', '显微镜+摄像头', and '软件'. The middle pane shows 'Images' with thumbnails for 'MS60 40X .jpg', 'MS60 40X measure. jpg', and 'TIM图片20190115114933. jp.'. The right pane shows a large live view of a plant cross-section stained with blue and purple. The bottom status bar shows 'Camera state: play | Preview resolution: 1280*853 | Definition: 52.156 | Capture frame rate: 0fps | Frame rate: 0fps | Position : x:682.5,y:494.8 R' and 'Scale:65.9%'.

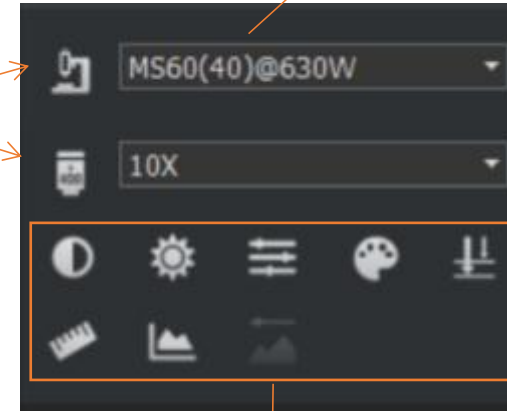
Zoom in and zoom out image freely in full screen



All-in-one Toolbox panel



In-time connect and move to different cameras in one software no waiting



Camera item and resolution

Objective times

Image setting: capture/view resolution, ROI, etc.

Exposure control: gain, exposure time, etc.

Image processing: contrast, sharpness, gama, etc.

Color control: RGB, saturation.

Measurement: captured and live image measure.

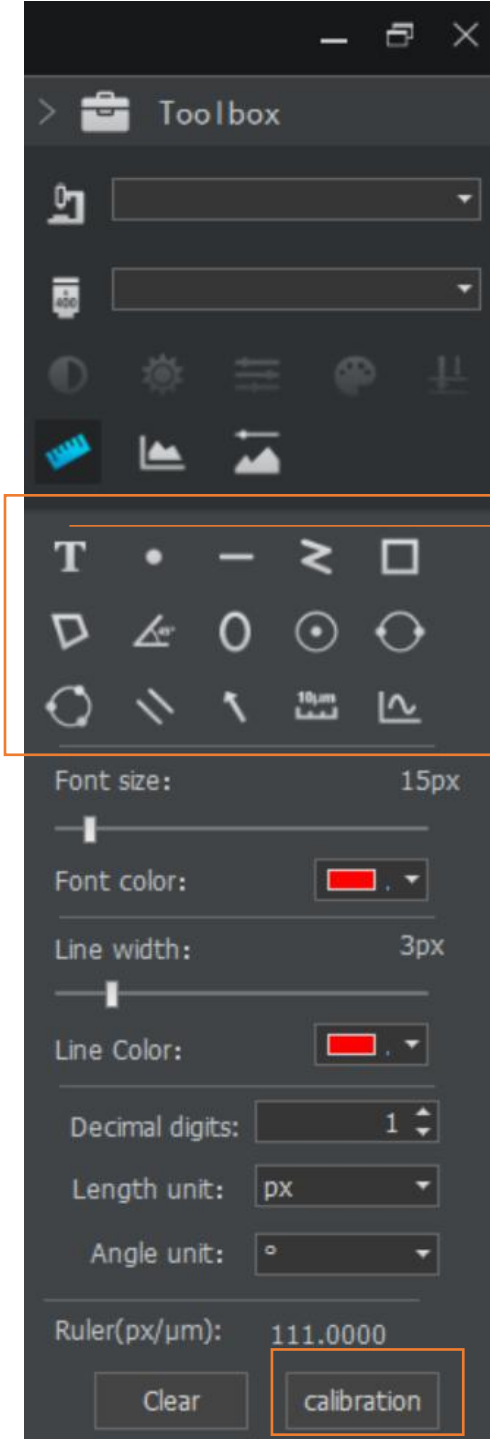
Static image processing: image crop, multichannel synthesis, etc.

Fluorescence processing: in time fluorescence combination, fluorescence color adjustment, shifting correction, ect.

White blance

Histogram

Measurement, Calibration, Text

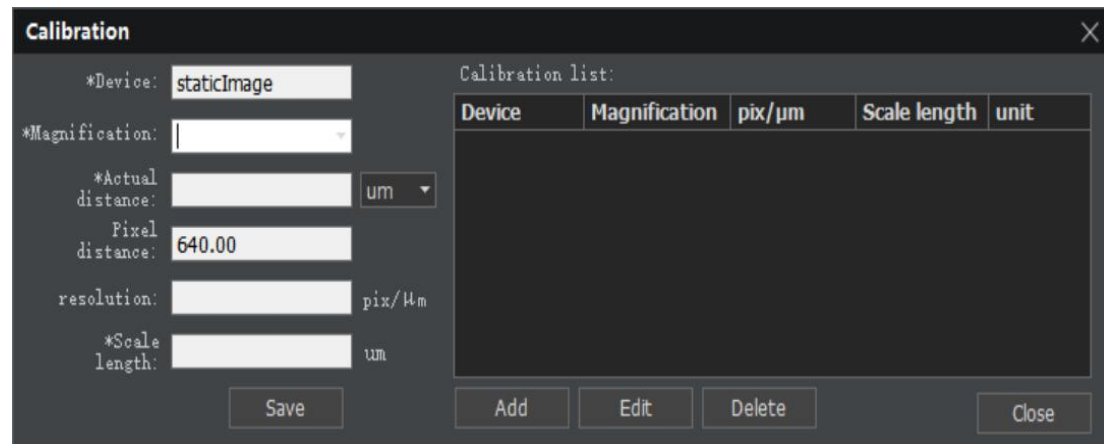
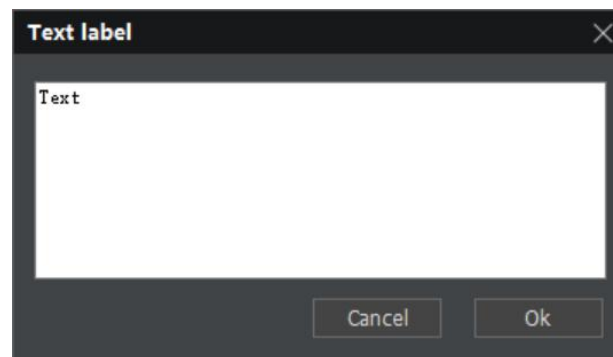


