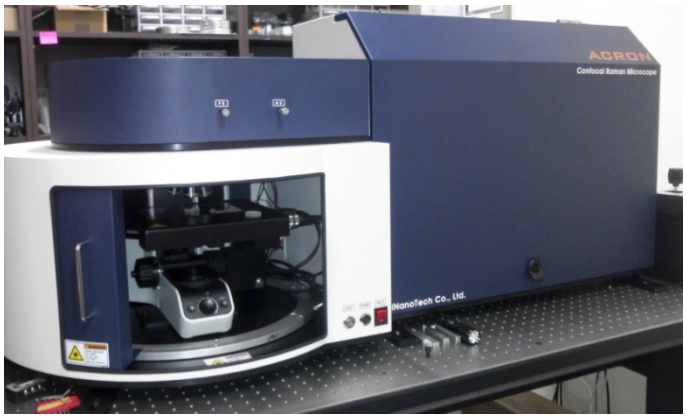
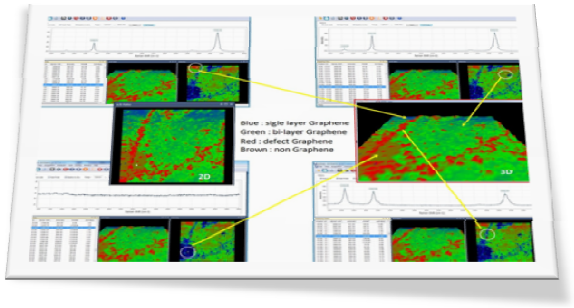
ACRON

Fully Automated Confocal Micro Raman Mapping System



New Generation of Micro Raman System



Feature & Benefits :

- **Highest sensitivity & Resolution**
- **New generation of spectrograph**
- **Integrated control Software**
- **Up to 3 integrated lasers**
- **Koehler illumination system for high contrast imaging**
- **Photoluminescence / Low Temp. measurement (option)**

Applications of RAMAN include :

- Pharmaceutical
- Forensic studies
- Minerals
- Modern paints
- Multilayer films
- Biochemistry
- Semiconductors• Polymers e.g. composition & structure
- Diagnosis of Graphene & 2D materials, etc.

System Specifications

Laser	Raman : 473nm, 488/514.5nm, 532nm, 632.8nm, 785nm Photoluminescence : 325nm, 375~890nm LD Laser Power control : 11 steps ND filters. (0.01~100%)
Spectrograph	Aberration corrected imaging spectrograph On axis Triple grating Turret Raman shift resolution <0.9cm^{-1} per pixel @ 632.8nm, 1800gr/mm grating Laser line cut-off : <60cm-^{1} @532nm
Microscopic Image	A Koehler illumination for reflected white light system using a LED 3M pixels color CMOS camera
Beam Spatial resolution	<500nm(XY), <1μm(Z) @532nm, 100X objective (NA 0.85)
Detector	High sensitivity TE cooled CCD Pixel format : 1024 x256 pixels (26μm x 26μm)
Mapping stage	XY : travel range max. 76 x 52mm Min. step resolution : 100nm Z-axis : Z-depth mapping : <100nm
Integration Software	NanoSCAN Beam switching, Laser power control, XY confocal slit & Spectrograph control Image and signal measurement, 2D, 3D mapping, data analysis.

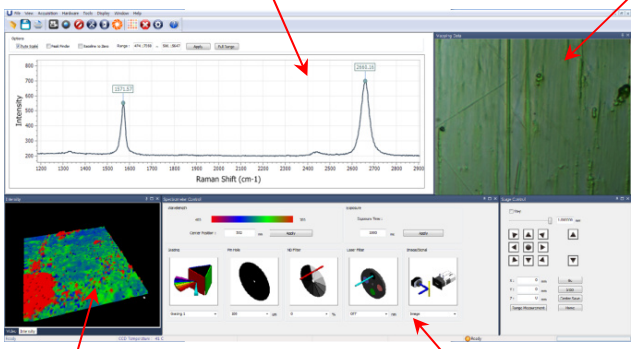
Fully automated Confocal Micro Raman Mapping System

