



[www.simtrum.com](http://www.simtrum.com)



[www.simscop.com](http://www.simscop.com)

# Company Introduction

**We focus on microscopy and spectroscopy.**



**SIMTRUM.Pte.Ltd**

**Singapore - A Global E-commerce Platform for  
Microscopy and Spectroscopy**



**SIMSCOP (GZ) .Ltd**

**Guangzhou, China - R&D and Production  
Center for High-end Microscopes**

# COMPANY PROFILE

## 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.

# company-Milestone

Company(Singapore)  
Incorporation



2019.04



**SIMTRUM**  
[www.simtrum.com](http://www.simtrum.com)

Re-branding  
Simtrum website Established  
Focus on building a microscopy and spectroscopy e-commerce platform

Completed Seed Round  
investment



2021.05



The official visit of the Prime Minister of Singapore  
and the Governor of Guangdong Province



2023.03



**SIMSCOP**  
理 科 仪 器



Established  
Simscop GZ in CSIJRI  
Focus on high-end microscope product  
development and production

2022.12



2023.04



Launched  
Spinning Disk/Point Scan/Line Scan  
Confocal Microscopy in China

2024.01



High-end Equipment  
Manufacturing Group Champion

2024.06

**SIMTRUM**  
理 创 科 技  
[www.simtrumcn.com](http://www.simtrumcn.com)

Established  
Simtrum GZ Company and  
Simtrum Chinese website

2024.07



Launched  
Auto-Fluorescence/ Confocal  
Raman Microscopy

2024.10



With A-Star Launched  
Wideband Handheld Confocal  
Raman Skin Analyzer

# Core team



**(CEO) John Yuan**

**Northumbria University-MBA**

**+16 years of experience in  
Photonics Industry**



**(CTO) Shen Shuhao,  
NUS Singapore Ph.D**

**+10 years of experience in high-end  
microscope development**



**(CMO) Tony Han**

**Xi'an Jiaotong University**

**+5 years experience in e-commerce**



**Teck Lee Chee**

**CEO of Moveon Technology**

**Seed Investor**

**Corporate Advisor**



**Prof. Liu Linbo  
NTU Singapore**

**Collaborator & Advisor**



**Prof. Chen Nanguang  
NUS Singapore**

**Collaborator & Advisor**



**Prof. Bi Renzhe  
A-Star Singapore**

**Collaborator & Advisor**



# Laboratories and awards



## R&D Laboratory

The joint R&D laboratory for microscopes, co-established with the China-Singapore Research Institute, is equipped with independent R&D and production capabilities, dedicated to innovating and making breakthroughs in cutting-edge optical technologies.



## Awards and IP Patents

Participated in the finals of the Guangzhou Technology Innovation and Entrepreneurship Competition, won the championship in the startup group, and obtained multiple technical patents and certificates !



# Key Leadership and Business Delegations



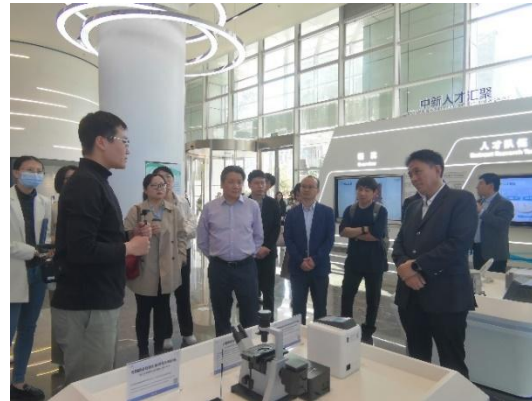
Prime Minister Lee Hsien Loong of Singapore visited the company on March 29, 2023.



The governor of Guangdong Province visited and inspected the company's relevant products on April 19, 2023.