Variety of measurement tools for captured image and live view image

Free set line size and color

Support different units

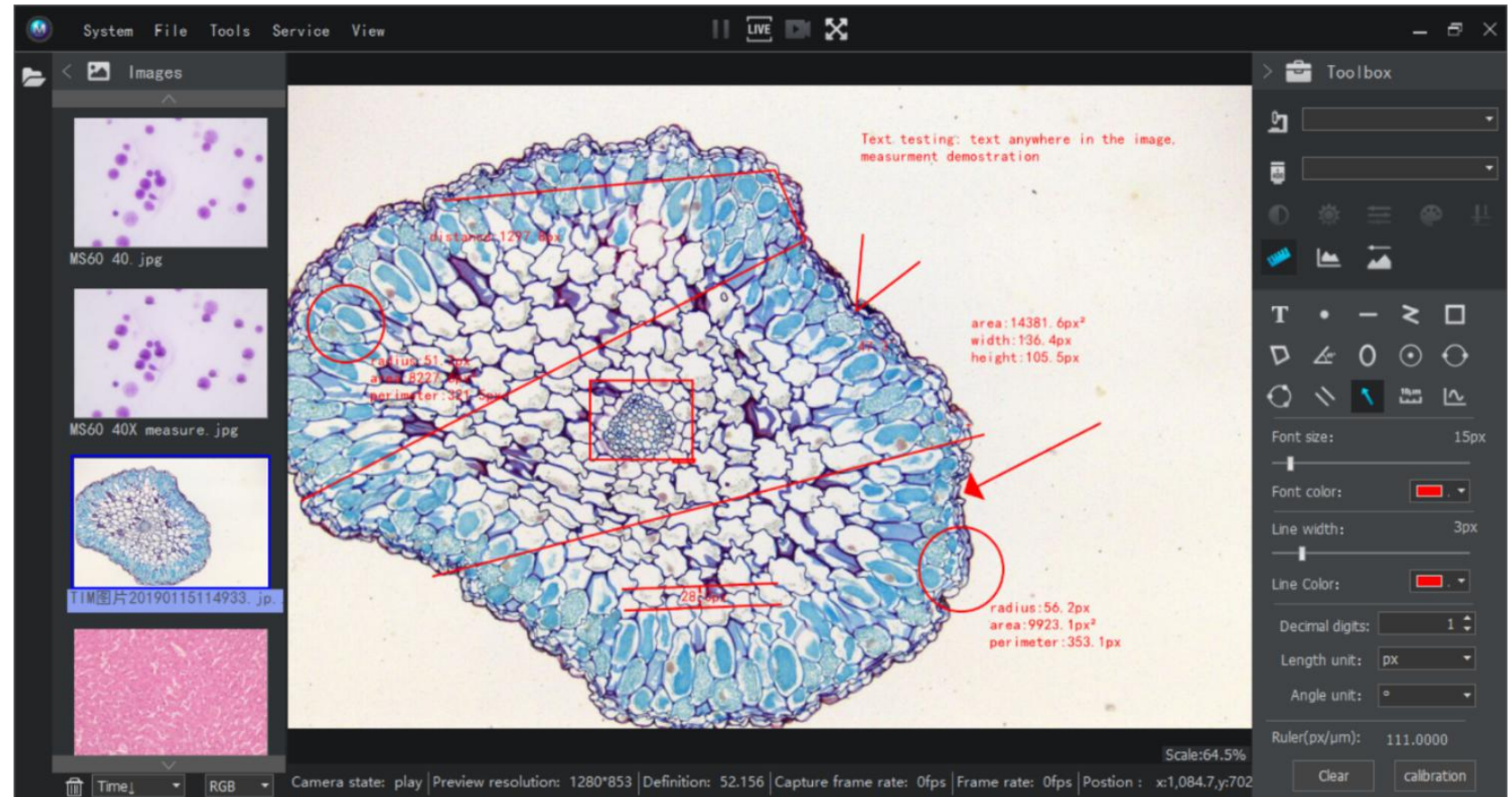
Calibration



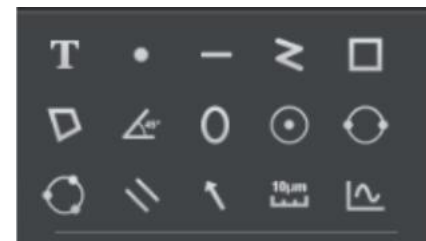
Measurement demonstration

Text anywhere
on the image

Measurement
record moveable

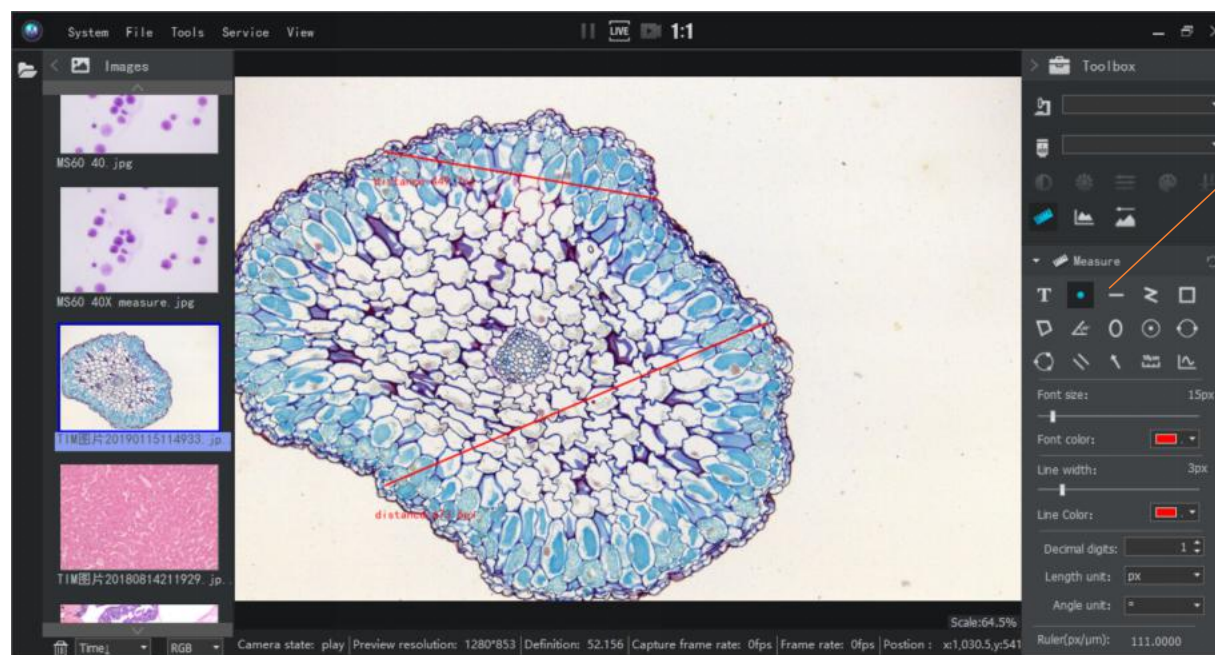


Remove measurement data

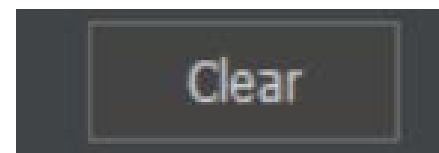
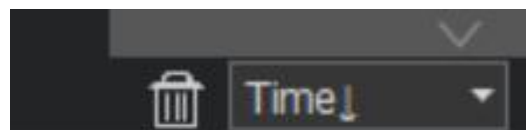


Step 1: Cancel choose measure tool till panel gray

Step 2: Choose measure data, press PC keyboard Delete button

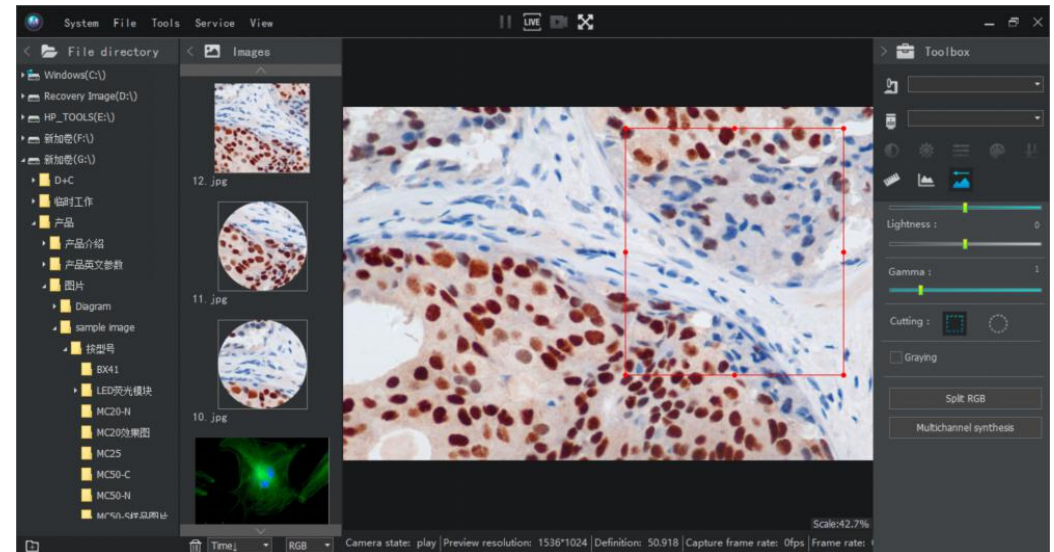
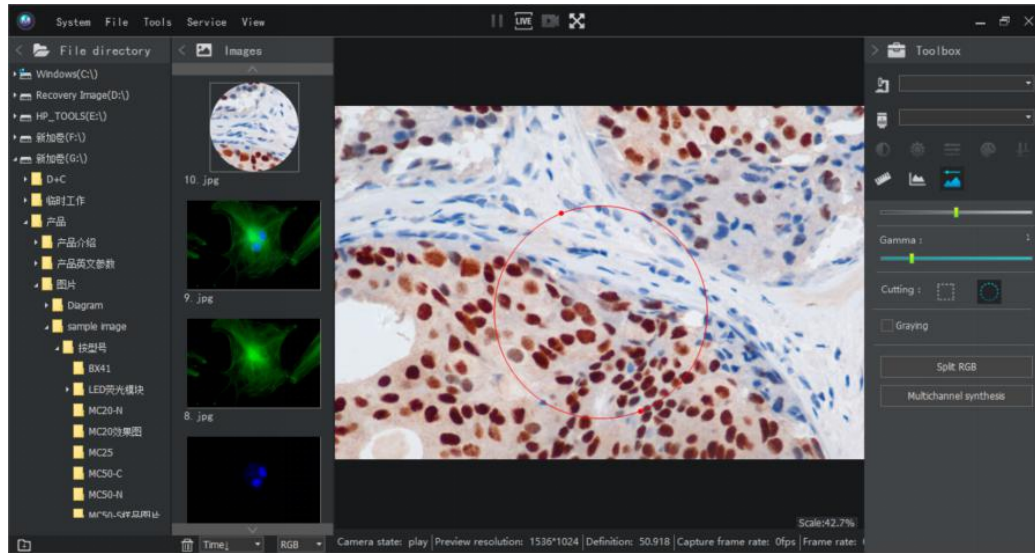


