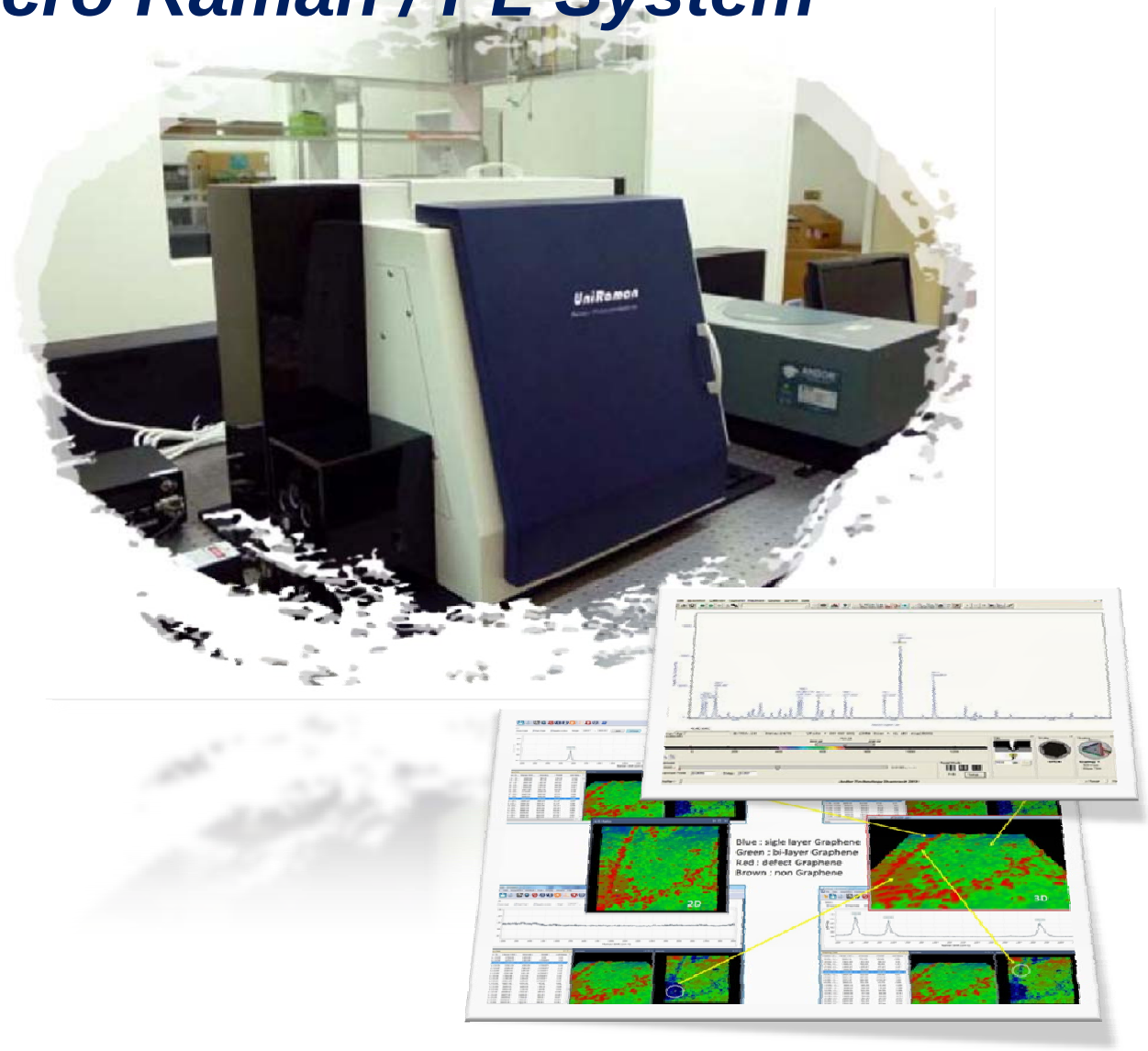
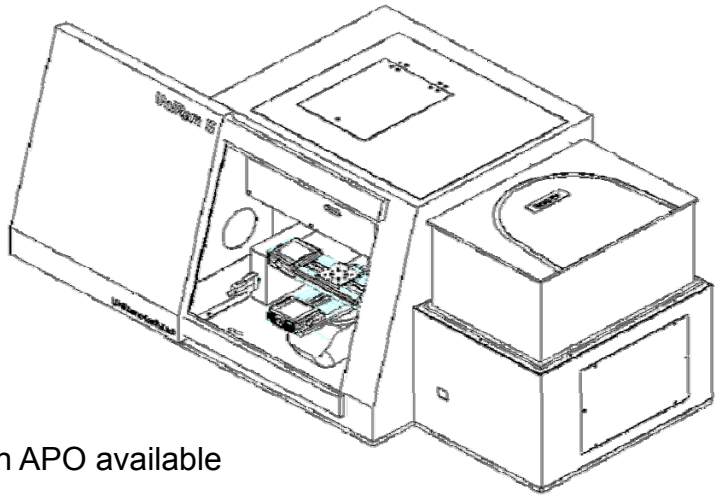
UniRAM II

