

AIRsight

IR and Raman microscope

01

What if

your instruments did not work for your sample?

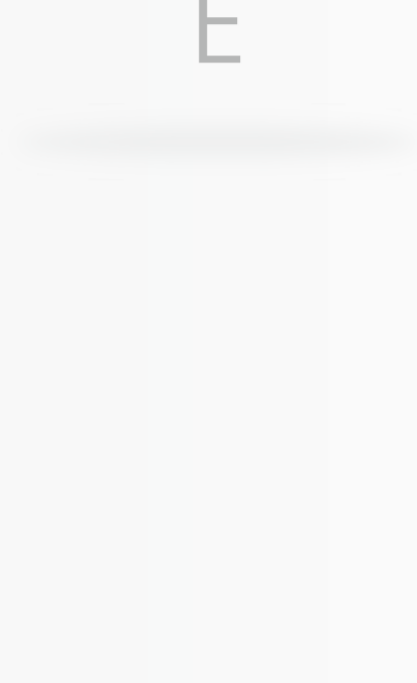


02

IR and Raman

are powerful techniques!

03



How so?

Because both instruments investigate

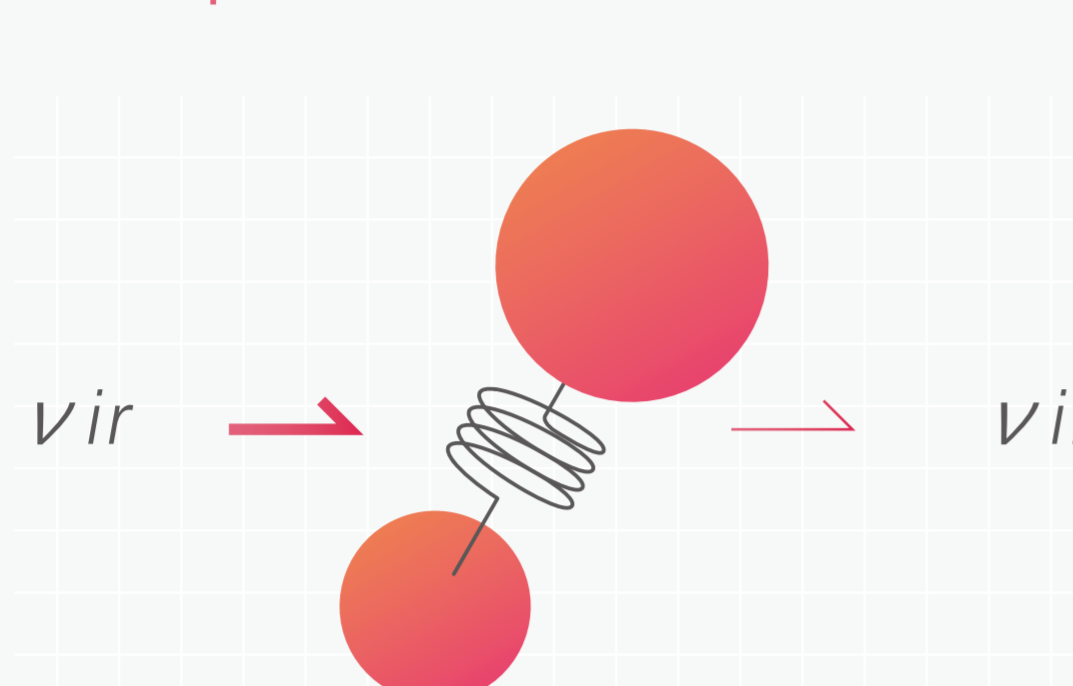
molecular vibrational energies

04

What is the difference between IR and Raman?

