

# Product Line Card

## Microscope Applications



### Point Scanning Confocal Microscope

- Frame rate: 8-30 fps@512x512
- Resolution: ~230 nm



### Line Scanning Confocal Microscope

- Frame rate: 30-50 fps@1024x1024
- Resolution: ~200 nm



### Spinning Disk Confocal Microscope

- Frame rate: 40-100 FPS@1024x1024
- Resolution: ~200 nm
- Turntable speed: 15,000 RPM



### STED Microscope

- Multi-channel compatibility
- Near-infrared band super-resolution
- Extremely weak signal detection



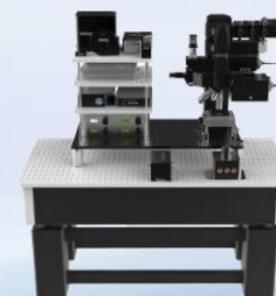
### Widefield/confocal upright Raman, PL, Fluorescence Multifunctional Microscope

- Modular design
- Multi-channel compatibility



### Industry Auto-Fluorescence Microscope

- Upright/Inverted Microscope,
- Three-Channel LED Illumination
- Motorized XY Movement, Fully Automatic Whole-Slide Scanning and Microplate Imaging



### Multimodal Microscope

- Compatible with multiple beam channels
- Modular design with intelligent software integration
- Flexible switching of multi-path illumination
- Synchronous acquisition of multi-dimensional optical information



### Handheld Confocal Raman Skin Analyzer

- Axial Resolution: 10um~20um
- Detection Range: FP: 450 – 1750cm-1  
HW: 2800-3750cm-1

**Microscope Systems 2026 V1**

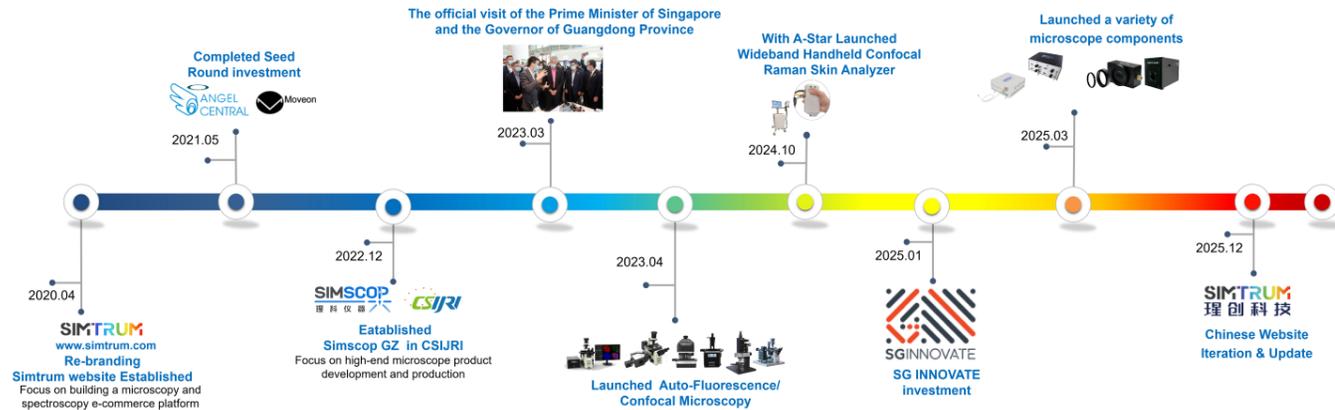
## Company Profile

Established in Singapore in 2019, SIMTRUM Group specializes in innovation and applications within microscopy and spectroscopy. Its core team brings decades of optical technology expertise. In 2022, the company partnered with the CSIJRI in Guangzhou to establish a joint R&D laboratory for microscopy with independent research capabilities. The team now includes multiple Ph.D. graduates from the National University of Singapore (NUS), and has grown to dozens of members.

SIMTRUM has collaborated with leading institutions such as Nanyang Technological University (NTU), NUS, A-Star, and Xiamen University to develop high-end microscopy systems. In March 2023, the company's Guangzhou R&D center was visited by former Singapore Prime Minister Lee Hsien Loong and the Governor of Guangdong Province. Later that year, SIMTRUM won first prize in the startup category of the Guangzhou Technology Innovation and Entrepreneurship Competition and secured multiple technology patents.

**Vision:** To be a leading photonics technology company that truly understands and adds value to our customers.

**Mission:** Driven by innovation, we deliver exceptional services and precise products to global photonics users, empowering customer success and advancing industry transformation.



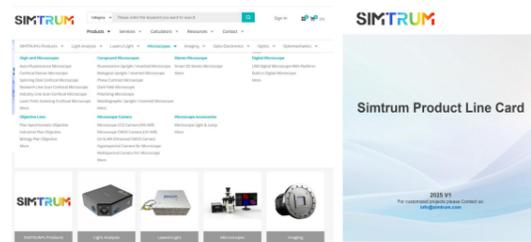
## Optical R&D Laboratory

We have established a fully-owned optical laboratory in Guangzhou operating as a subsidiary of Simscop Instruments. This facility specializes in the R&D and manufacturing of high-end microscope systems and critical equipment components.

Our proprietary microscope systems include confocal laser microscopes and wide-field microscopes, along with core components such as detection modules, photomultiplier tubes (PMTs), silicon photomultipliers (SiPMs), multi-channel lasers, and motorized filter wheels. Additional products are currently under development.



