

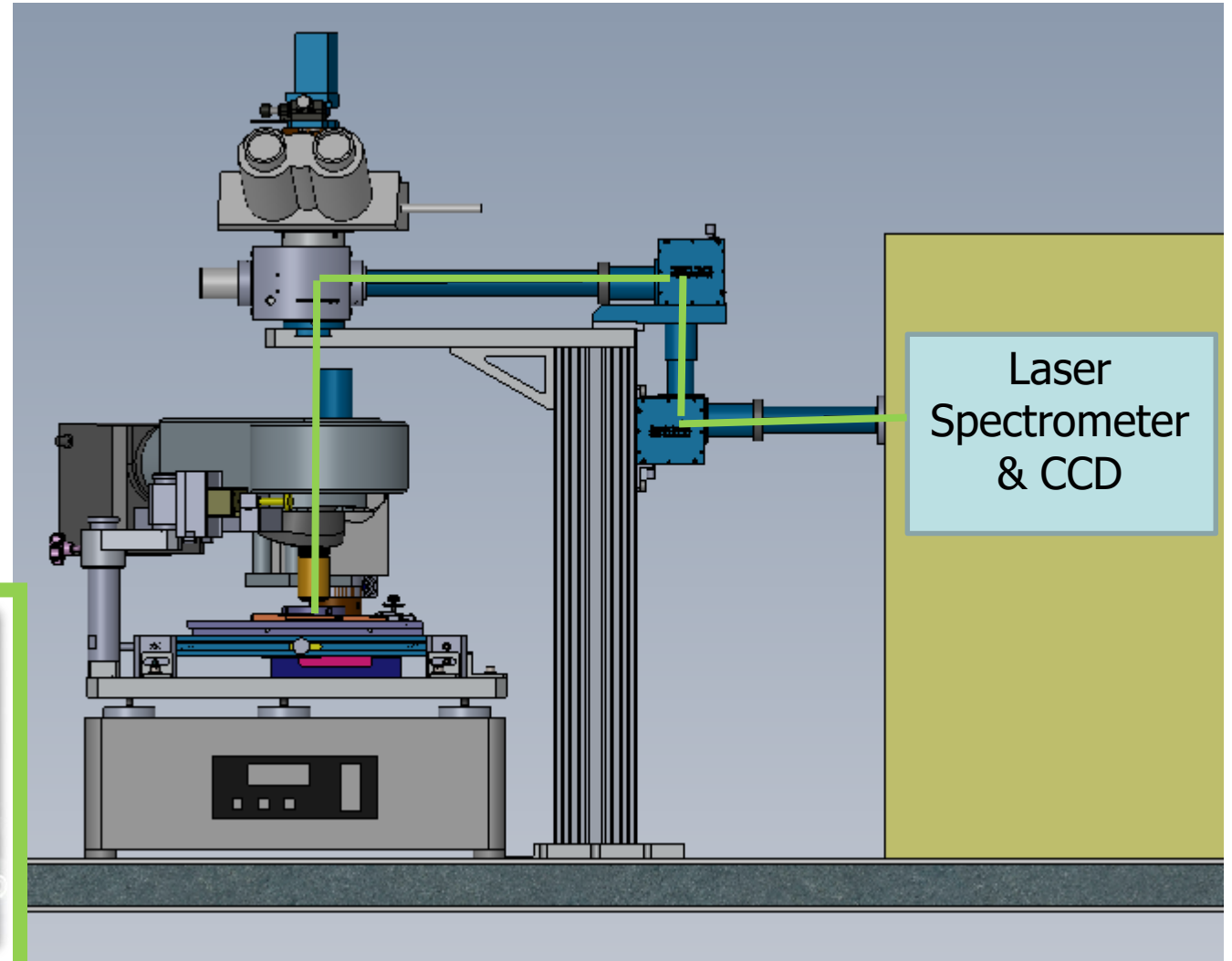
# The Basis of the Nanonics Integration Package for Hybrid Raman SPM and Other Linear and Non-linear Spectroscopic Applications



NANONICS  
IMAGING Ltd.