Former Guangzhou Municipal Party Committee Secretary visited



President of Chinese Academy of Social Sciences visited

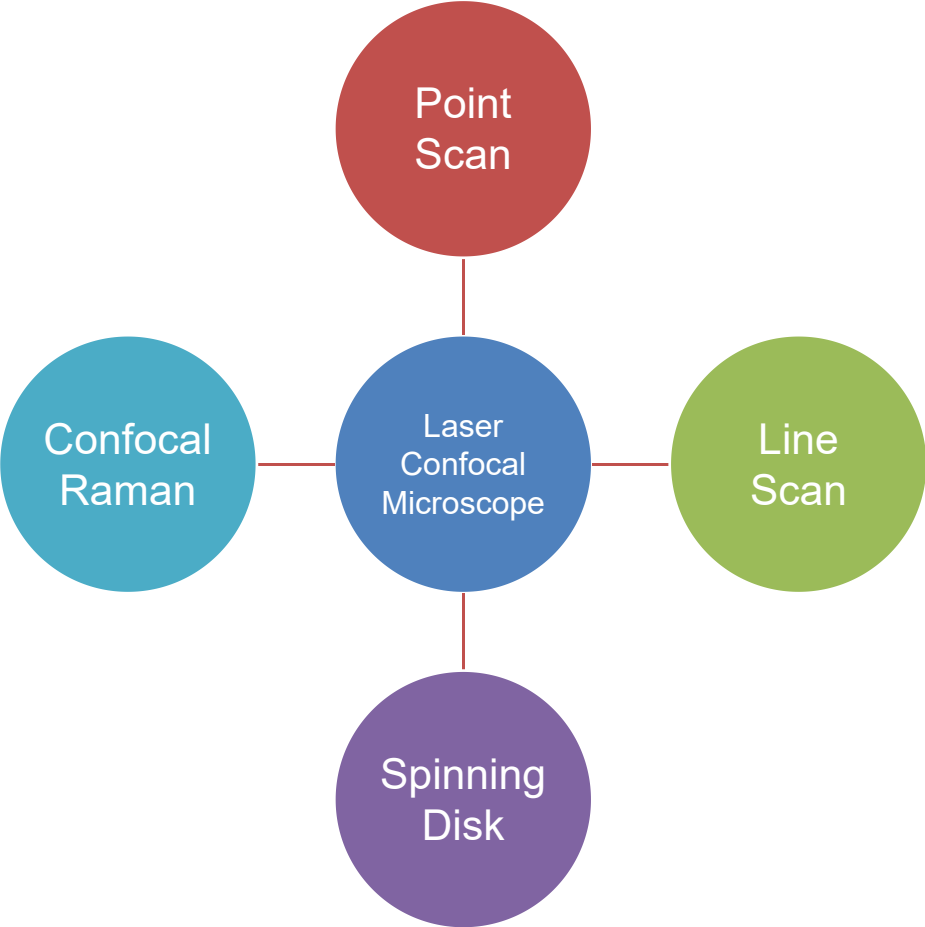


Director Yan of the Ministry of Science and Technology of China visited



Former Singapore Deputy Prime Minister Wong Kan Seng visited

# Summary of Technical Capabilities (Microscopy + Spectroscopy)



# Laser Confocal Microscopy



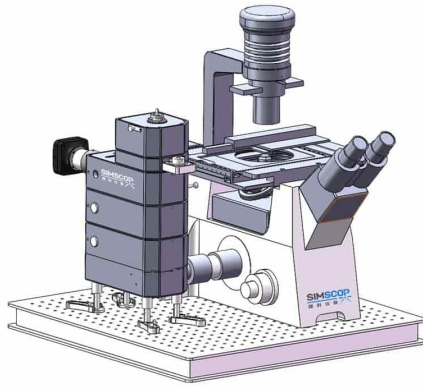
Parameter	Point Scan Confocal	Line Scan Confocal	SPINDISK Basic	SPINDISK+SIM
Frame Rate	4fps-12fps@512x512	50fps@1024x1024	100fps@2048x2048	13fps@1024x1024
Resolution	~230 nm	150-200nm	~230 nm	~100 nm
Depth	<100μm	<600μm	<200μm	<200μm
Detector	SIPM/PMT	sCMOS	sCMOS	Duel sCMOS
Application	Biomedicine:Three-dimensional fluorescence microscopy,observation of cells and tissues,multi-channel fluorescence detection	Rapid 3D imaging of thick tissues, 3D image detection oftissue pathology, 3D tissue morphology research of small animal tissue organs such as brain neurons, liver, kidney, etc	Dynamic fluorescence imaging of living cells/tissues,microscopic observation of small animals such as zebra fish and nematodes	Dynamic fluorescence super-resolution imaging of living cells, 3D imaging of tissues, organoids, spheroids and small organisms