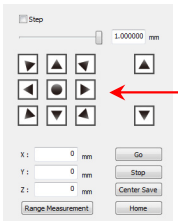
NanoSCAN

Integrated Control Software

Spectrum view
- NanoSCAN provides an ultra high resolution spectrum analysis
- Can select both wavelength and Raman-shift

Image view
- Koehler illumination for high contrast imaging
- 3M pixels CMOS Color camera

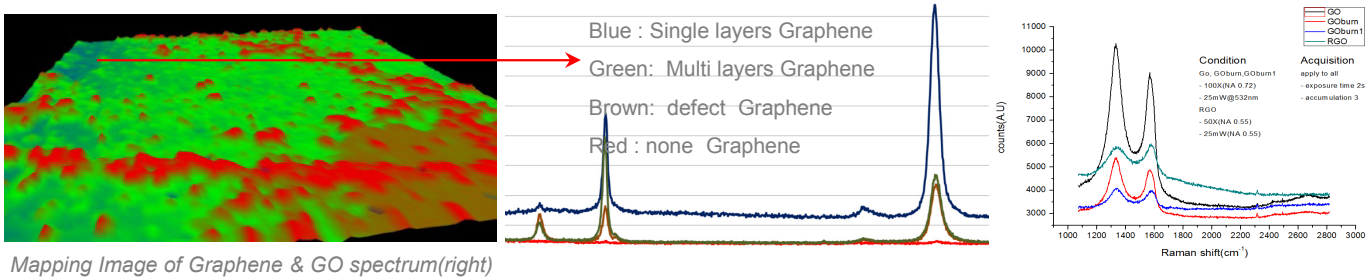




Stage control panel
- <1μm Accuracy & Repeatability
- Resolution : 0.05μm

Mapping Image
- 2D & 3D mapping Image
- A/B ratio, Intensity, FWHM image

Gratings & Confocal Pinhole control panel
- Control 3 gratings for wavelength range & spectrum resolution
- Can control XY confocal pinhole size, 10um - 1mm
- 11 steps ND filters control

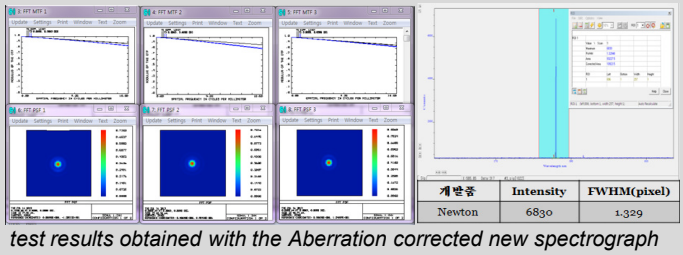


Mapping Image of Graphene & GO spectrum(right)

New Generation of imaging Spectrograph

The aberration corrected spectrograph is integrated in ACRON Raman System, which provides best performance with ultra high resolution and accuracy.

This spectrograph enables researchers to get best quality and results. Upgrade your system with this outstanding Raman solution.



계산품	Intensity	FWHM(pixel)
Newton	6830	1.329

test results obtained with the Aberration corrected new spectrograph

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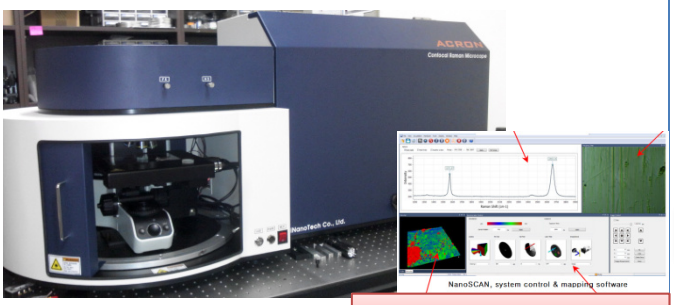
Research India

