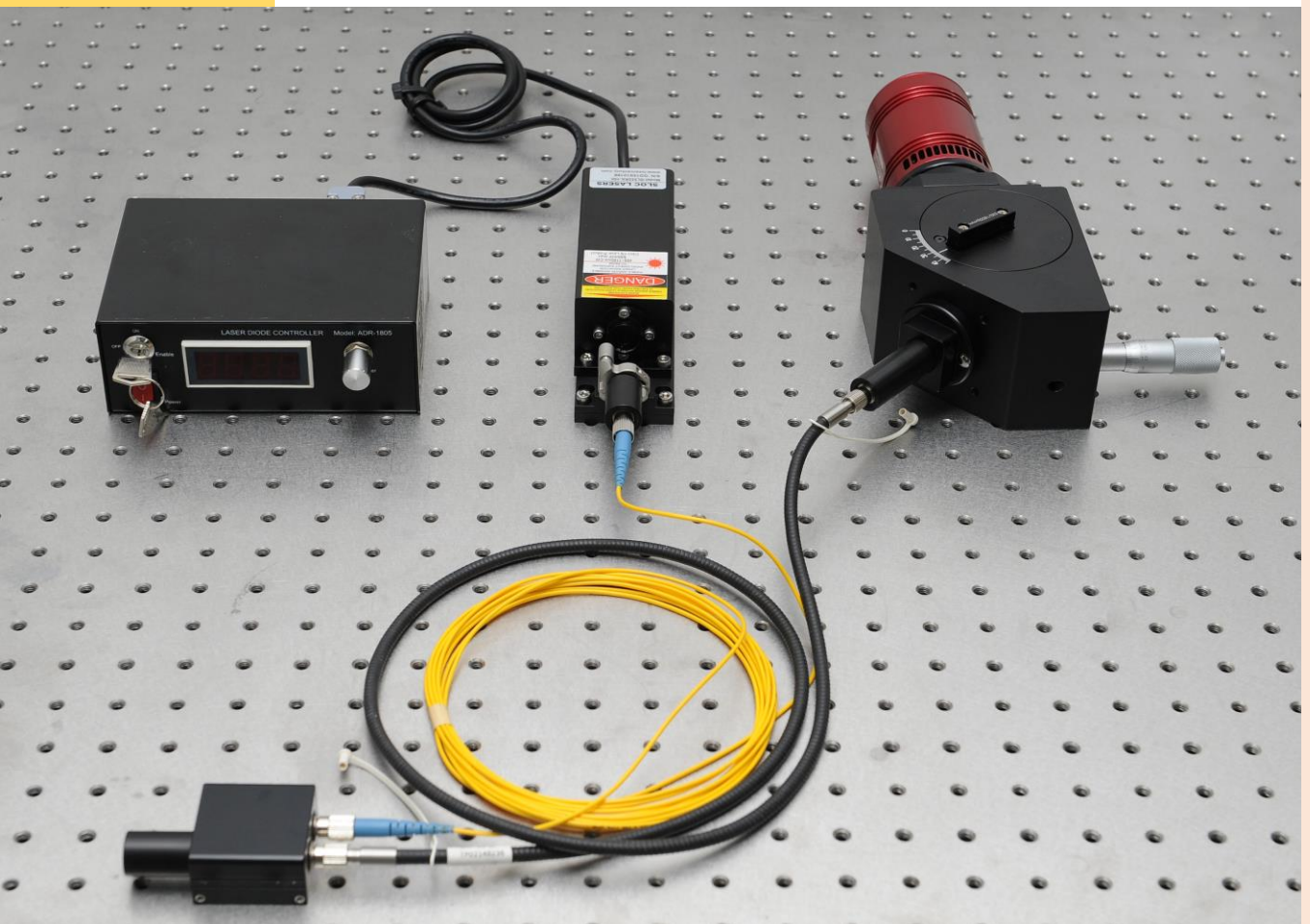


NANOBASE  
Macro Raman Instruments

# XPER RAM M

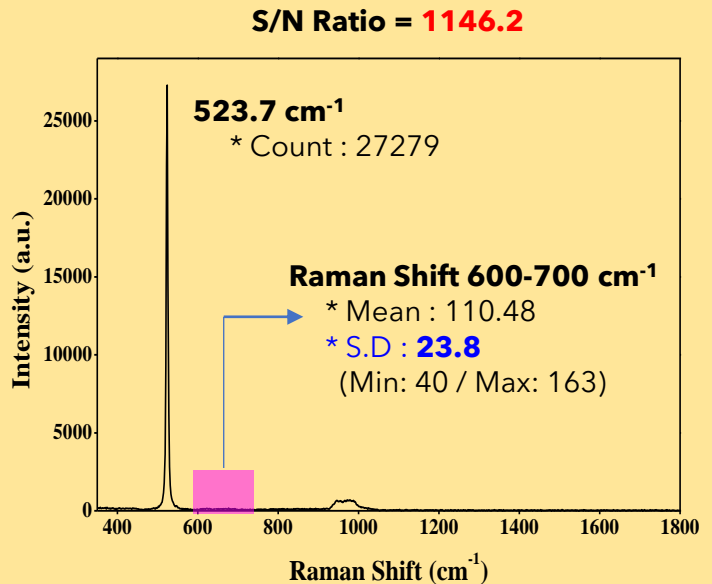
Product Guide



# Back to Raman Basics

As expected from any NANOBASE Raman instrument products, **XperRAM M Series** features a high efficiency spectrometer (over 90% Raman spectrum peak efficiency), giving you complete confidence in data accuracy to take your Raman research to another level.

We offer 532nm and 785nm laser options for **XperRAM M Series**, but it's fully customizable to work on other laser wavelength selections. Contact us or your local distributor for more information.



Silicon wafer Raman shift taken from XperRAM M Series (532nm excitation wavelength)

## Features

- Macro areal Raman analysis
- Photoluminescence (PL)
- One laser/probe default setting
- Probe holder and stage available for purchase upon request

## Spectrometer Specifications

Catalog No.: XperRAM-M

Contact us for more spectrometer options

### For use with 785 nm Fiber coupled Raman laser

#### XPE 85F Monochromator

- Input aperture ratio: f/1.4
- Focal length: 85 mm
- Designed wavelength: 785 nm
- Fixed VPH grating (1200 lpmm at 840 nm)