## Focus on microscopy and spectroscopy e-commerce platform



Simtrum is a specialized e-commerce platform dedicated to microscopy and spectroscopy, serving scientific research, industrial, and healthcare fields with high-quality products and aiming to be a trusted partner in the sector.

The platform features seven major product categories: Microscopes, Light Analysis, Lasers/Light sources, Imaging, Opto-Electronics, Optomechanics, and Optic, offering over 4,000 products in total. Each category is equipped with a product line card to facilitate efficient selection.

As a supply chain-integrated systems provider, Simtrum employs a rigorous testing system where every product undergoes professional inspection and performance verification before launch. This ensures reliability and delivers a ready-to-use, worry-free experience for customers.

E-commerce platform website: [www.simtrum.com](http://www.simtrum.com)

## Microscope Accessories

 <p><b>Multi channel Multi-mode/Single-mode laser</b></p> <ul style="list-style-type: none"> <li>Wavelength range: 375-808 nm</li> <li>Output power: &gt;500mW</li> </ul>	 <p><b>Laser Speckle Reducer</b></p> <ul style="list-style-type: none"> <li>Gathers at fiber bottom</li> <li>Small eccentric motor</li> <li>Quick deploy, no debug</li> </ul>	 <p><b>Microscope &amp; Spectrometer Light Source</b></p> <ul style="list-style-type: none"> <li>Wavelength range: 185-5500 nm</li> </ul>	 <p><b>Multi-channel Fluorescence Microscope Imaging Moduler</b></p> <ul style="list-style-type: none"> <li>Compatible with Upright/Inverted Microscopes, Point/Line Scan Microscopes, Raman Microscopes</li> <li>Number of Channels: 2/3/4</li> </ul>
 <p><b>Supercontinuum Light Source</b></p> <ul style="list-style-type: none"> <li>Spectral range: 450-2400 nm</li> <li>Average power: 3W @ 80 MHz</li> </ul>	 <p><b>Narrow Linewidth Diode Lasers</b></p> <ul style="list-style-type: none"> <li>Wavelength range: 532-1064 nm</li> <li>Linewidth: MHz to kHz level</li> </ul>	 <p><b>Motorized Filter Wheel</b></p> <ul style="list-style-type: none"> <li>Speed: 300°/s</li> <li>Positioning Accuracy: 1°</li> </ul>	 <p><b>XYZ Microscope Stages</b></p> <ul style="list-style-type: none"> <li>Minimum step size: 50nm</li> <li>Travel distance: 130×100 / 250×100</li> </ul>
 <p><b>High Sensitivity Photodiode Detector</b></p> <ul style="list-style-type: none"> <li>Spectral range: 320-1700 nm</li> <li>Bandwidth: 16/20/40 GHz</li> </ul>	 <p><b>High Sensitivity Silicon photomultiplier (SiPM)</b></p> <ul style="list-style-type: none"> <li>Spectral range: 300-950nm</li> <li>Peak sensitivity: PDE: 50%</li> </ul>	 <p><b>High Sensitivity Photomultiplier Tube</b></p> <ul style="list-style-type: none"> <li>Spectral range: 165-900 nm</li> <li>High quantum efficiency: 45%</li> </ul>	 <p><b>Si-APD Ultra-sensitive Photodetector</b></p> <ul style="list-style-type: none"> <li>Spectral range: 400-900 nm</li> <li>High detection efficiency: 70%@700 nm</li> </ul>
 <p><b>High Sensitivity sCMOS Camera</b></p> <ul style="list-style-type: none"> <li>High sensitivity 95%@560 nm</li> <li>Low readout noise 0.9 e-</li> </ul>	 <p><b>SW/MW/LW Infrared Cameras</b></p> <ul style="list-style-type: none"> <li>Spectral range: 0.4 ~ 14 μm</li> <li>Resolution: 0.08 MP, 0.3 MP</li> </ul>	 <p><b>In-vacuum CCD Cameras</b></p> <ul style="list-style-type: none"> <li>Wavelength range: 5 eV - 20 keV</li> <li>Pixels: 4096 * 4096</li> </ul>	 <p><b>Solar Blind UV Imaging</b></p> <ul style="list-style-type: none"> <li>Spectral range: 240-280nm</li> <li>Resolution: 1280×1024</li> </ul>

## Microscope Accessories



**Optical Heating & Cryo Stage**

- Temperature: -190~600°C /RT~1800°C
- Chamber Type: Airtight or vacuum



**X-ray/XRD Heating & Cryo Stage**

- Temperature: -190~600°C /RT~1500°C
- Chamber Type: Airtight or vacuum



**Electrical Probe Temperature Stage**

- Temperature: -190~600°C /RT~1500°C
- Chamber type: Airtight or vacuum



**Adjustable Electrical Probe Station- Manual**

- Temperature: -190~600°C /RT~1200°C
- Temperature Stability: ±0.1°C



**Spatial Light Modulator**

- Spectral range: 160-14000 nm
- Resolution: 2560x1600



**VUV Light Sources**

- Wavelength range: 115-400 nm
- Plasma chamber: average 30x9



**Time-Correlated Single Photon Counting**

- Channel count: 4/6/10/20
- Resolution: 1/4/8ps



**AOM/AOTF/AOD/EOM**

- Wavelength: 266 nm~10.6 μm
- Central frequency: 40-1500 MHz

## Other Systems



**Maskless lithography UV laser writer**

- Minimum line width: 0.5 μm
- Maximum Writing Area: 8"