Customer Sample Testing Available – contact us for details

Introduce of Raman / Photoluminescence / Fluorescence measurement system

ACRON, Automated confocal Micro Raman/PL system



NanoSCAN for ACRON

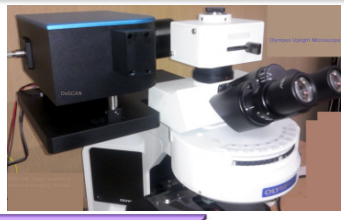
System specification

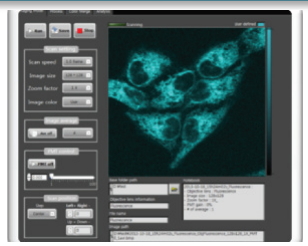
Laser	Raman : 473nm, 488nm, 532nm, 632.8nm, 785nm, etc. Photoluminescence : 325nm, 375~890nm LD Lasers, etc. Power control : 11 steps ND filters. (0.01~100%)
Spectrograph	Aberration corrected imaging spectrograph On axis Triple grating Turret Raman shift resolution <0.9cm^{-1} per pixel @ 632.8nm, 1800gr/mm grating Laser line cut-off : <60cm-^{1} @532nm
Sample image	Koehler illumination system for reflected white light via LED light source & 3MP color CMOS camera for imaging
Spatial resolution	<500nm(XY), <1μm(Z) @532nm, 100X objective (NA 0.85)
Detector	High sensitivity TE cooled CCD Pixel format : 1024 x256 pixels (26μm x 26μm)
Mapping stage	XY : travel range max. 76 x 52mm Min. step resolution : < 100nm Z-axis : Z-depth mapping : <50nm
Integration Software	NanoSCAN for ACRON / UniSCAN for UniRAM Beam switching, Laser power control, Spectrograph control, Image and signal measurement, 2D & 3D mapping, data analysis, FWHM, intensity, Raman shift, etc.

UniRAM-II, Micro Raman/PL mapping system

UniSCAN for UniRAM-II

DeSCAN, Laser scanning confocal imaging module

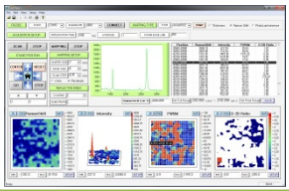




Specification

Laser	405nm, 488nm, 532nm or 561nm, 640nm, and user requested selectable source Power control : continuous step ND filters.
Microscope	Compatible with all microscope bodies (via video port) Combines with all types of commercial Upright & Inverted microscopes including Leica, Carl Zeiss, Nikon, Olympus, etc
Scanner type	Two galvanometer (XY) optical scanners
Scan resolution	128x128pixels, 256x256pixels, 512x512pixels
Scan speed	1.5frame per sec. @512x512 pixels
Scan Zoom	1x~16x (optical zoom)
Confocal pinhole	Motorized selectable pinhole
Detection Range	400-750nm or customizable
No. of detector	Upto 2, or customizable
Software	LabView, Function : Operation / Image Processing / Color Merge / Line Profile, etc.

UniG2D, Micro Raman system for Graphene



*** Features ;**

- Compact design & easy to use for Graphene Raman measurement
- Microscope Raman mapping & G–2D peak Ratio., etc

*** Specification ;**

1. SLM 532nm, DPSS laser set, >50mW, *other wavelengths available.*
2. TE Cooled CCD & Imaging spectrograph
   - 1024x256pixels, -70℃ /TE cooling, USB2.0 interface
   - Volume Phase Grating (470-650nm), 1200gr/mm grating
   - 1.1cm-1 per pixel Resolution @slit-10
3. Microscope Raman chamber, 1um beam spot @100x lens
4. Motorized XY stage set for Mapping
   - stepping motor stage & sample holder
   from 10um~85mm XY travel, standard, 1um step resolution.
5. System Control PC & UniMAP, mapping software
   - FWHM, intensity, peak Raman shift, G-2D ratio,
   - 2D & 3D color maps of mapping image

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