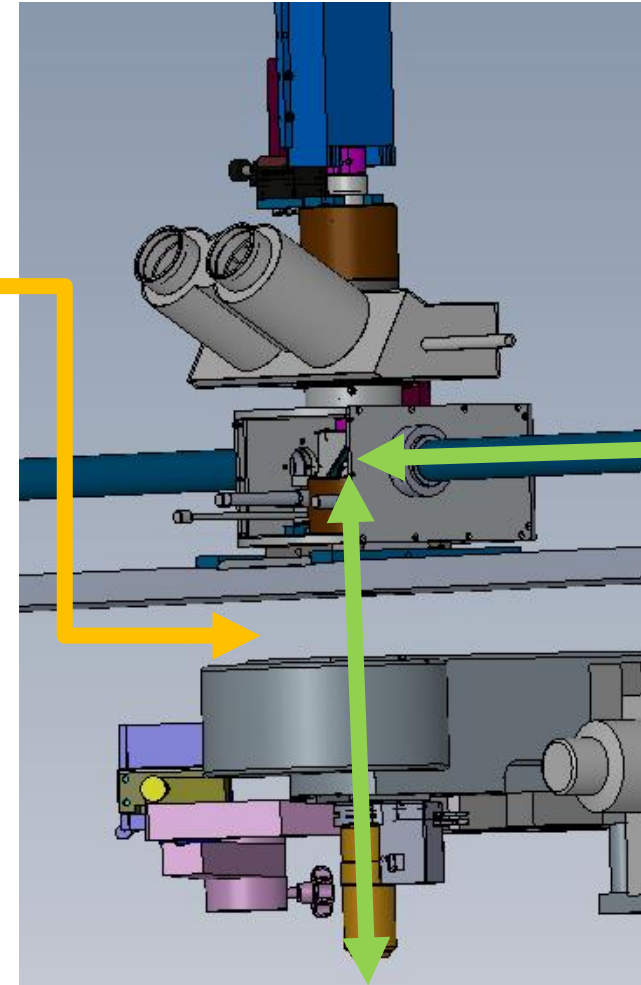
# Nanonics MV 2000

## Upright Integration Package



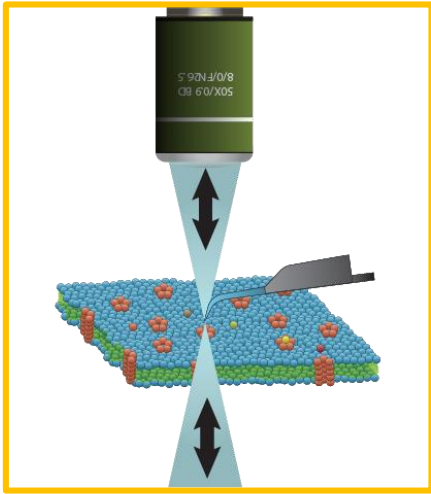
# The Basis of The Integration Package

- Basis of the integration package is for the SPM head to be used with no influence of vibrations from lasers or Raman CCD camera sitting on the optical table.
- This is accomplished by providing a separation of the microscope body from the ocular where the light from the lens is parallel.
- The integration package can be used independently with the Laser and Raman Spectrometer provided by the manufacturer
- Or through an intervening manufacturer supplied optical microscope as seen on the next slide
- This allows the manufacturer's microscope to be used independently of the SPM