**Laser Doppler Vibrometer**

- Measurement point: 1,2,4,8
- Measurement distance: 0.2m-5m



**OCT Imaging System**

- Wavelength: 850 nm
- Axial resolution: 2.5 μm



**Portable Raman Systems - Industrial Edition RMT GY**

- Wavelength: 785nm
- Output power: 0-500mW



**Portable Raman Systems - Food and Drug Edition RMT SY**

- Wavelength: 785nm
- Output power: 0-500mW



**Portable Raman Systems - Research Edition RMT KY**

- Wavelength selection: 532/785/1064nm
- Output power: 0-500mW

## Spectrometers 200nm to 2.5μm



**Standard Spectrometer 200-1100nm**

- Wavelength range: 200-1100nm
- Resolution: <1nm Customizable



**High Sensitivity UV Enhanced Spectrometers**

- Wavelength range: 200-1100nm
- Resolution: <1nm Customizable



**BSI Cooled High Sensitivity Spectrometers**

- Wavelength range: 200-1100nm
- Resolution: <1nm Customizable



**Near Infrared Spectrometer 900 - 2500nm**

- Wavelength range: 900-2500nm
- Resolution: <1nm Customizable



**Large NA High Sensitivity Raman Spectrometer**

- Wavelength range: 400-1100nm
- Resolution: <1nm Customizable



**Multi Channel Spectrometer**

- Wavelength range: 200-1100nm
- Resolution: 0.15nm



**VUV/UV Spectrograph**

- Spectral range: 115-1100 nm
- Resolution: average 0.04 nm

## Raman spectrometer 532/780/1064nm



**Handheld Raman Spectrometer**

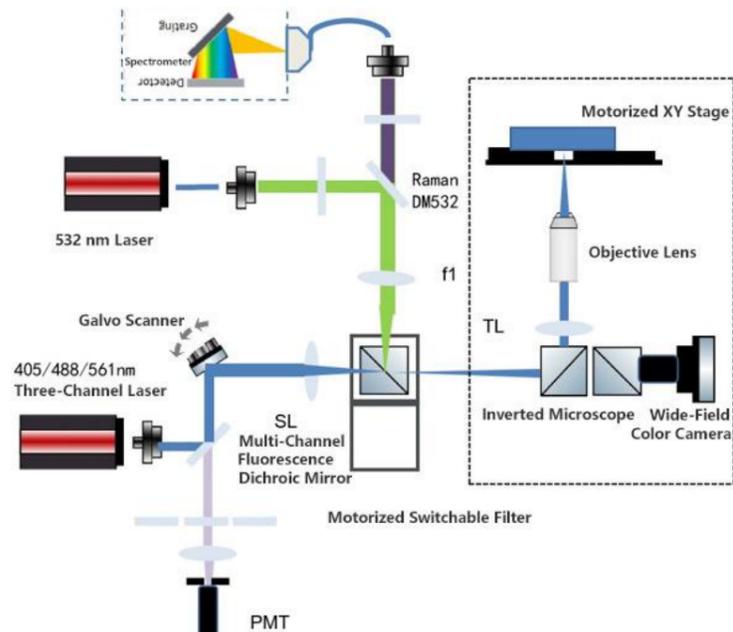
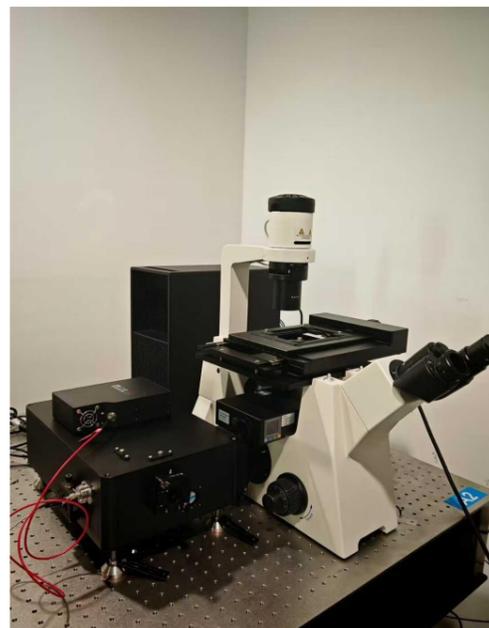
- Wavelength selection: 785nm/1064nm
- Output power: 0-500mW Adjustable



