

Rules and Charges of Confocal Raman/AFM Microscopy Facility Usage

Confocal Raman Microscope with AFM imaging (*WiTec alpha 300, Germany*) existing at PSG Institute of Advanced Studies is an integrated system with high resolution nanoimaging capability can be mainly used for chemical analysis at sub-micrometer scale. The confocality of the optical design facilitates excellent depth resolution and makes the generation of 3D Raman images and depth profiles easily with a Raman Spectral range of 50 cm^{-1} - 4000 cm^{-1} . Confocal micro-Raman spectroscopy has features such as, Single-point spectra acquisition, Single-point depth profiling and 3D imaging and depth profiling. The advantage of an integrated system with a combination of ultra-high topographic and lateral resolution of AFM with Raman spectroscopy provides a more comprehensive understanding of the samples; not only the chemical information, but also structural and topographic information acquired at the same time and from the same sample area. The system is integrated with a motorized stage as well as high resolution piezo XYZ mapping Stage with AFM imaging capability. The instrument is equipped with 355 nm and 532 nm lasers as UV Excitation Laser source for PL analysis and VIS Excitation Laser source for Raman analysis respectively. Using optical pre-inspection by means of various illumination and detection techniques (e.g. bright field, dark field, polarization, fluorescence, etc.) the area of interest for the AFM/Raman imaging can be easily determined. The system is capable of measuring the Raman spectra of wide variety of samples including amorphous, crystalline, polymer or liquid/biological samples.

Faculty in charge: Dr. P.Biji, Assistant Professor in Nanotechnology, PSGIAS

Email: pbm@psgias.ac.in

Researchers from various institutions are welcome to use these facilities. Those who want to avail these facilities are requested to send the filled job requisition form (Downloadable from PSGIAS website) and advance DD/Cheque (if applicable) in favour of “**PSG Centre for Sponsored Research & Consultancy**” payable at Coimbatore to:

Dr. P. Biji, Associate Professor,

I-106, SPM/Raman Facility

PSG Institute of Advanced Studies PB No: 1609, Peelamedu Coimbatore-641 004

E-mail: pbm@psgias.ac.in

Rules and Charges for using the facility

1. To avail any facility prior registration is a must.
2. Analysis will be done on charge basis.
3. Appointment will be given as per queue and the allotted time for the slot will be informed through Email.
4. For a better analysis, basic details about the sample should be given.
5. Refunds will not be made in any case.
6. Sample preparation should be done by the user.
7. External colleges & Universities and industry users should pay the charges in advance along with the samples for characterization

Analysis Charges:

Modes	Internal (PSG Institutions (INR)	External Colleges & Universities (INR)	Industry (INR)
Raman spectra	150	300	600
Raman spectra with imaging	500	1000	3000
Raman with AFM imaging	1000	3000	6000

Note: 18% GST to be added to these basic charges