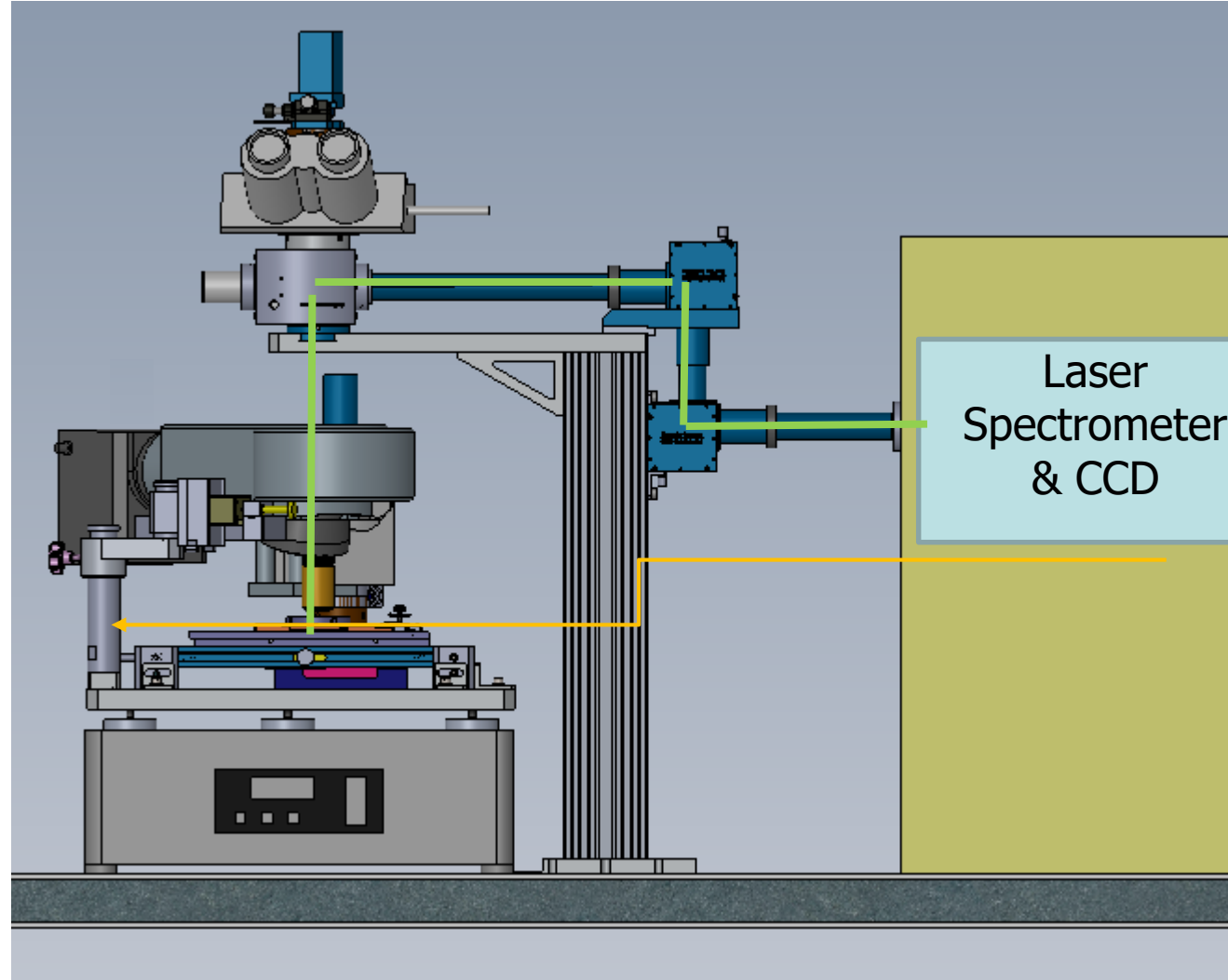


From  
the  
Raman

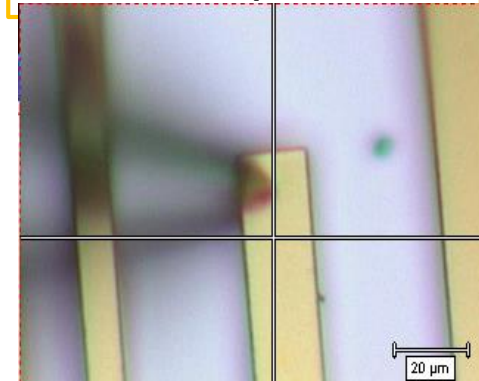
# Optical path from laser to sample



Patented transparent exposed tip AFM probe with no background Raman and no additional scattering. Excellent co-localization of Raman and AFM with no obstruction



Probe can be accurately placed on sample due to the patented transparent glass AFM-Raman probe & Raman can be collected with the additional no Raman background or scattering noise from the tip.