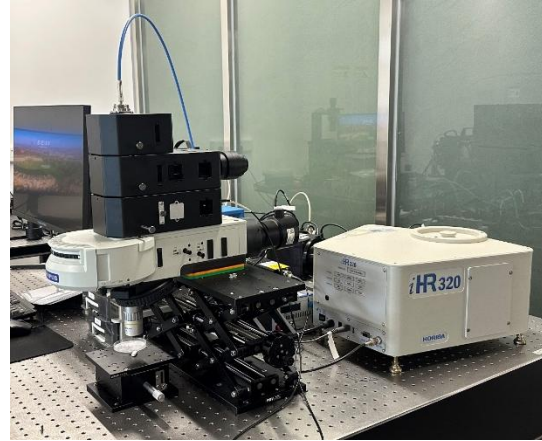
# WideField or Confocal Raman, PL System



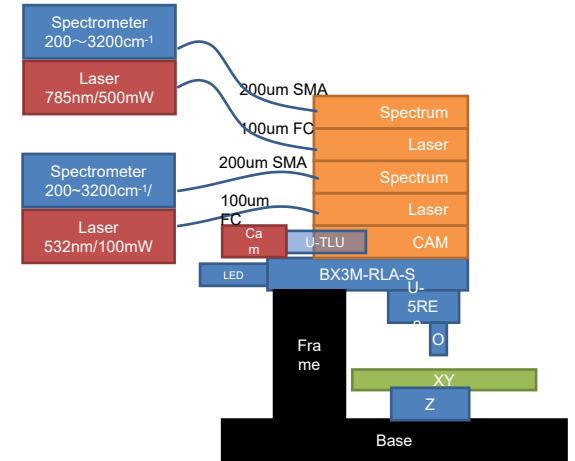
Upright Raman System



Inverted Raman System



PL with Horiba



Optical Path of Raman



Portable Raman  
(For Skin Care)



Tabletop Raman



Fiber Output Raman



Portable Raman



Handheld Raman

# Motorized Upright & Inverted Microscope



Upright Motorized  
Microscope



Inverted Motorized  
Microscope



Point Scan Confocal Module



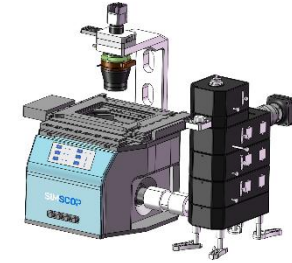
Line Scan Confocal Module



Spindisk Confocal Module



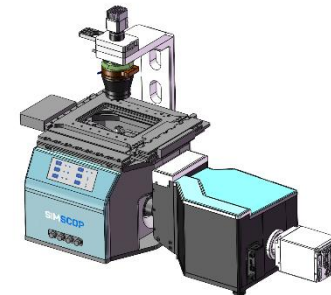
SIM Module



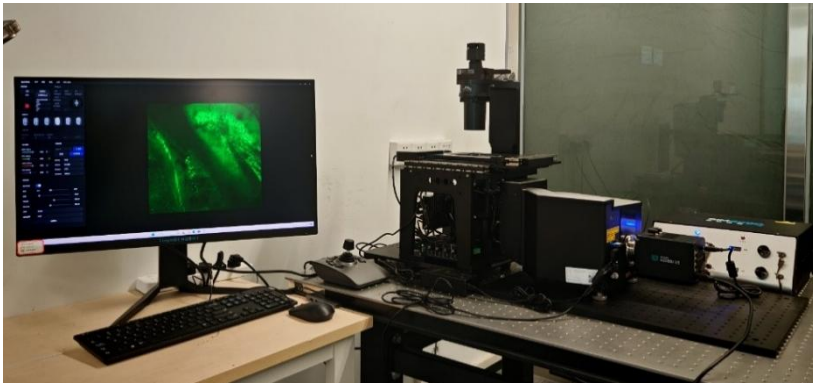
Auto Multi-channel fluorescence,  
Raman, PL