**OEM Handheld Raman Spectrometer**

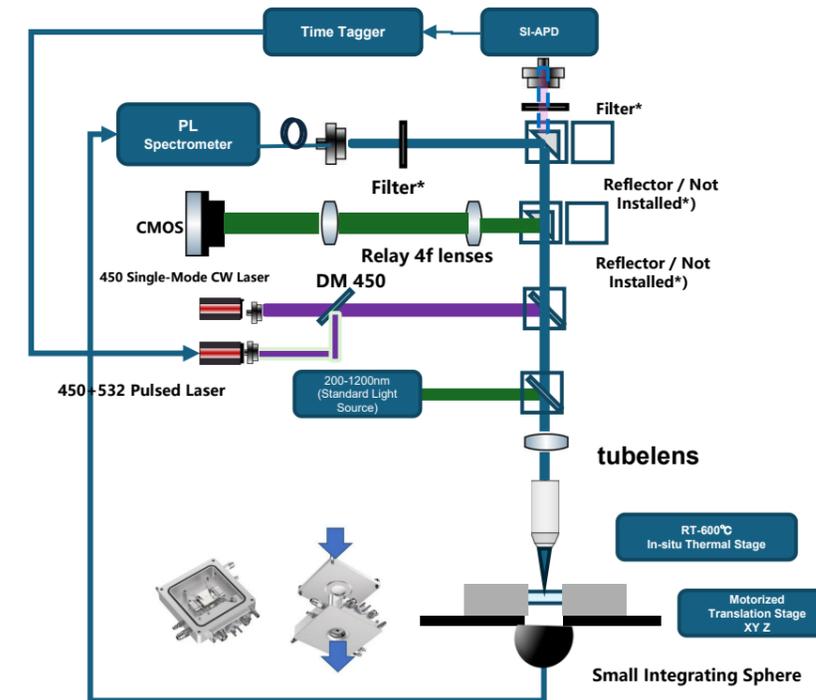
- Wavelength selection: 785nm/1064nm
- Output power: 0-500mW Adjustable

**Solutions-1** 3-Channel Fluorescence Confocal System + 532 Raman Microscope

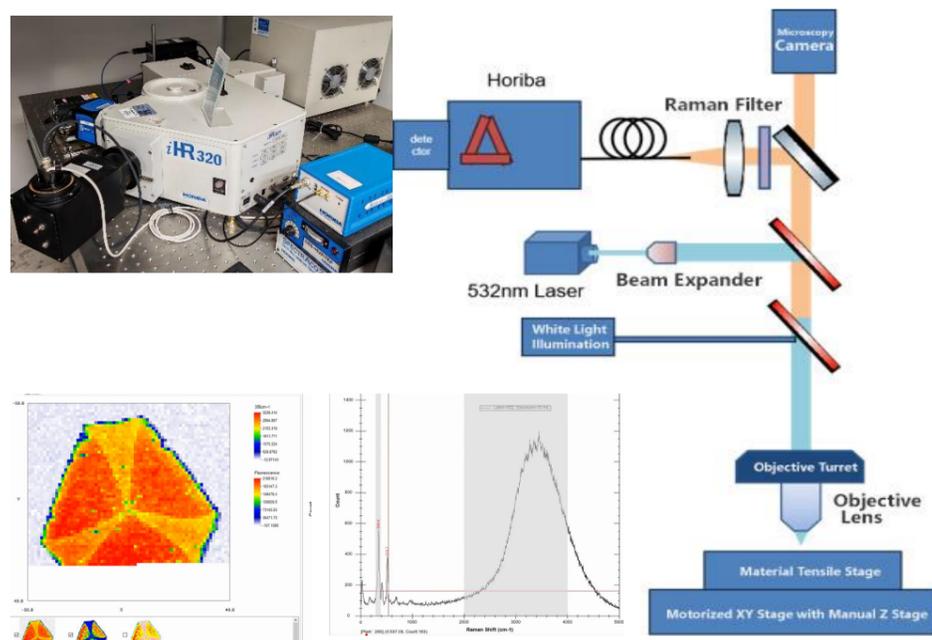
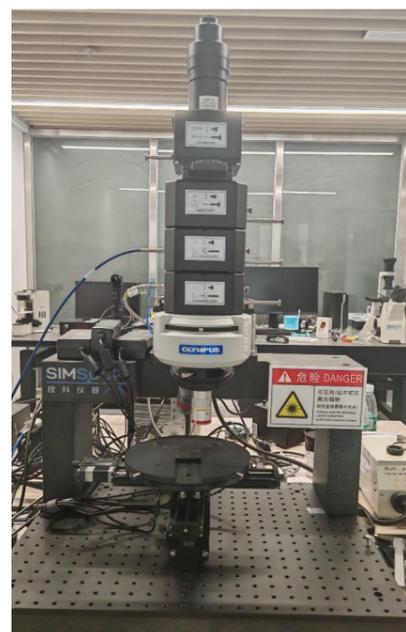