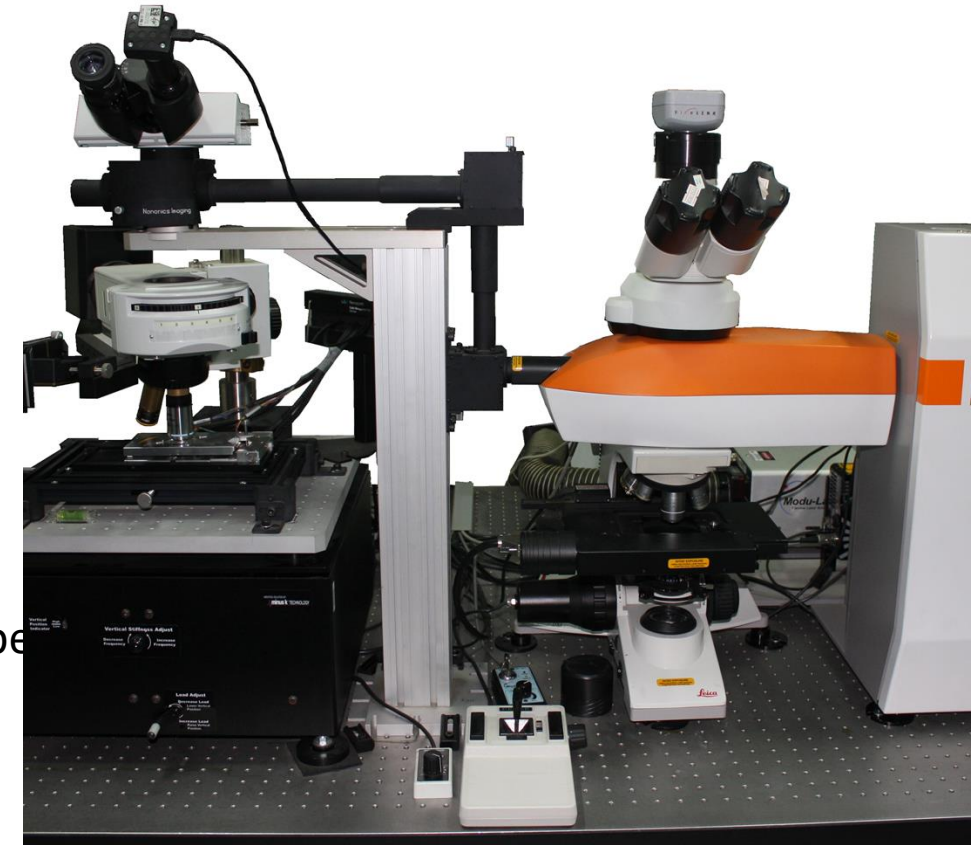


# Key Raman Related Features

Nanonics MV 2000 & 4000

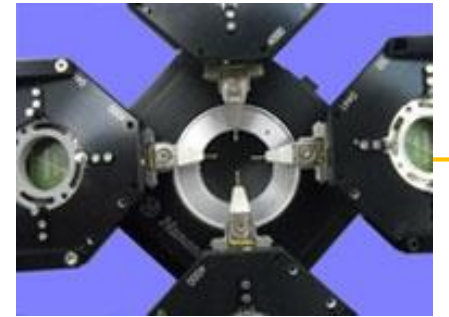
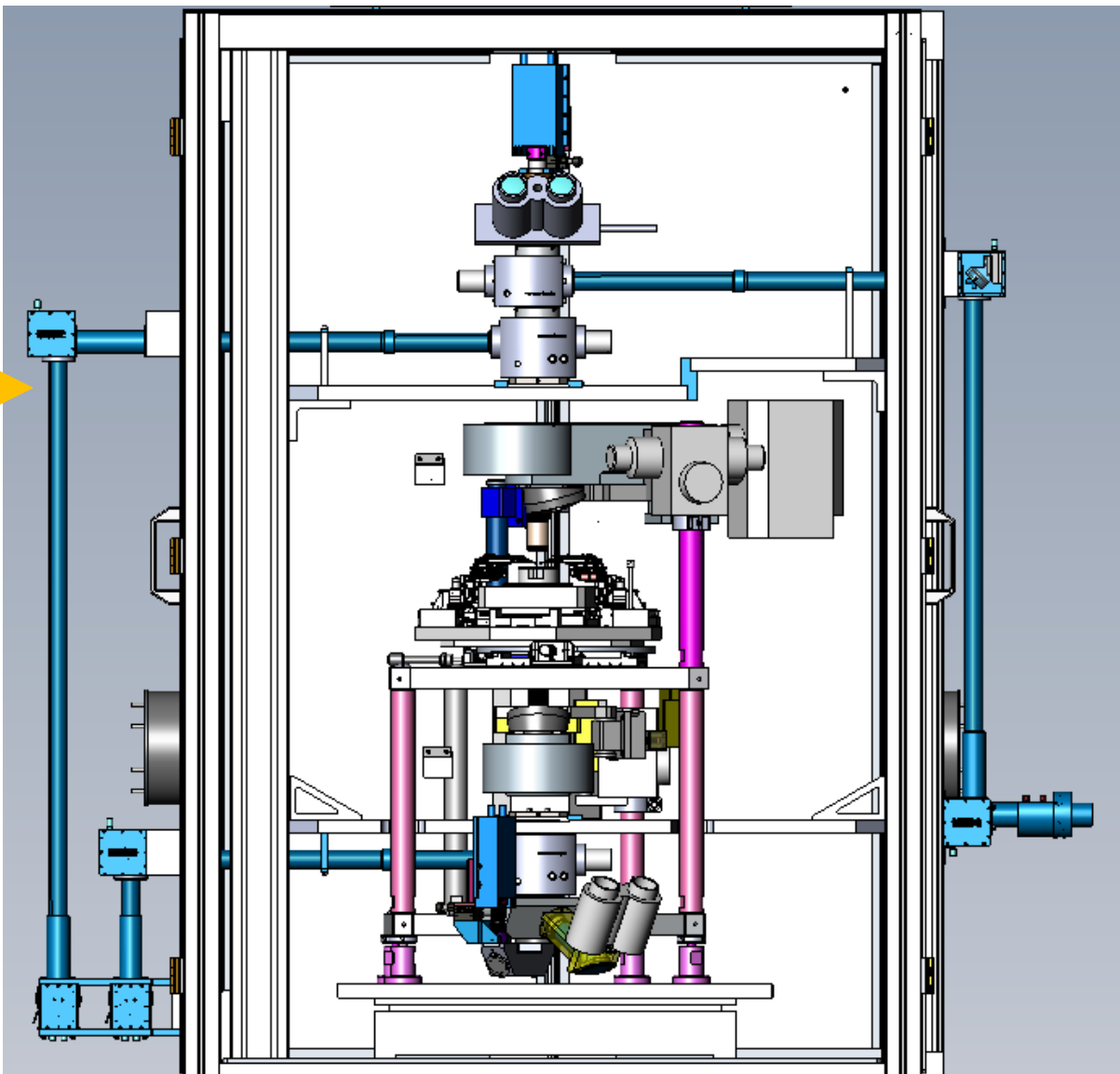
## AFM-Raman Key Features:

- Patented exposed tip transparent probe with no Raman obstruction or increased scattering
- Excellent co-localization for pixel by pixel correlated AFM-Raman 3D maps
- Laser-free tuning fork feedback mechanism
- No optical interference of feedback with Raman
- Use any Raman laser unconstrained by optical AFM feedback background
- All modes of TERS in same AFM head:
  - STM
  - AFM (non-conducting)
  - Difference TERS
  - Piezo scanning for finding tip hot spot
- Raman on-line with advanced SPM modes such as: MFM, EFM, Kelvin Probe, PFM, etc.
- Allows the Raman manufacturers optical microscope to be free for other general users



# Integration Packages Even for Dual Microscopes Excitation and Raman Collection with Same SPM Head

Modular  
addition of  
other  
excitation  
paths for other  
forms of  
spectroscopy  
such as non-  
linear  
spectroscopies  
with fsec laser



Even 4 SPM  
Heads can be  
integrated