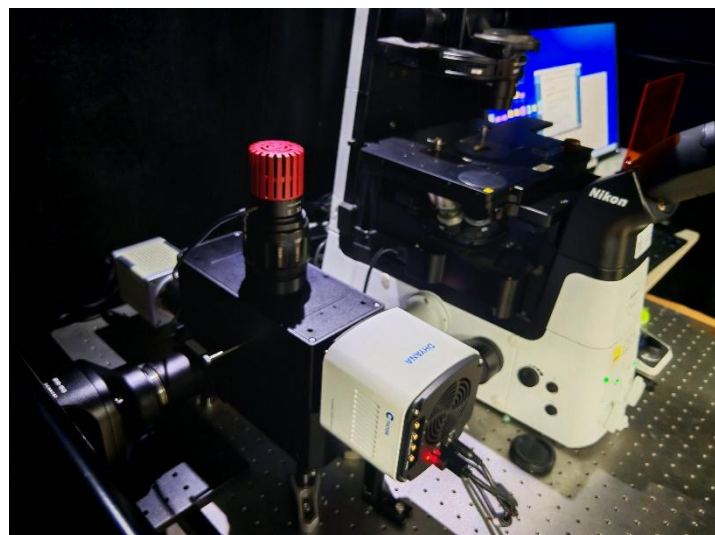
Auto Line/Point scanning confocal



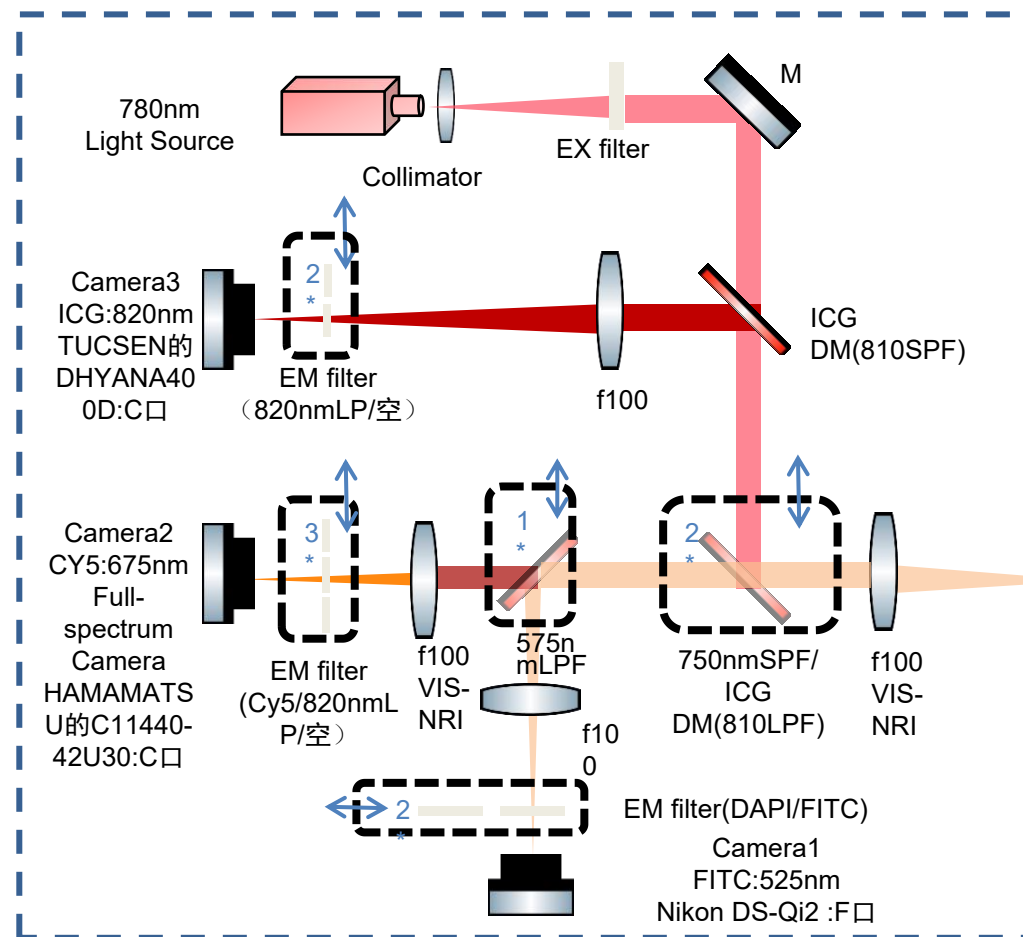
Auto Spin Disk Confocal



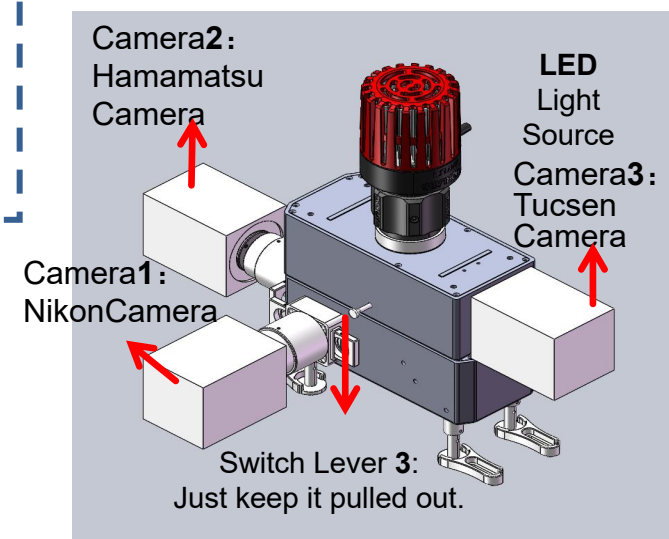
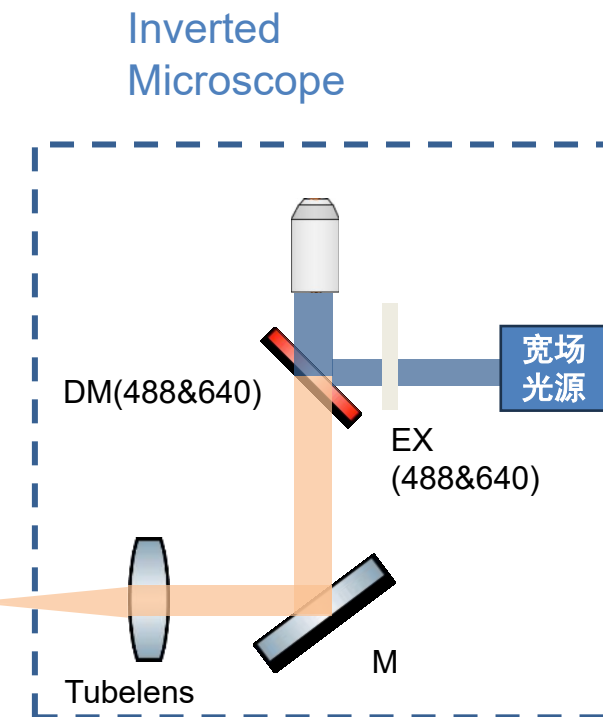
# Three-channel High-speed Fluorescence Microscope



Multi-channel Fluorescence Module  
 1. Switching optical path  
 2. Dual-channel optical path switching with replaceable filters  
 3. Three-channel optical path switching with replaceable filters