High sensitive -

Micro Raman / PL System



Introduction of the system - Sample Chamber



Feature & Benefits

- High compatibility
- BX51, microscope body
- 1um Z-axis focusing module.
- 10x, 20x, & 100x, plan objective lens
  as well as Long working distance M plan APO available
- Koehler illumination system for high contrast imaging
- 3M CMOS USB color camera for viewing sample
- 11 steps ND filter for adjusting laser power
- Up to 3 integrated lasers
- Photoluminescence measurement available

System Specifications

Laser	Raman : 488nm, 532nm, 632.8nm, 785nm Photoluminescence : 325nm, 375~890nm LD Laser Power control : 11 steps ND filters. (0.01~100%)
Spectrograph	Czerny-Turner Spectrograph, Focal length 300mm Triple grating Turret Raman shift resolution <1.0cm^{-1} per pixel @ 532nm, 1800gr/mm grating Laser line cut-off : <60cm^{-1} @532nm
Image	A Koehler illumination for reflected white light system using a LED 3M pixels color CMOS camera
Spatial resolution	<1μm(XY), <2μm(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 : > 50nm Z-axis : <1μm
Integration Software	UniScan Beam switching, Laser power control, Spectrograph control Image and signal measurement, mapping, data analysis.

Introduction of the system
- Light source, Spectrograph, CCD

Light Source

Single Mode Laser for Raman application
532nm DPSS laser is employed as standard
and able to integrate up to 3 lasers
Available Wavelength : 325nm, 488nm, 514nm, 532nm,
632.8nm, 785nm

High Resolution Spectrograph

Focal length : 300mm or 500mm(option)
Resolution : 0.09nm at 435.8, 10um slit at 1200g/mm
Detector coverage : 136nm @600gr/mm grating
Aperture Ratio : f/4.0
CCD resolution : 0.1nm @2.5pixels . Accuracy : +/- 0.2nm . Repeatability : +/- 0.04nm
Triple grating Turret mount (selectable 3 gratings)
One entrance motorized slit & exit port for CCD detector .USB interface for computer control