**Solutions-3**

In-situ High & Low Temperature TRPL + Transmittance Detection of Perovskite

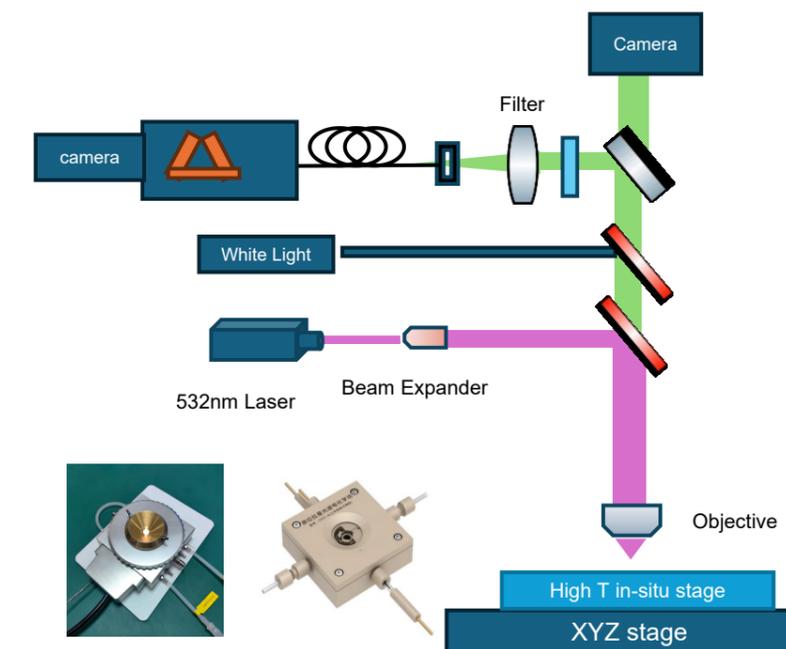


**Solutions-2** Wide-field Raman microscopy system +(upgraded with Horiba spectrometer)



**Solutions-4**

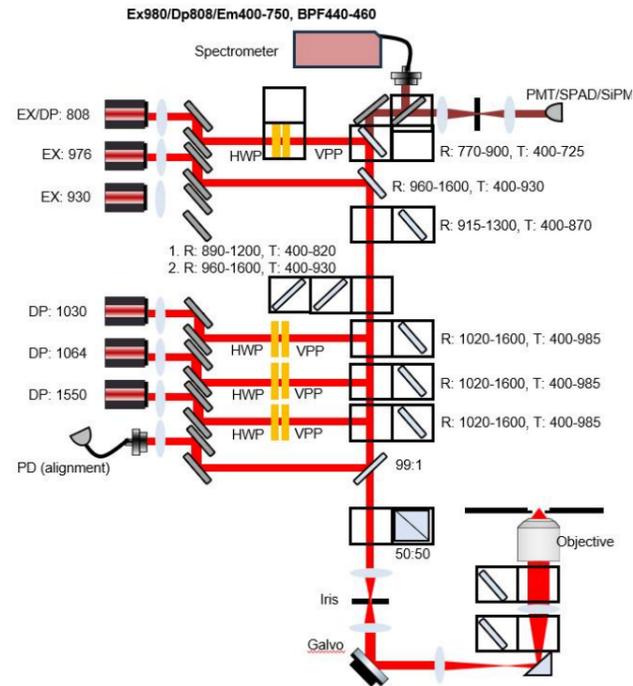
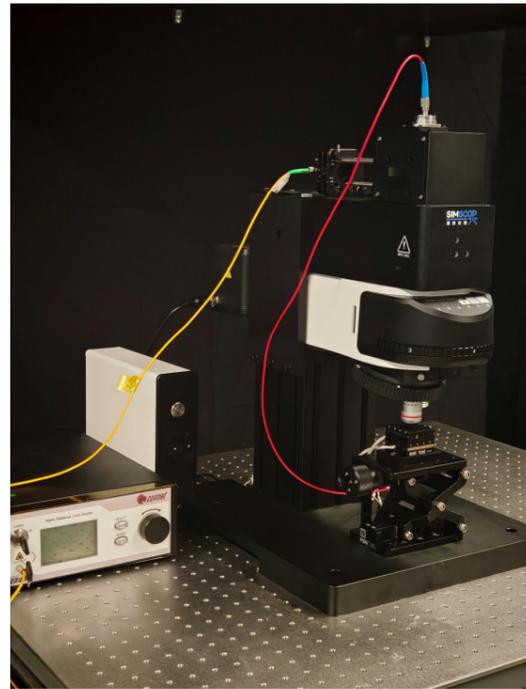
532 Raman High-Temperature Microscopy System for Lithium-ion Battery/Electrolyte Detection and Analysis



\*For more application cases, please refer to the website [www.simtrum.com](http://www.simtrum.com)

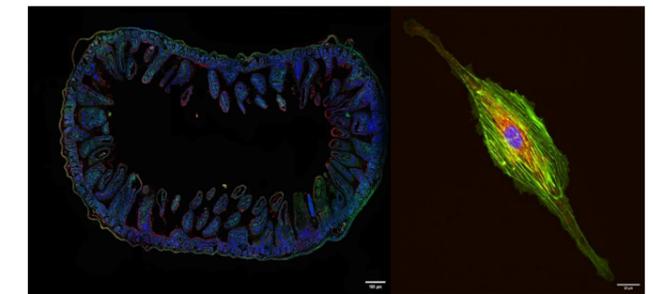
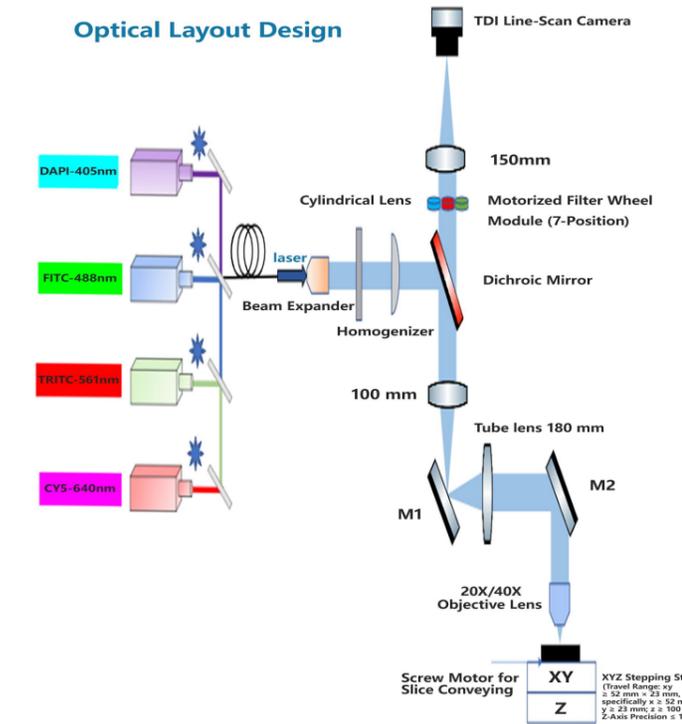
**Solutions-5**