Can draw measure data to it remove



Clear all measurement

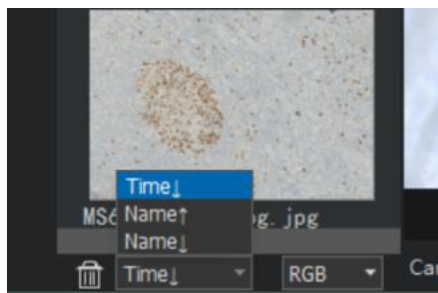
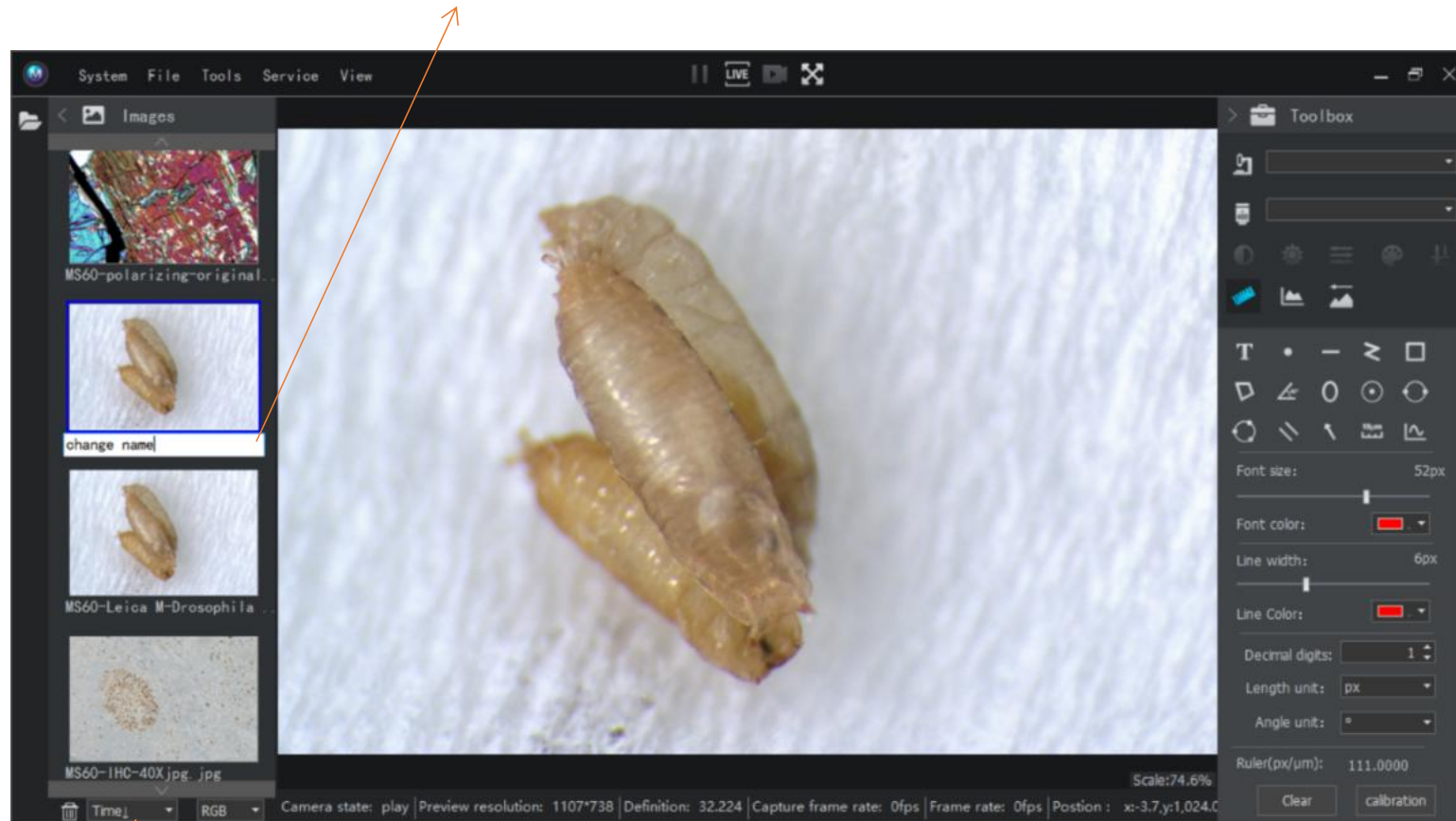
Cut Image