Optical Path Diagram of Multi-channel Fluorescence Module





# Products developed in collaboration with Singaporean research institutions



Single Point LDV



Multi-Point LDV



LDV Microscope



Multispectral/Hyperspectral  
microscopy

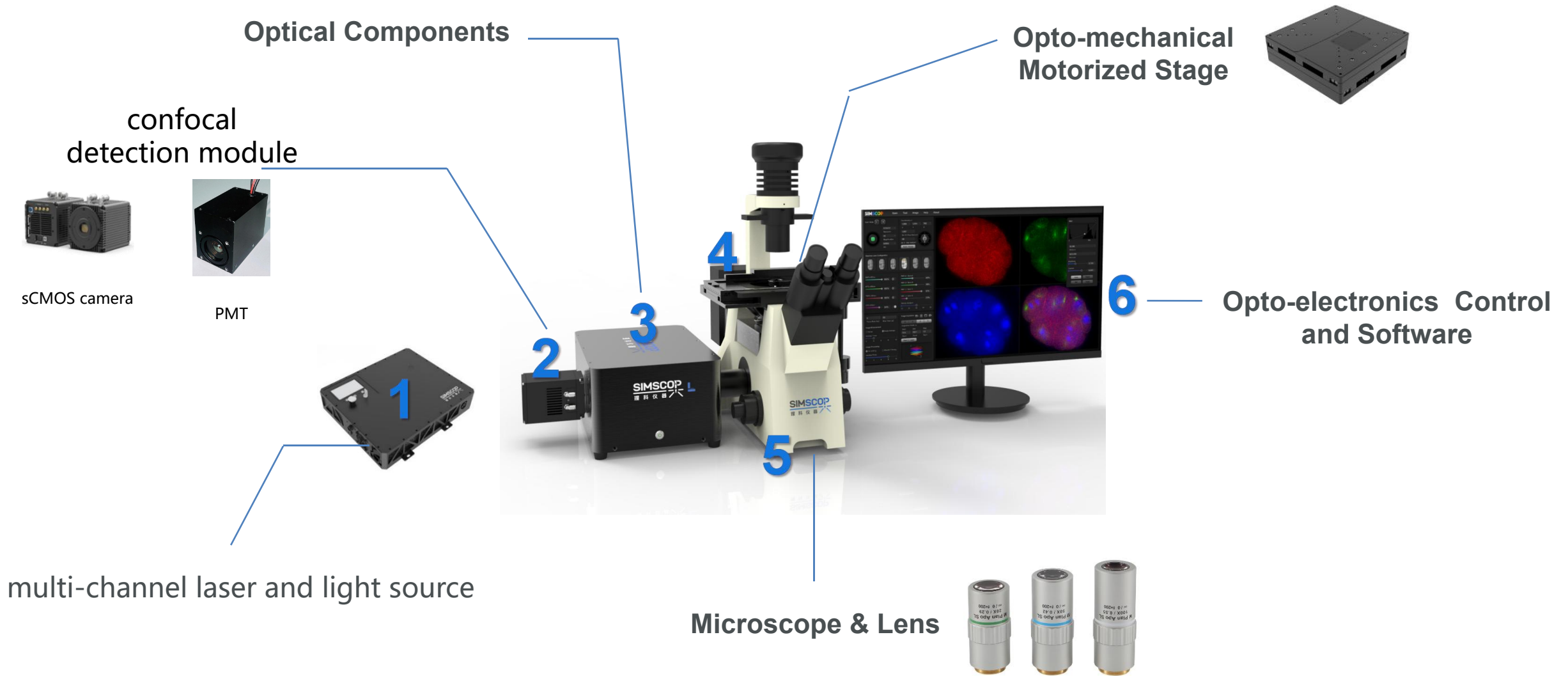


Maskless Lithography UV Direct  
Laser Writer



OCT Optical Coherence Tomography

# Our capabilities regarding the core components related to microscopy and spectroscopy



## Laser/Light source



CW Laser Diode Module  
405 to 640nm



multi-channel multimode laser  
405 to 640nm



narrow-linewidth  
semiconductor laser  
532,780,1064nm



single & multi-  
wavelength LED  
360 to 780nm



Microscope Light &  
Lamp  
185-5500nm

## Detector /Spectrometer



SIPM  