- Spectral range: Max. 3900 cm<sup>-1</sup>
- Spectral resolution (FWHM): Min. 2.5 cm<sup>-1</sup>
- Termination: SMA or FC/PC or FC/APC

#### Detector

- Back-illuminated CCD
- Deep-Depletion with anti-fringing
- Active pixels: 2000 × 256 pixels
- Pixel size: 15 × 15 μm
- Dark current: As low as 0.033 e<sup>-</sup>/pixel/sec
- Quantum efficiency: >40% from 400 nm to 1000 nm

### For use with 532 nm Fiber coupled Raman laser

#### XPE 35 Monochromator

- Input aperture ratio: f/5
- Focal length: 35 mm
- A volume phase holographic grating is mountable
- Spectral range: Max. 5514 cm<sup>-1</sup>
- Spectral resolution (FWHM): Min. 3.0 cm<sup>-1</sup>

#### Detector

- Active pixels: 1931 × 1451 pixels
- Pixel size: 4.54 × 4.54 μm
- Dark current: ~0.0002 e<sup>-</sup>/pixel/sec
- Quantum efficiency: >55% from 400 nm to 700 nm

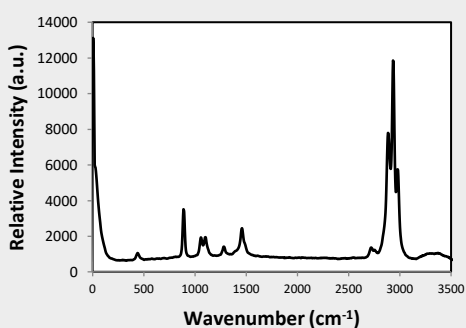
## Applications

Raman spectrum is a fingerprint of a material. Raman is a powerful material analysis technique that provides useful information such as identification of unknown materials, differentiation of materials, and quantification of material composition and properties.