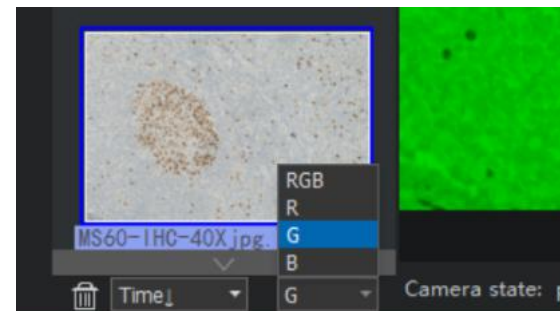
Simple manual count



Double click to edit image name

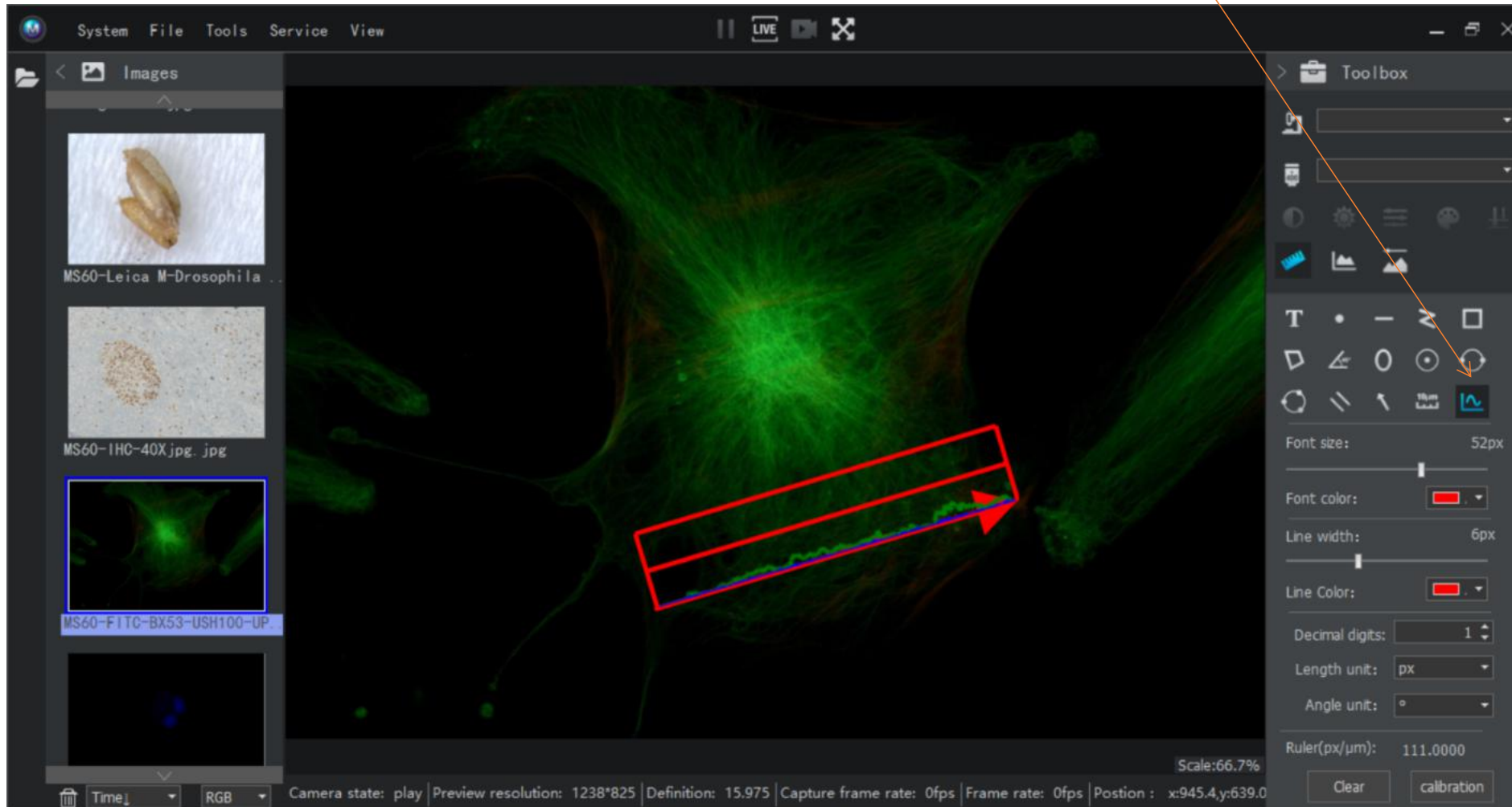


Make image in order by capture time or name

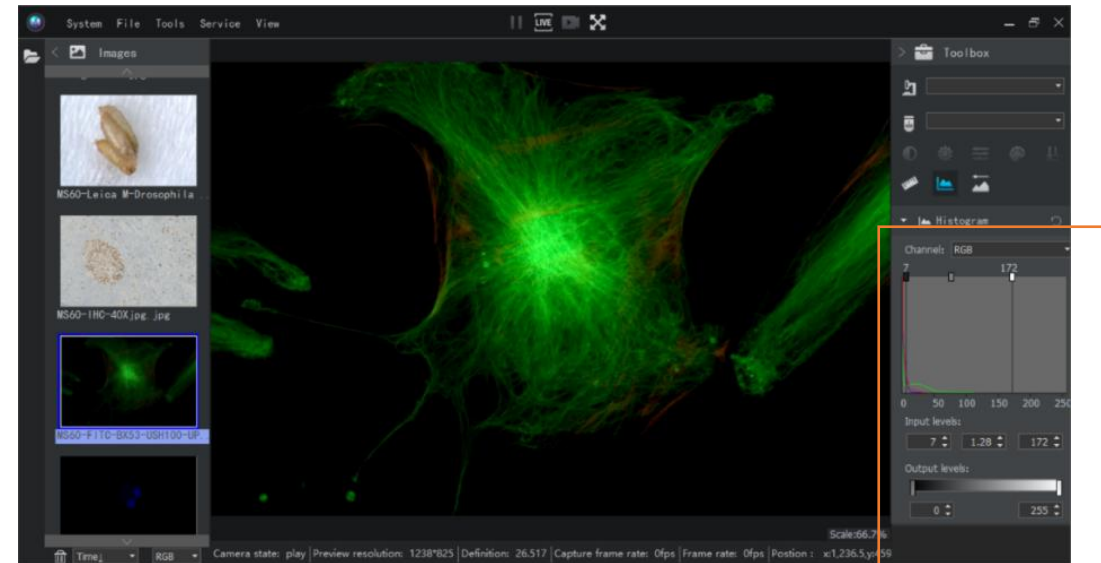
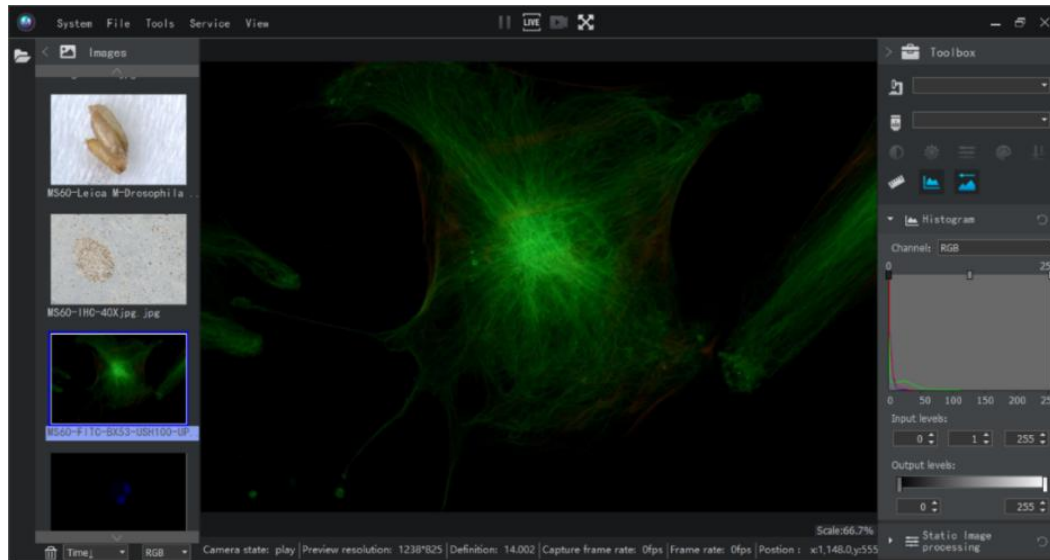
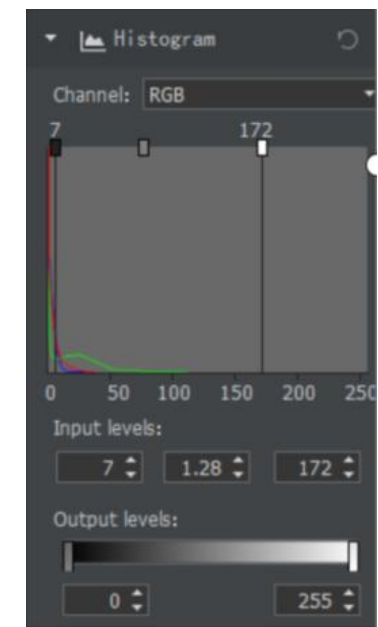


Quick auto dye image in RGB

Show light intensity

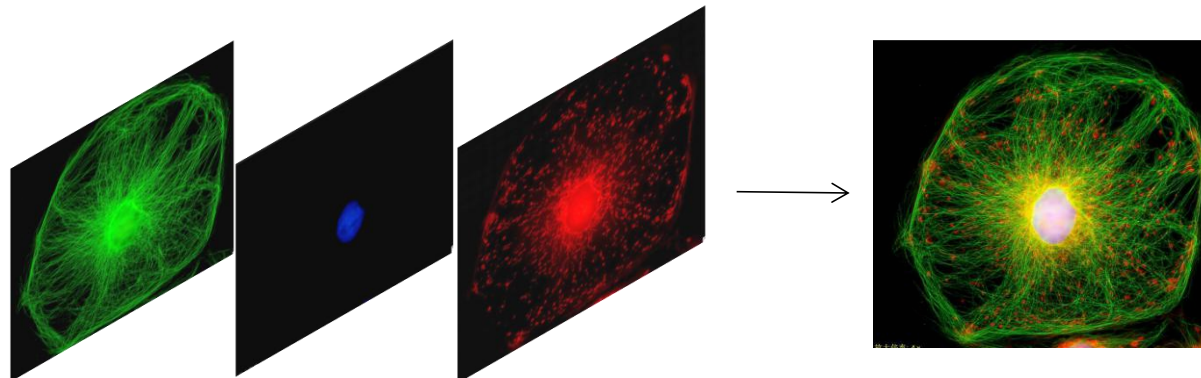
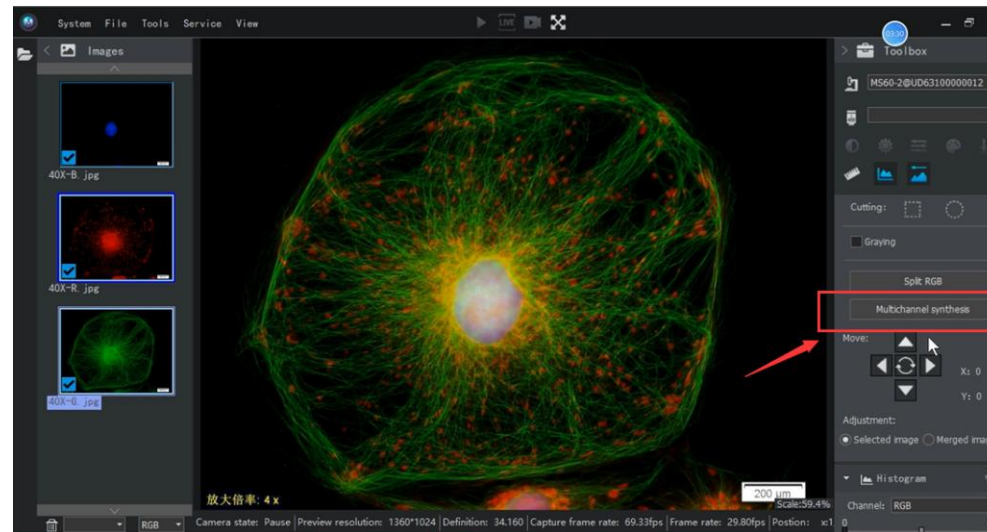