(300-950nm)



SPD  
(200-1700nm)



PMT  
(160-900nm)



PD  
(200nm-12um)



spectrometer  
200-1700nm



multi-channel  
spectrometer  
200-1700nm



Raman  
spectrometer



## Optomechanics Series



Optical Heating &  
Cryo Stage



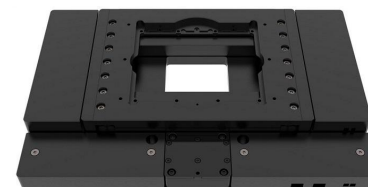
Electrical Probe  
Temperature Stage



Adjustable  
Electrical Probe  
Station



In-situ Tensile Heating &  
Cryo Stage



XY Microscope  
Piezo Stages



Motorized Filter  
wheel

## Opto-Electronic



AOM



Electro-optic Intensity  
Modulator



AOTF



Tunable Multi-channel Phase-coherent  
Radio Frequency Signal Source

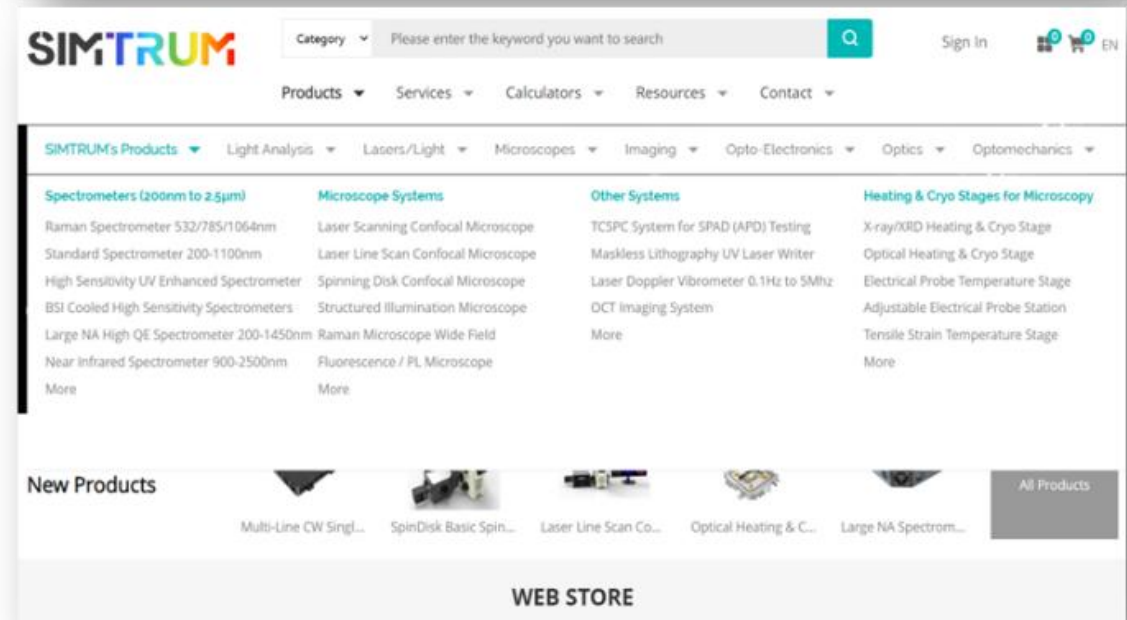
Radio frequency generator (synchronizable)  
12 slots with 6 in use, DDS core, 1GSps