**NIR Stimulated Emission Depletion (STED) Microscope**



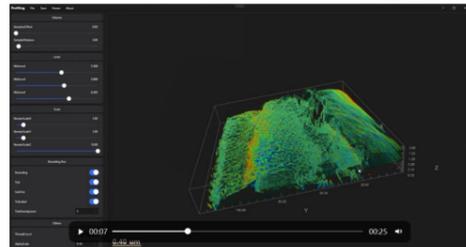
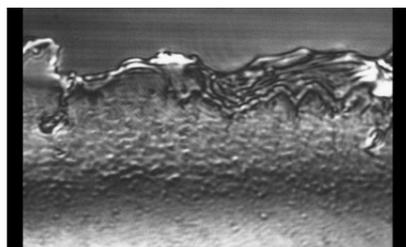
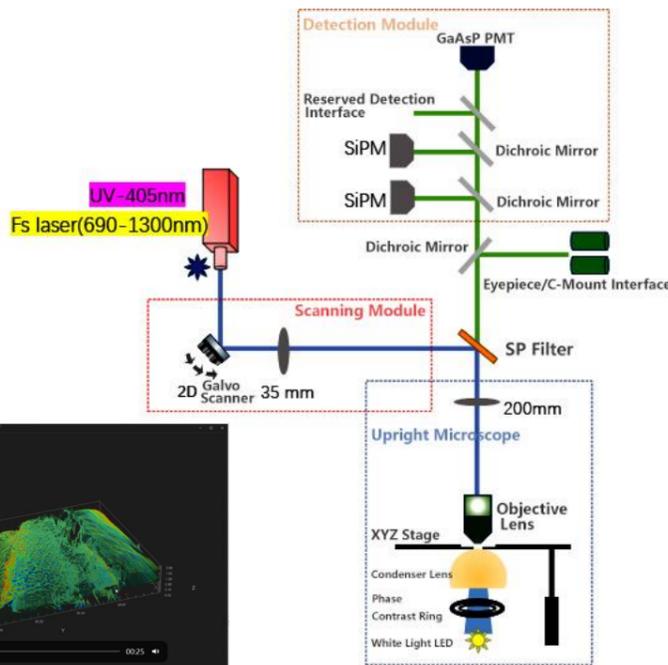
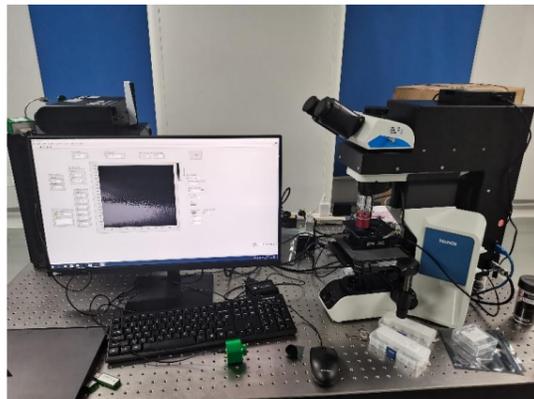
**Solutions-7**

**Whole Slide Fluorescent Pathology Linear Scanner**



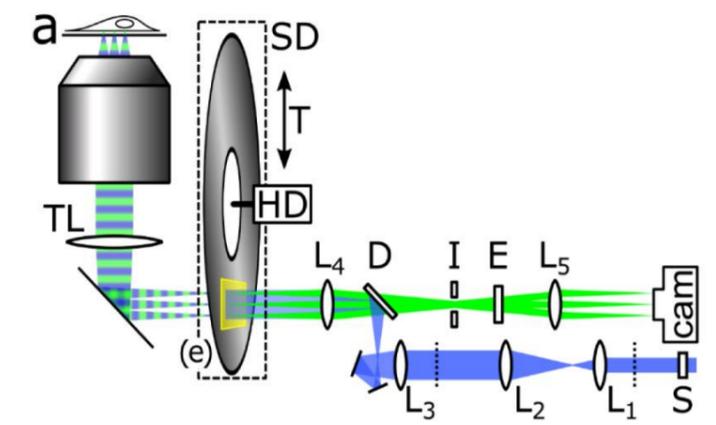
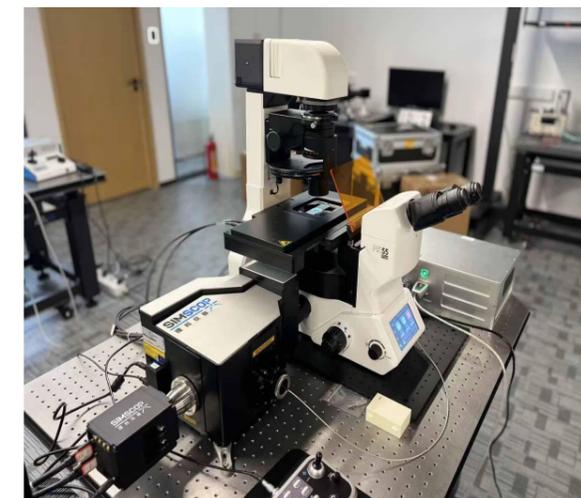
**Solutions-6**