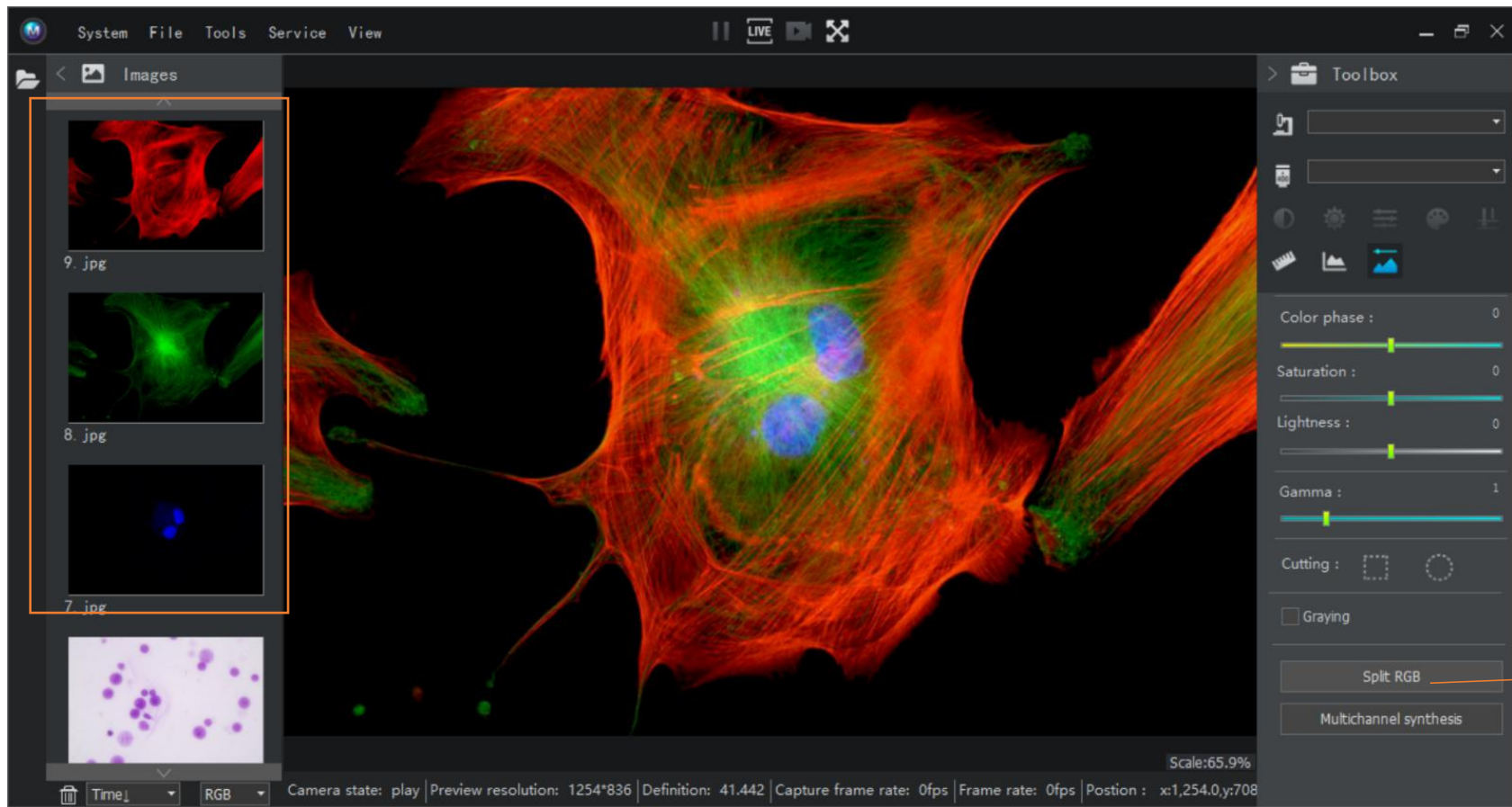
Histogram easy to get better fluorescence and reduce image noise



Merge Channels

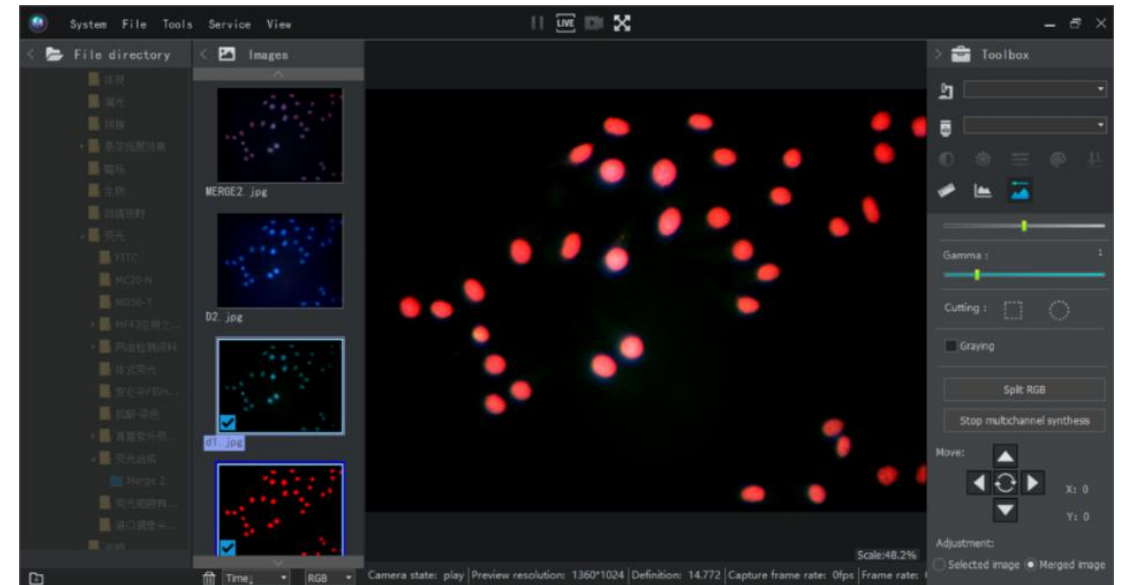
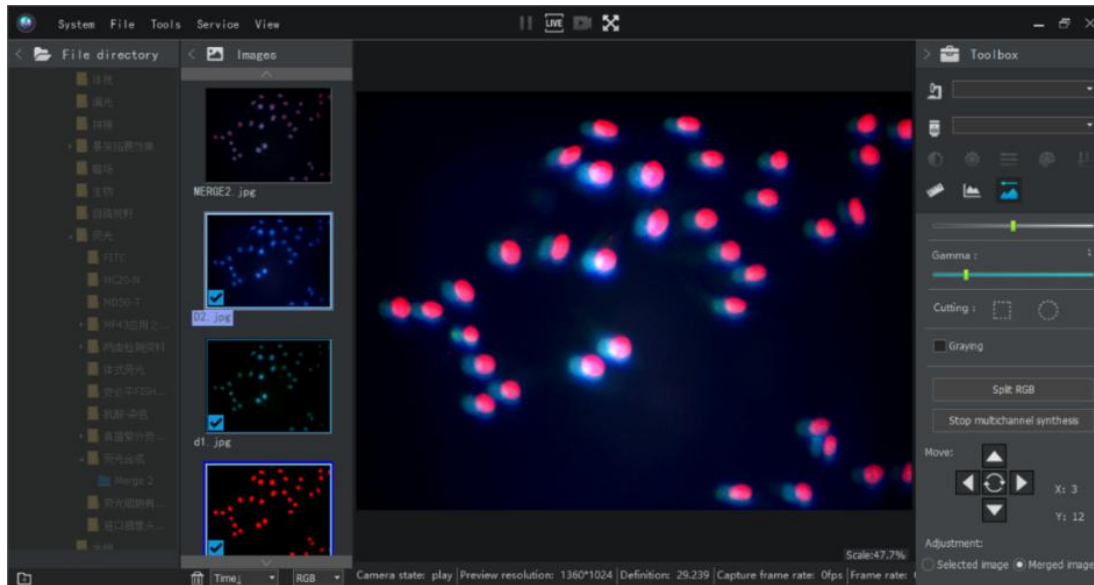
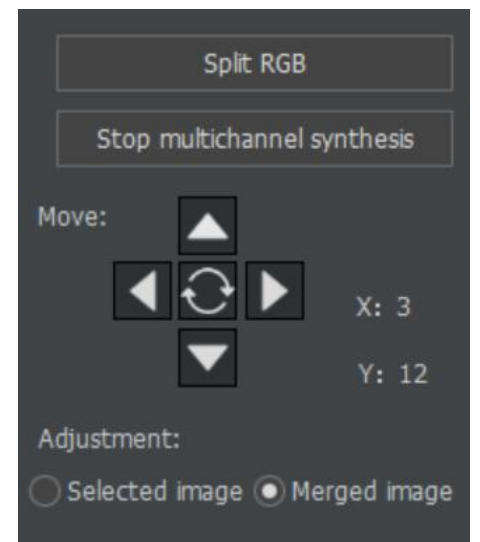
- Merge different color fluorescence images into a multi-color fluorescence image.