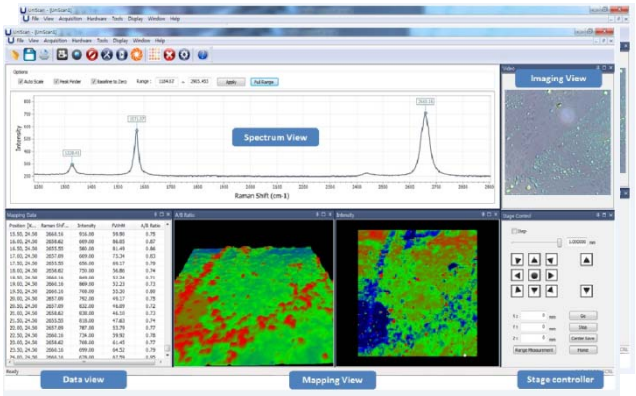
High sensitivity TE cooled CCD detector

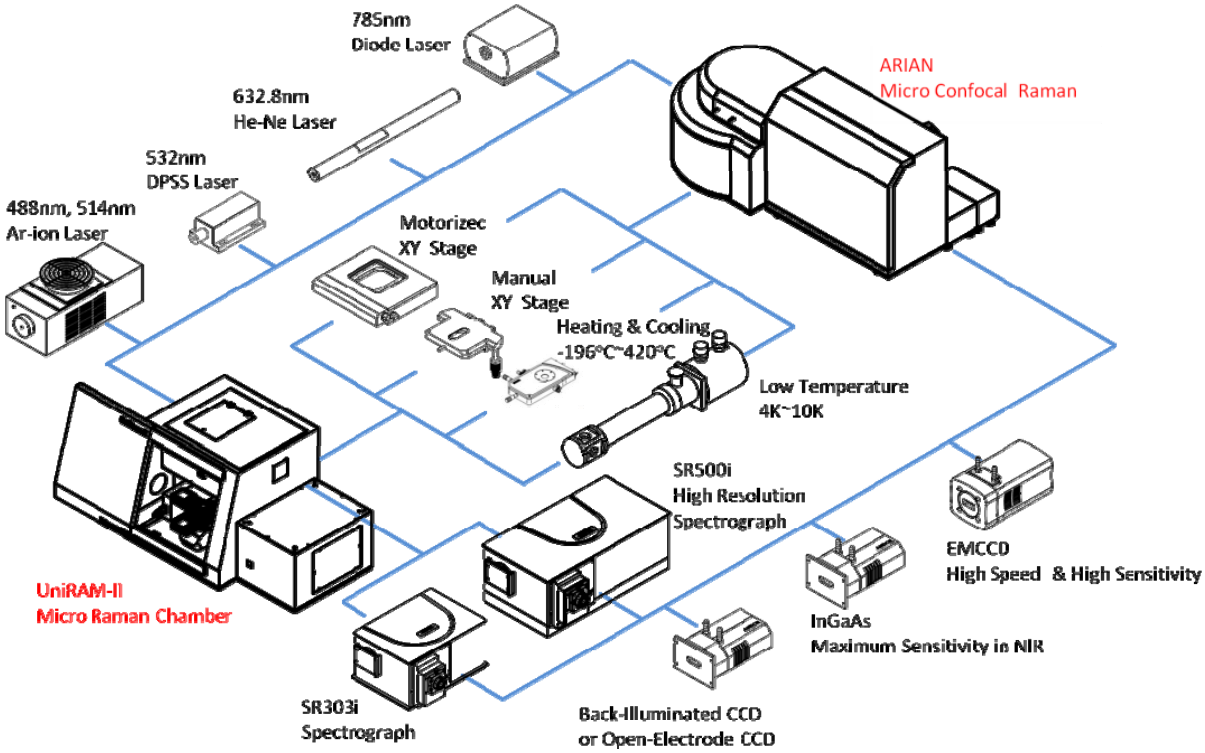
Andor iDus : DV-420A-OE(standard).
Pixel format : 1024x256 pixels.
Pixel size : 26μm x 26μm pixel size.
Dark Current : 6e- /pix-hr .
Minimum operating Temp : -55℃ (at air)
Spectral Range : 200-1050nm .
Spectroscopy Solis software package
(Another model is available)

UniScan – Mapping Software

Raman signal analysis
Micro order mapping
- Travel range : 76 x 52 mm(3” x 2”)
- Repeatability : <1μm
- Accuracy : 1μm
- Resolution : >0.05μm

Able to select mapping shape
Mapping function :
Intensity / Raman shift /FWHM / AB ration





Make your own system with Us !!

We can provide unique system based on user's requirements in spectroscopy fields.

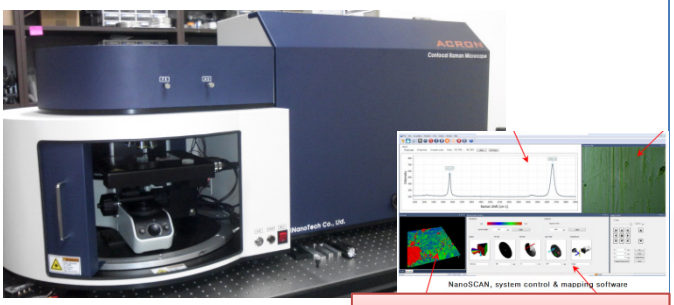
Homepage : www.research-india.co.in
Phone +91-9425678895, 09425478895

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

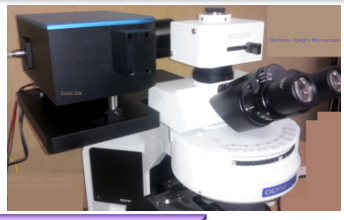
System specification

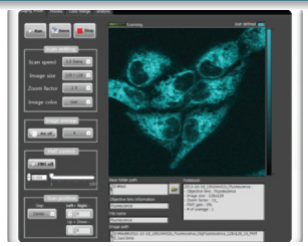
Laser	Raman : 473nm, 488nm, 532nm, 632.8nm, 785nm, etc. Photoluminescence : 325nm, 375~890nm LD Lasers, etc. Power control : 11 steps ND filters. (0.01~100%)
Spectrograph	Aberration corrected imaging spectrograph On axis Triple grating Turret Raman shift resolution <0.9cm^{-1} per pixel @ 632.8nm, 1800gr/mm 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

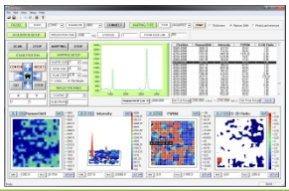




Specification

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

Research India

M/Q-191, C.W.S Jayant, Near Indira Market, Singrauli- 486890 (M.P)

Tel: +91-9425678895, 09425478895

www.research-india.co.in **email** : sales@research-india.co.in