**NIR Point Scan Confocal Microscope**



**Solutions-8**

**Spin Disk Confocal Microscope**

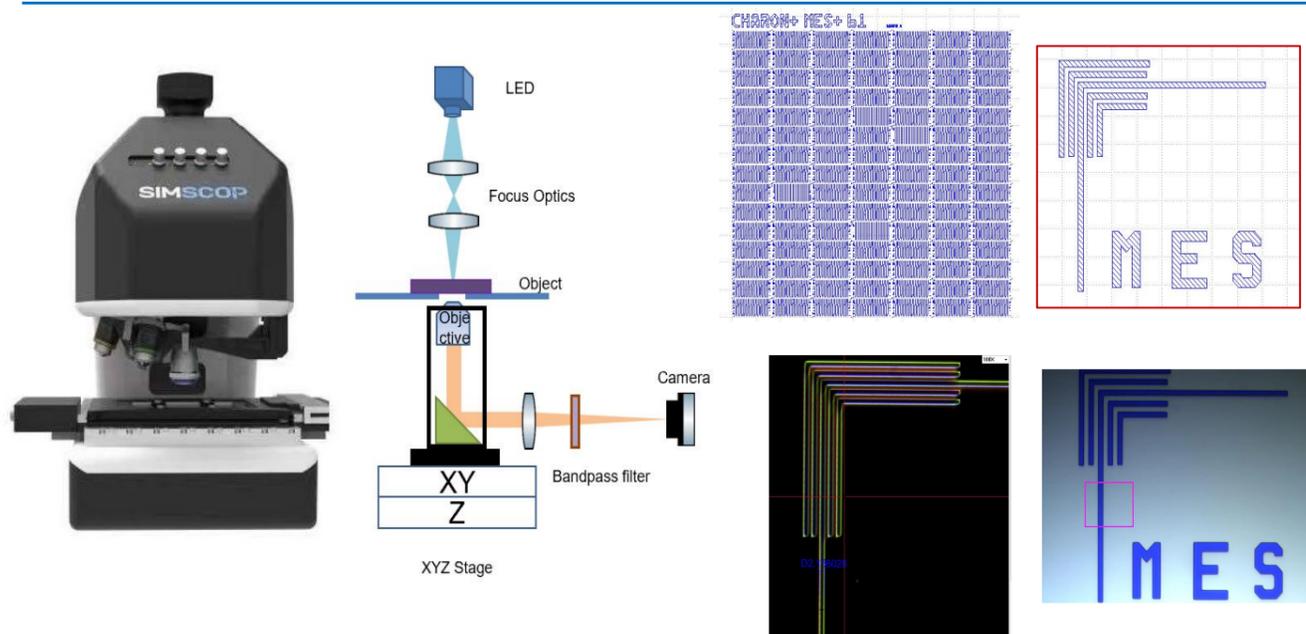


Simscop's single disk design

\*For more application cases, please refer to the website [www.simtrum.com](http://www.simtrum.com)

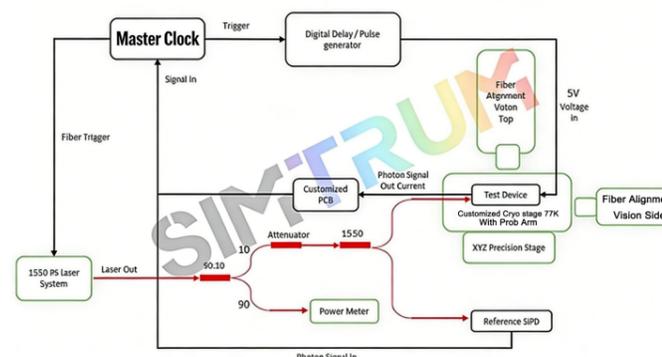
**Solutions-1**

**Semiconductor patterned wafer CD measurement**



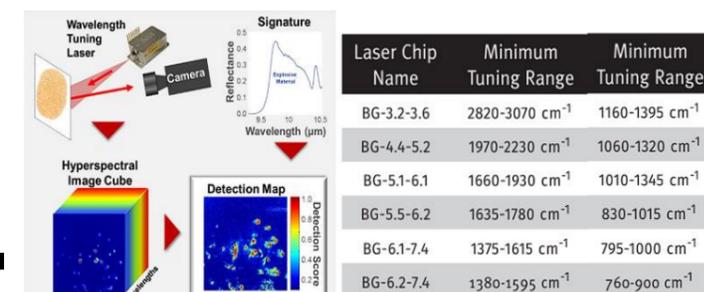
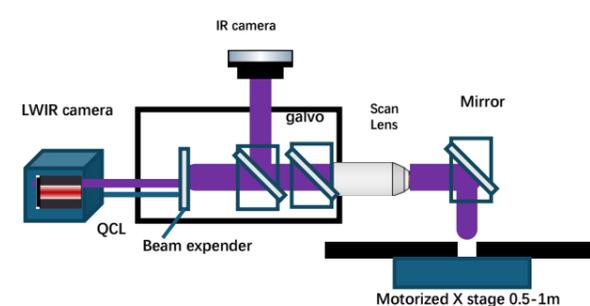
**Solutions-3**