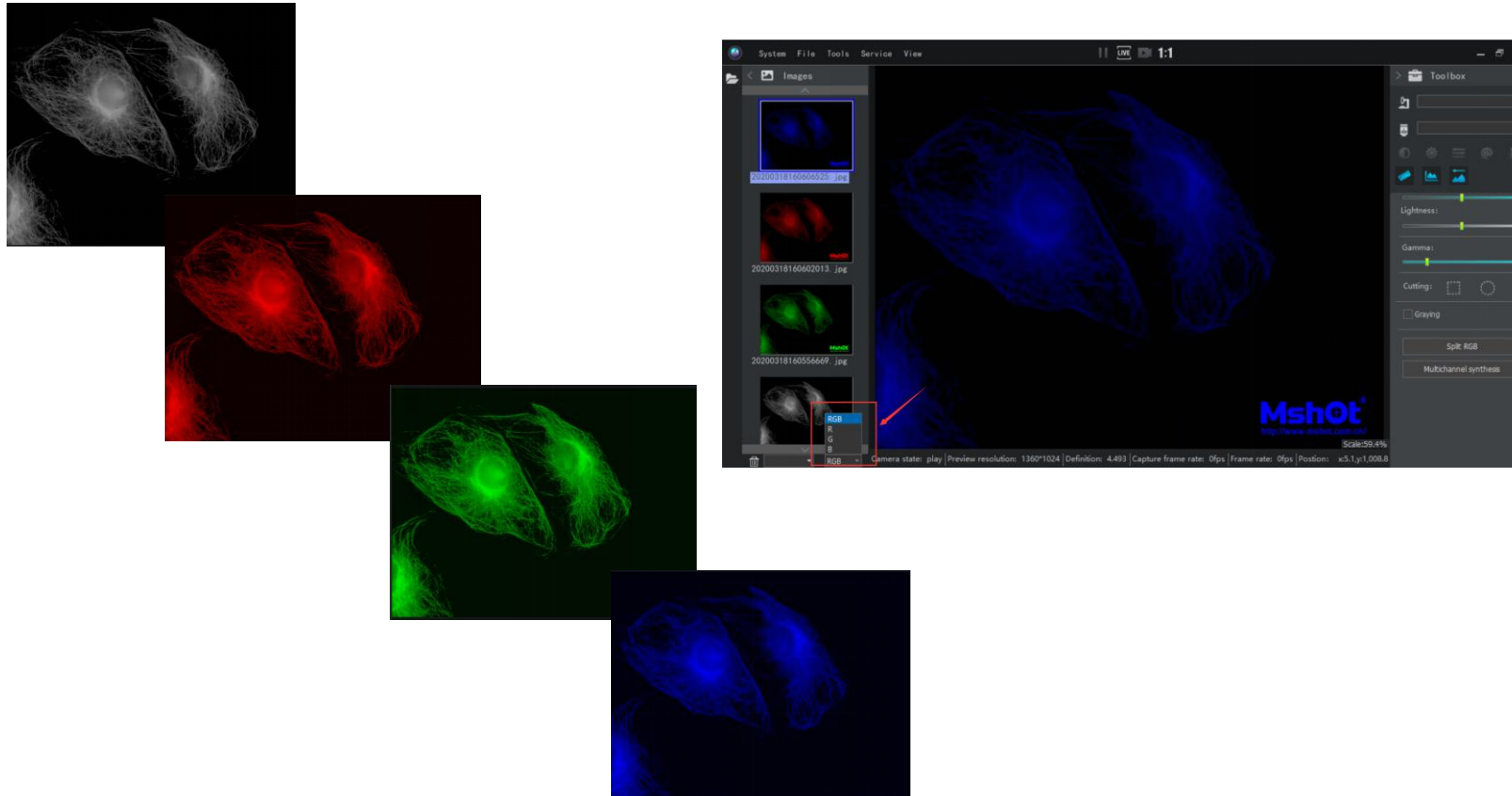
Split RGB

Shifting and color correction Merged fluorescence image



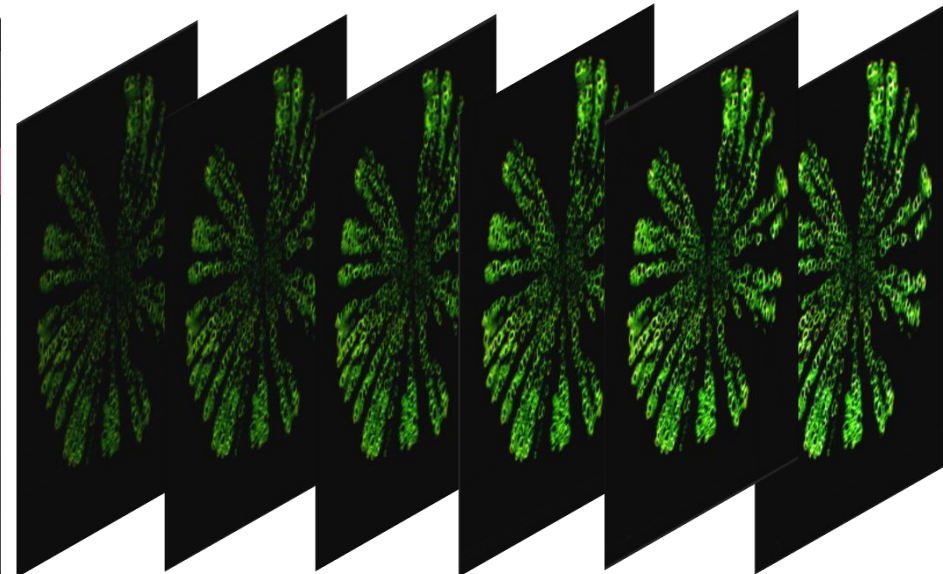
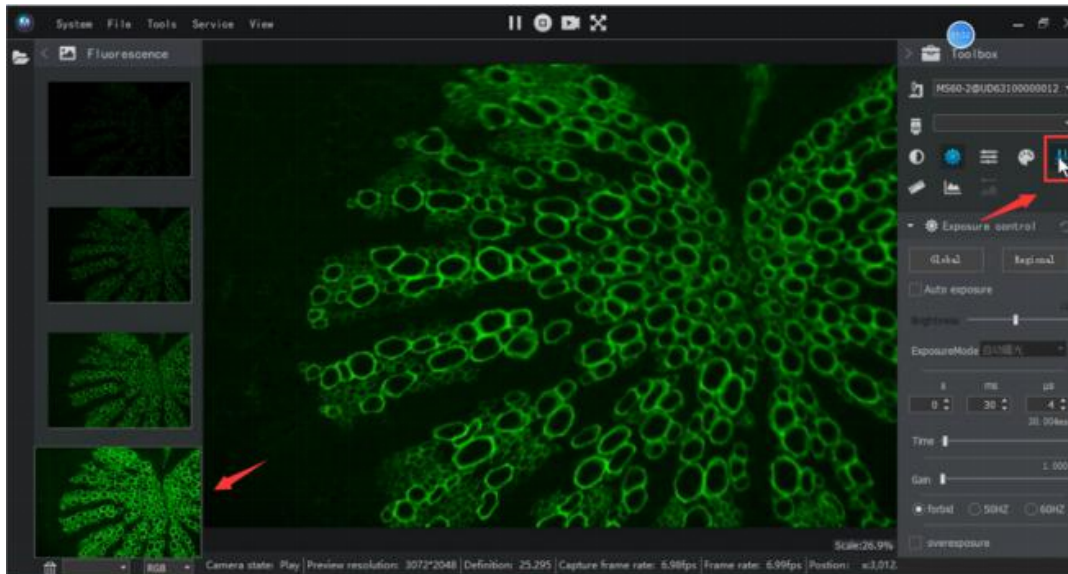
Quickly dye