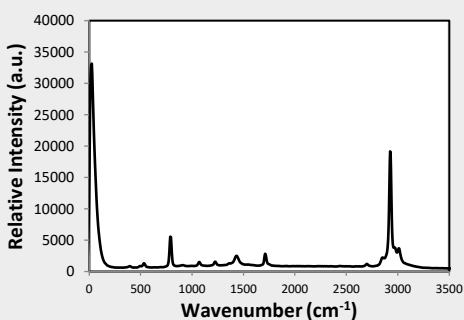
Except solid metal, Raman technique can present spectrum data for any materials you can imagine. The materials shown in the following spectra is just a fraction of the endless examples of what Raman can do for material analysis.

The following spectra are the actual data generated from **XperRAM M** Series.

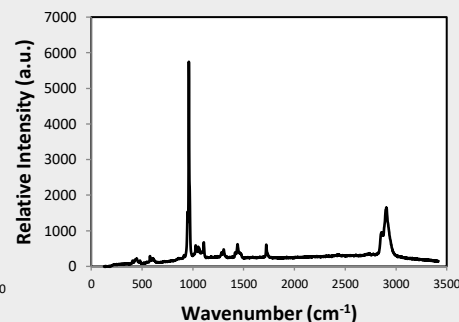
Ethanol



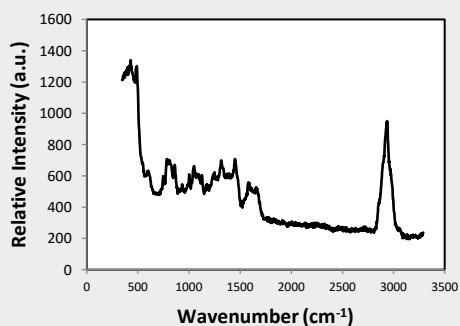
Acetone



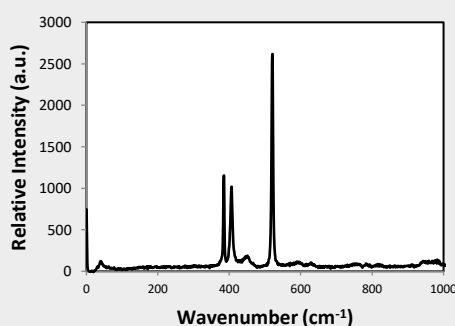
TCL-TCP



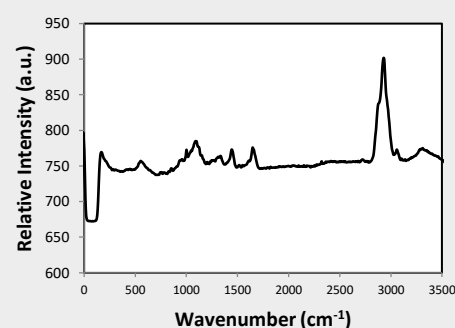
Microorganism



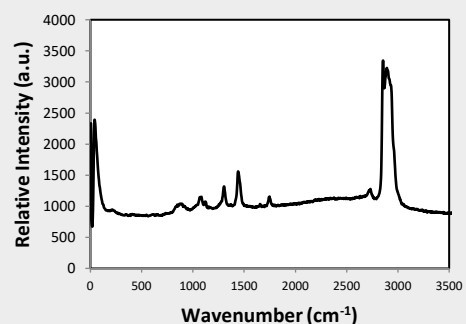
MoS2



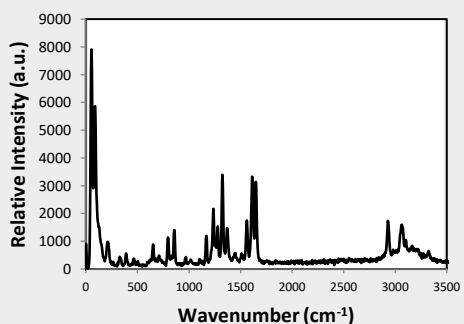
Epithelial Cell



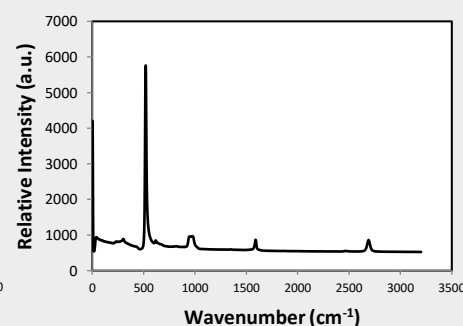
Coconut Oil



Acetaminophen



Graphene



## XperRAM M Series

Product Guide

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