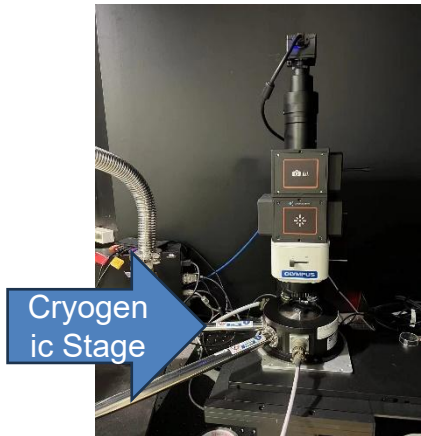
Time Tagger

# E-commerce platform specializing in microscopy and spectroscopy

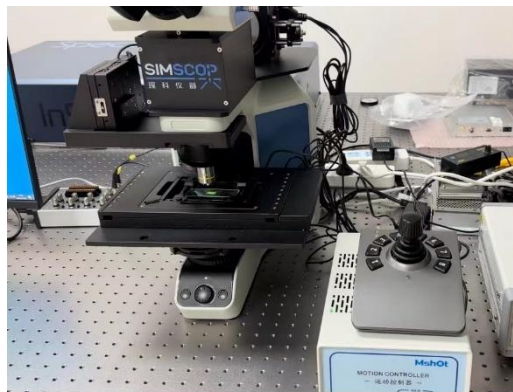
- English and Chinese e-commerce platforms ([www.simtrum.com](http://www.simtrum.com))
- The platform covers 7 product series with approximately 4,000 products.
  - microscope
  - spectral analysis
  - Lasers and light sources
  - imaging
  - optoelectronics
  - Optomechanics
  - Optical Devices” 或 “Optical Components
- The application fields of the platform cover (Optical Application Product Line Card)
  - Biomedical and Life Sciences
  - 2D Material and Semiconductor
  - Quantum
  - Terahertz