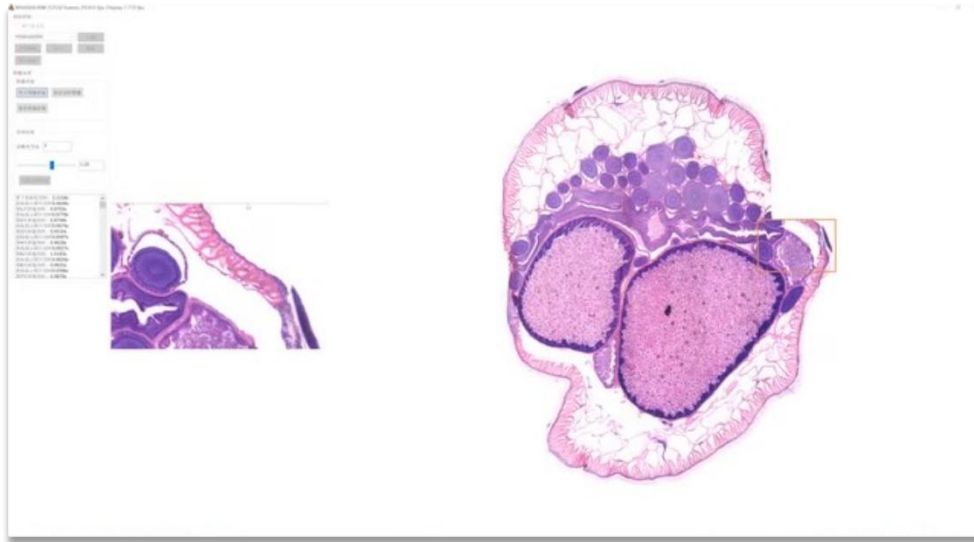
- Just choose R/G/B channel to dye the monochrome fluorescence image for quickly observation.



Dynamic Overlay

- Merging max. 7 different exposure images to one better image, reduce image noise (improve SNR) / to enhance fluorescence brightness.



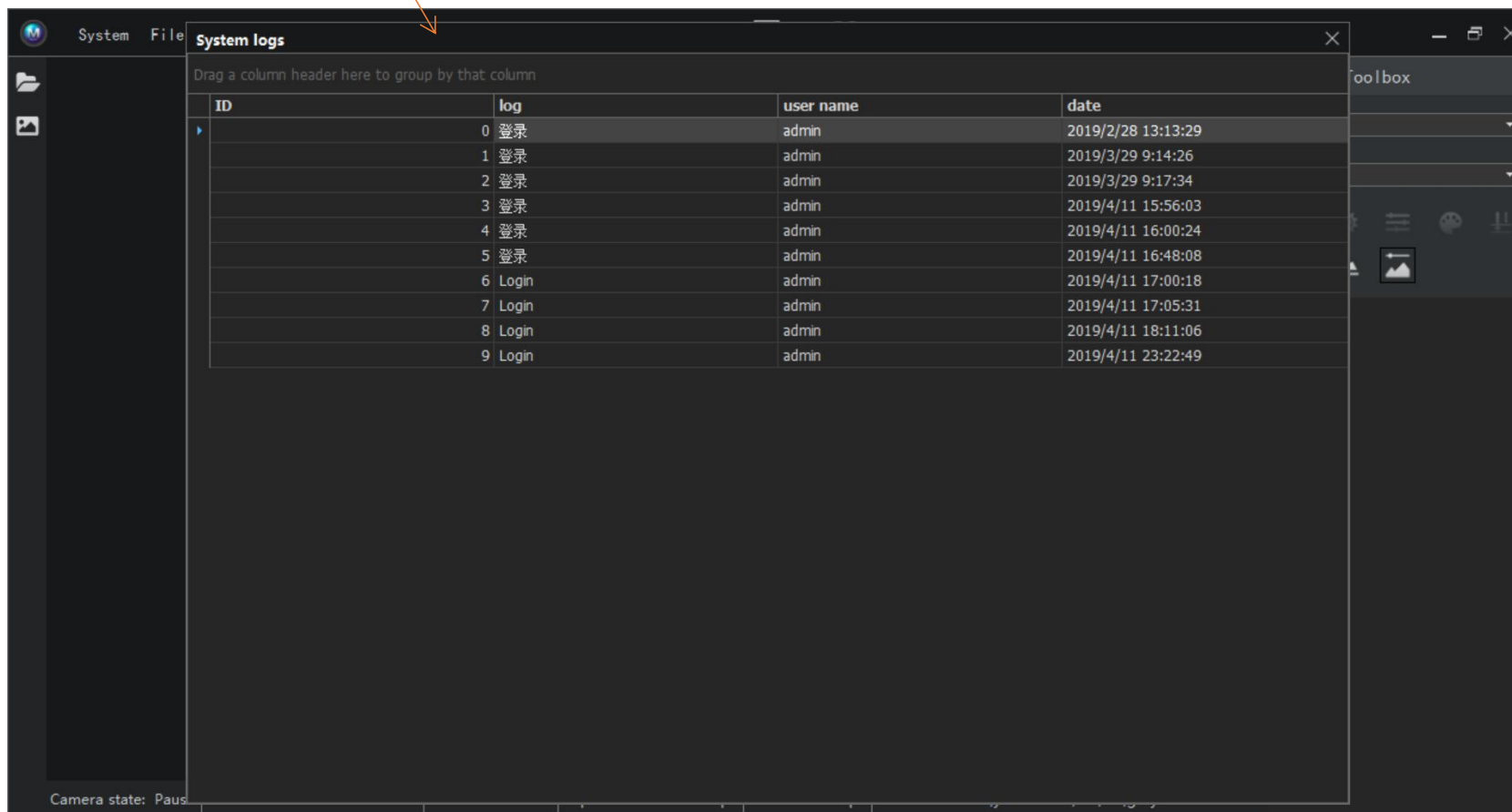


Auto image splicing



Auto extend depth of field

Record user login time

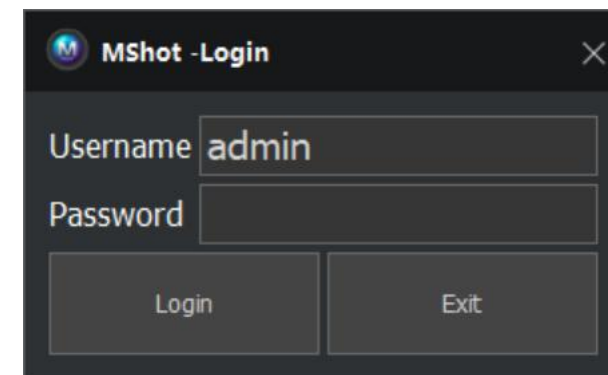


System logs

Drag a column header here to group by that column

ID	log	user name	date
0	登录	admin	2019/2/28 13:13:29
1	登录	admin	2019/3/29 9:14:26
2	登录	admin	2019/3/29 9:17:34
3	登录	admin	2019/4/11 15:56:03
4	登录	admin	2019/4/11 16:00:24
5	登录	admin	2019/4/11 16:48:08
6	Login	admin	2019/4/11 17:00:18
7	Login	admin	2019/4/11 17:05:31
8	Login	admin	2019/4/11 18:11:06
9	Login	admin	2019/4/11 23:22:49