**Wide-field TCSPC (Time-Correlated Single Photon Counting) Microscope**



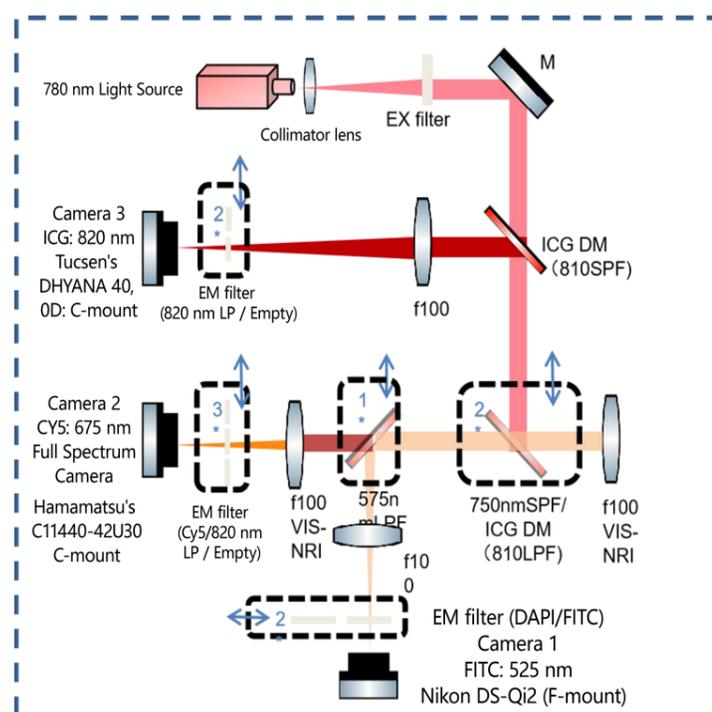
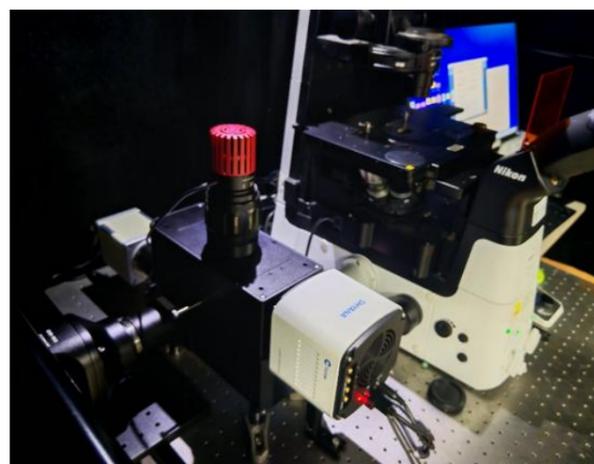
**Solutions-4**

**Mid- to far-infrared hyperspectral microscope (for hazardous chemical testing)**



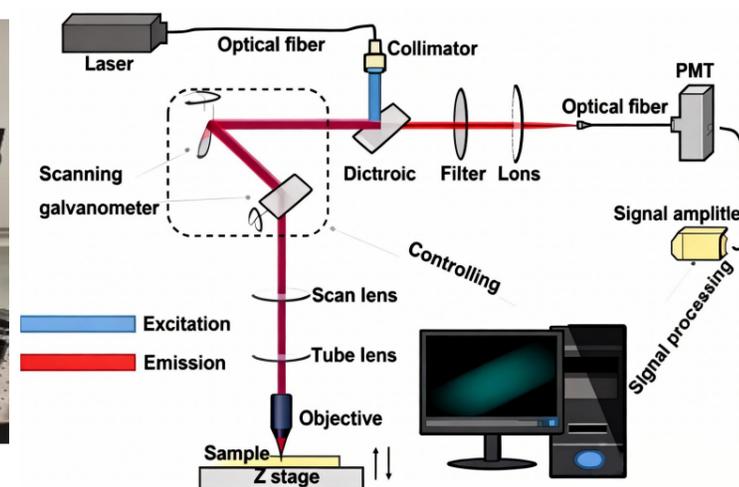
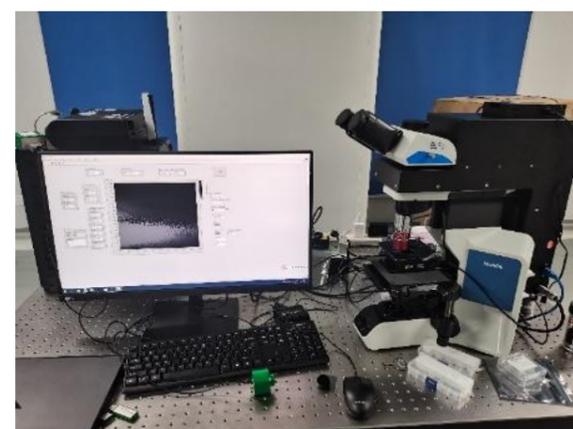
**Solutions-2**

**Three-Channel High-Speed Fluorescence Microscope**



**Solutions-5**

**Near-Infrared Confocal Spectral Microscope (NIR I/II Confocal Co-aligned)**



\*For more application cases, please refer to the website [www.simtrum.com](http://www.simtrum.com)