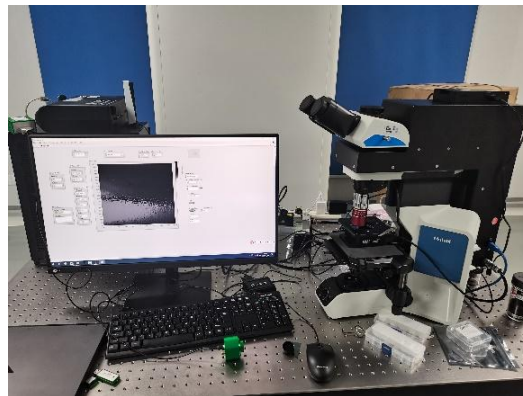
# Solution Capability



Customized Cryogenic Raman



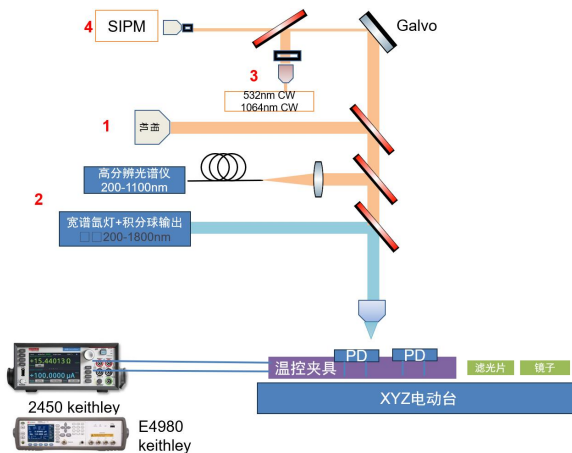
Single-photon Confocal Microscope



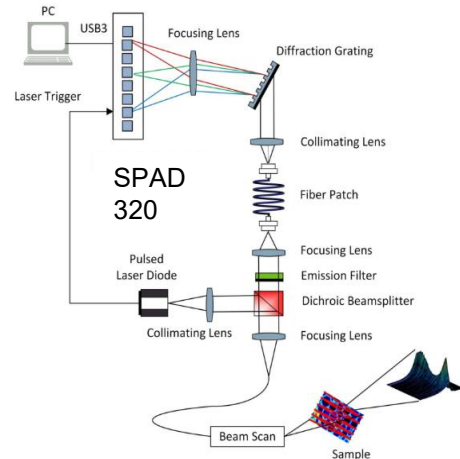
Infrared Single-Point Confocal System



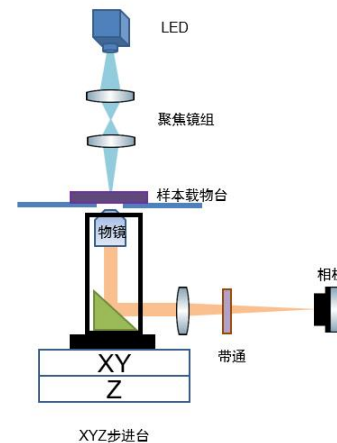
TCSPC system for SPAD (APD) testing



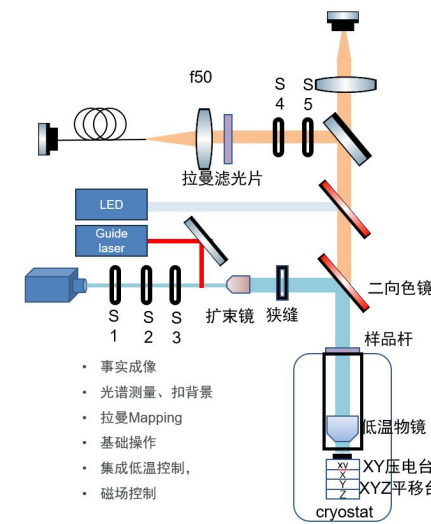
Industrial PD 4-in-1 Microscopy System



Line array SPAD time-gated Raman



Bacterial Automated Fluorescence Microscope



Customized Cryogenic Confocal Raman



# Our Customers

## Scientific research clients



中国科学院  
CHINESE ACADEMY OF SCIENCES

张江实验室  
ZHANGJIANG LABORATORY

中国工程物理研究院  
CHINA ACADEMY OF ENGINEERING PHYSICS

NYP NANYANG  
THE INNOVATIVE POLYTECHNIC

DSO  
DEFENCE SCIENCE AND TECHNOLOGY ORGANISATION

ST Engineering

新加坡国立大学  
SINGAPORE UNIVERSITY OF TECHNOLOGY AND DESIGN

NUS  
National University of Singapore

Temasek  
POLYTECHNIC



MAX PLANCK INSTITUTE  
FOR THE SCIENCE OF LIGHT

Sandia  
National Laboratories

NASA  
Jet Propulsion Laboratory  
California Institute of Technology

Agency for  
Science, Technology  
and Research  
SINGAPORE

JOHNS HOPKINS  
UNIVERSITY & MEDICINE

NANYANG  
TECHNOLOGICAL  
UNIVERSITY  
SINGAPORE

北京量子信息科学研究院  
Beijing Academy of Quantum Information Sciences

## Industrial clients



dji  
大疆创新

HUAWEI

Mercedes-Benz

SPACE DYNAMICS  
LABORATORY

SIMIT

WASTE  
ROBOTICS

Chiral Photonics

DESY

BROADCOM

PLEXUS

IPG  
PHOTONICS

nexperia

PSI

CRYOTRADE  
engineering  
...WE MAKE IDEAS WORK

HZDR  
HELMHOLTZ ZENTRUM  
DRESDEN ROSENDOERF

Quantum Valley  
Ideas Lab

iberOptics  
sistemas opticos

THE HEBREW  
UNIVERSITY  
OF JERUSALEM

ColdQuanta

UFE  
Institute of Photonics and Electronics  
The Czech Academy of Sciences

n Med

BKtel  
Pacific Rim Inc.

TRIOPTICS

THORLABS

Moveon

tsmc

PENTAMASTER



Z-LIKE

QUIX  
QUANTUM

Motic



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