Camera state: Paused



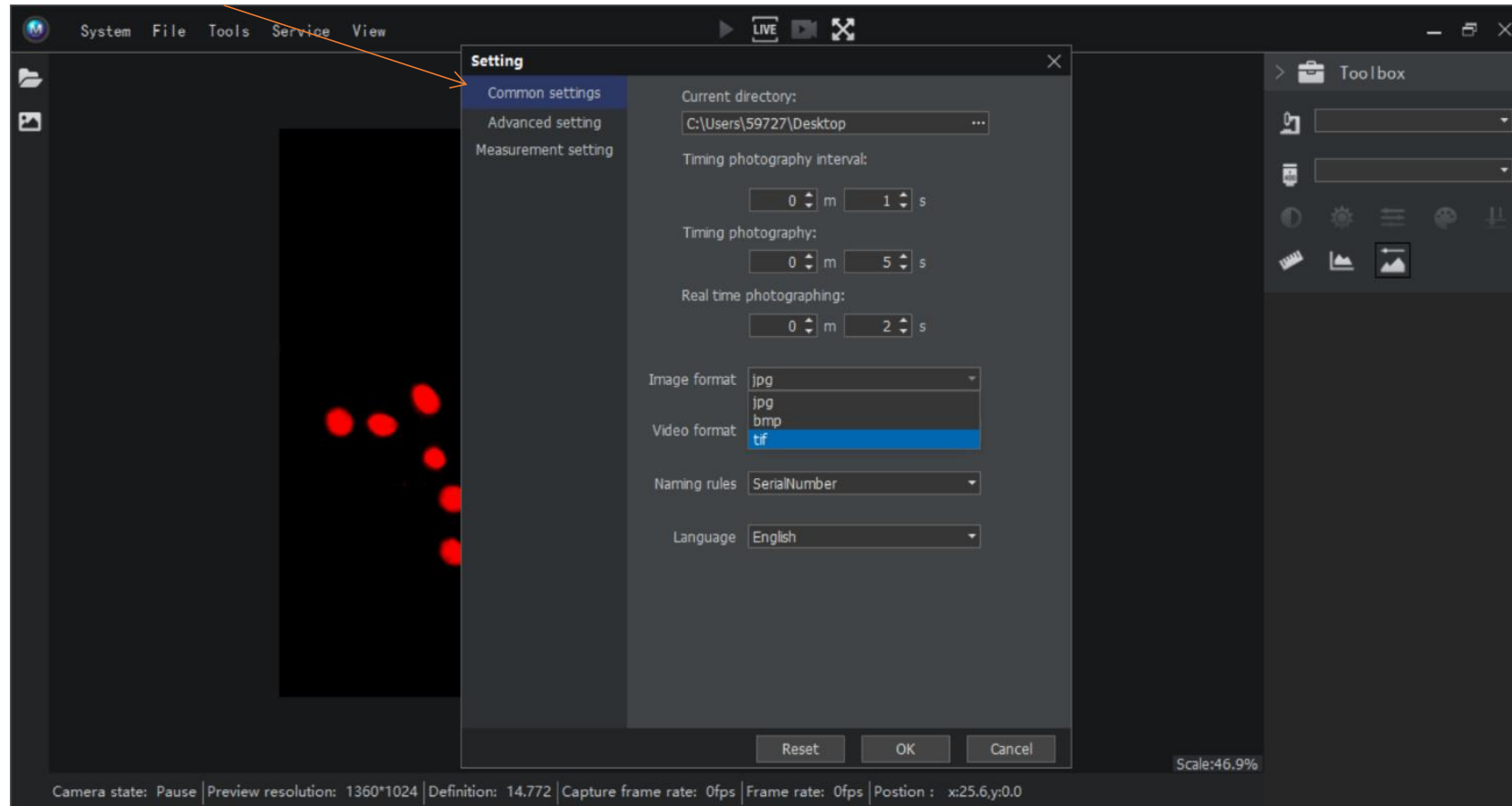
MShot -Login

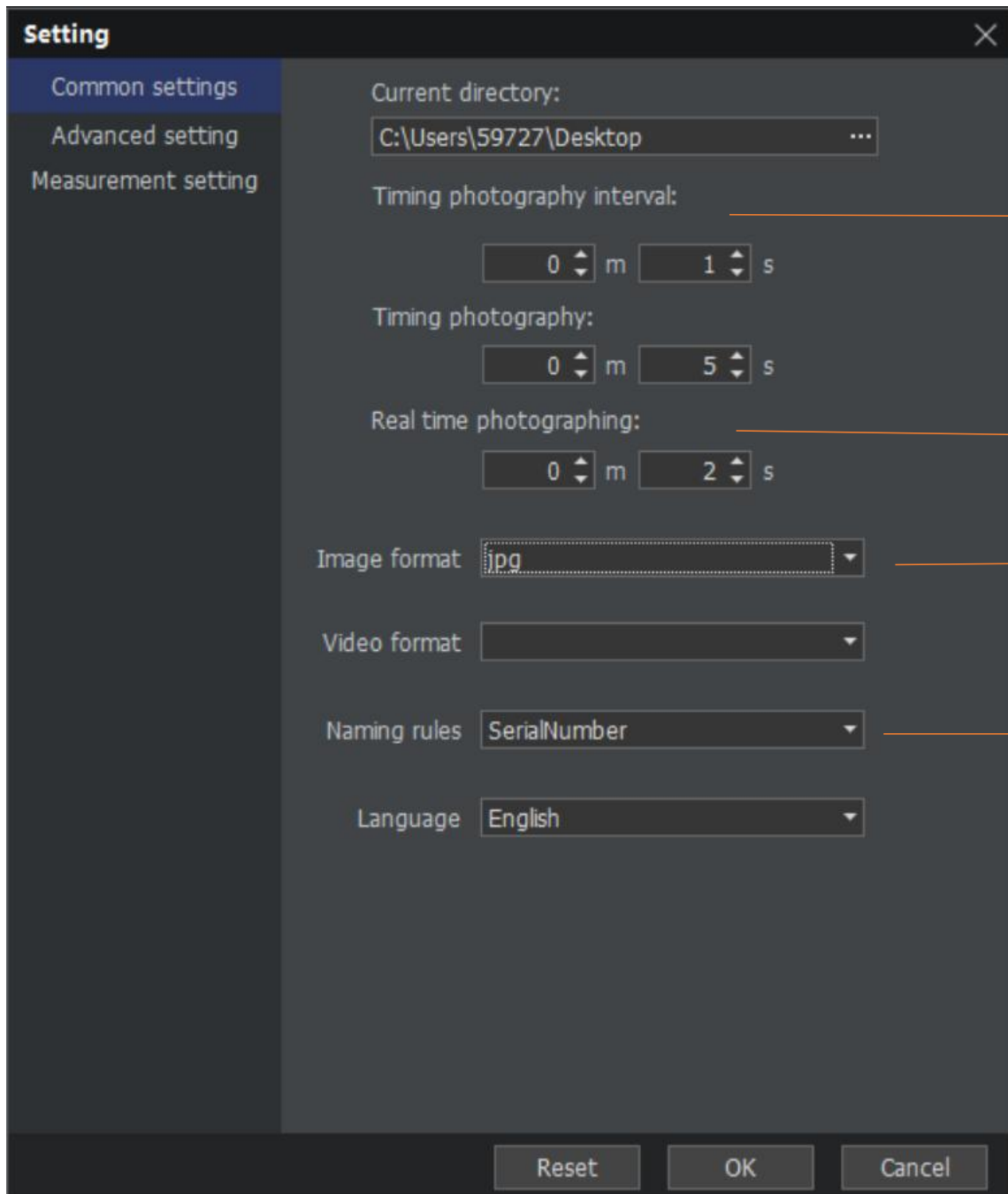
Username

Password

The version of password is optional
(Not included in standard version)

Set file, format, timing, language, etc



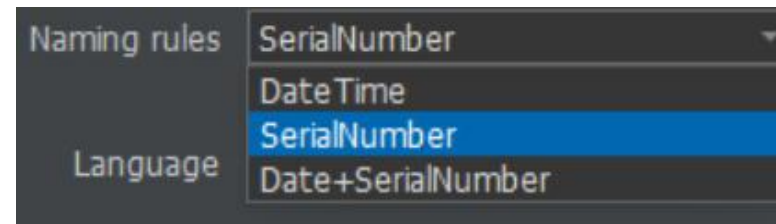


Capture image in interval time

Capture image of every frame rate in set time, such as 5s has 20fps, it will takes 20 images of every fps

Image format: jpg, tif, bmp support 16bit color depth

Set capture image auto name rules



Setting

- Common settings
- Advanced setting
- Measurement setting

矩阵列表

Apply Cancel

$\begin{bmatrix} R' \\ G' \\ B' \end{bmatrix}$	$=$	$\begin{bmatrix} 0.000 & 0.000 & 0.000 \\ 0.000 & 0.000 & 0.000 \\ 0.000 & 0.000 & 0.000 \end{bmatrix}$	\times	$\begin{bmatrix} R \\ G \\ B \end{bmatrix}$
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Save as Load

CPU/GPU

- Flat field correction Collect flat field correction
- Color point correction Collect color point correction

Reset OK Cancel

Correct RGB calculating value to revise color balance

Correct image brightness and color uniform when connecting camera

Eliminate image dead pixels when connecting camera