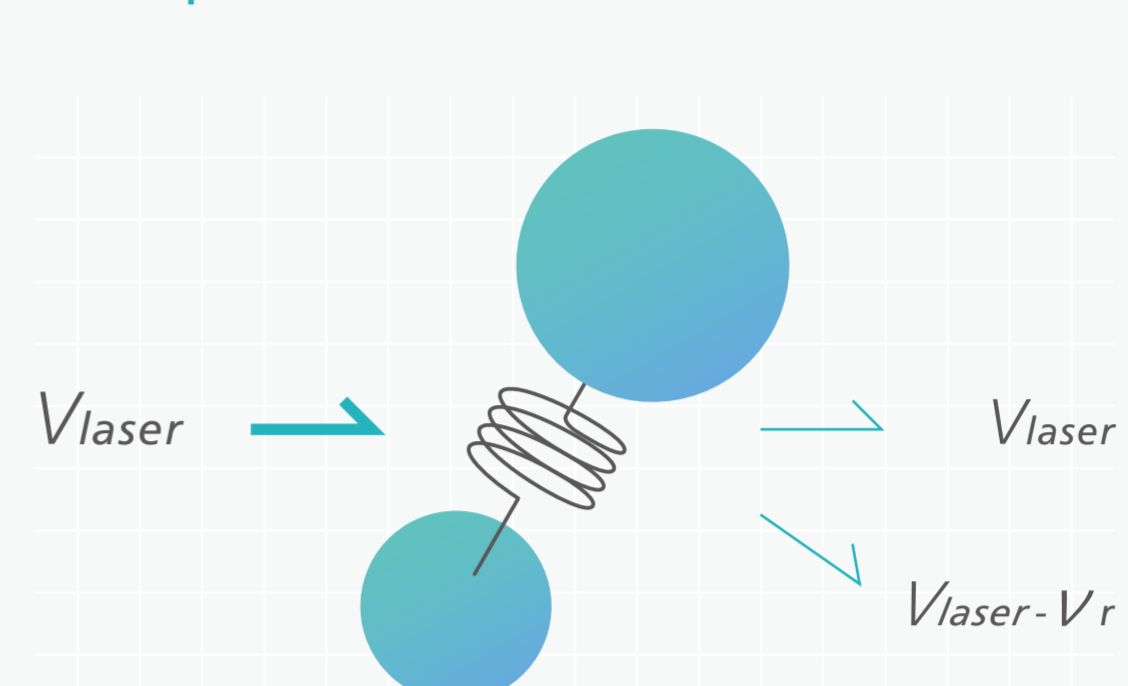
IR

ν_{ir} | frequency of absorbed photons
molecular vibrational energy



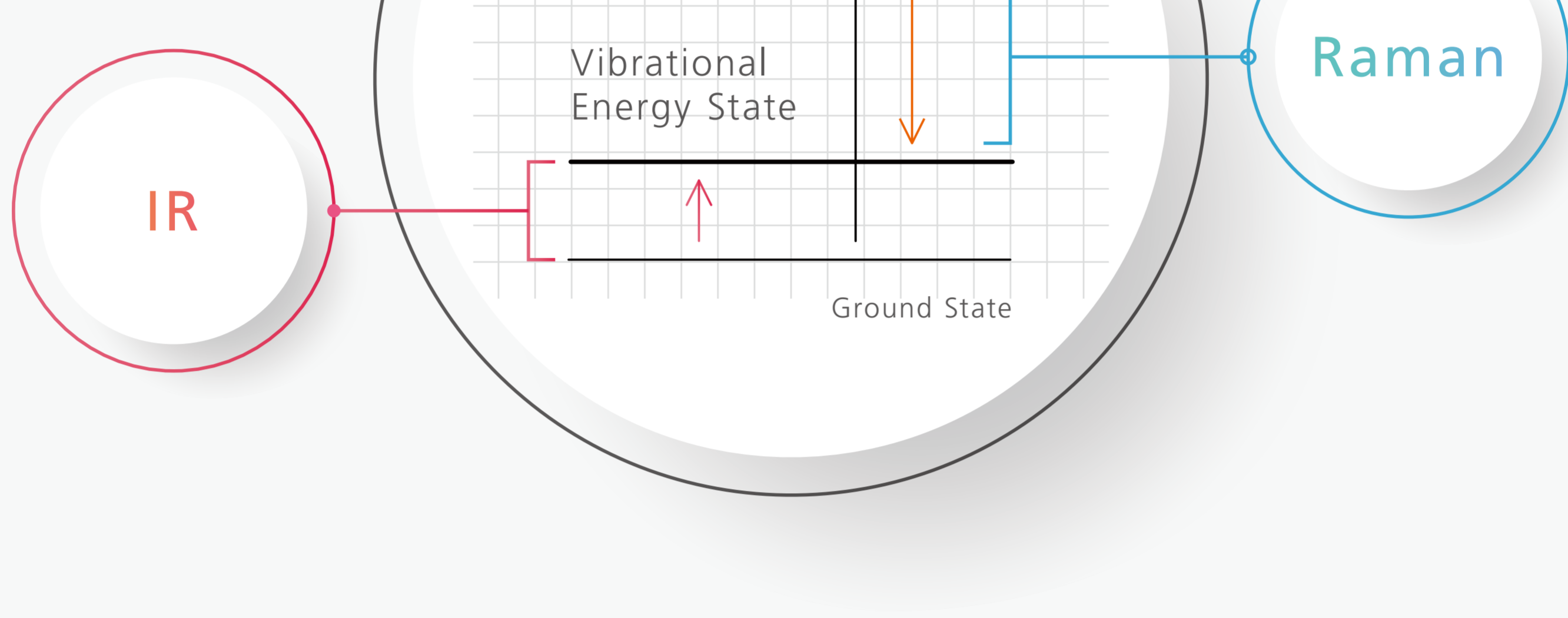
Raman

ν_r | ν_{laser} versus scattered lights:
how much they differ in frequency



ν_{ir} Related to molecular vibration ν_r

Energy Diagram



IR

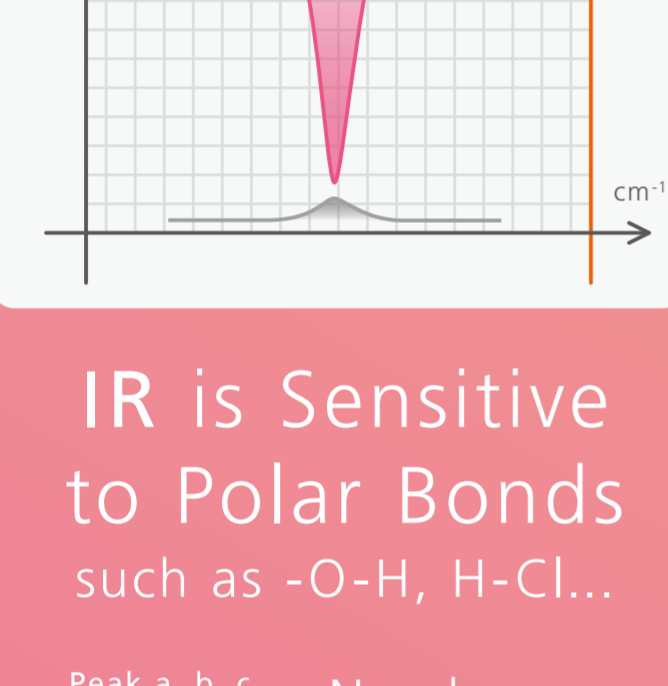
Raman

IR and Raman complement each other.

Both IR spectroscopy and Raman spectroscopy measure the same molecular vibrational energy, but IR captures polar bonds and Raman captures non-polar bonds.

Combined Data

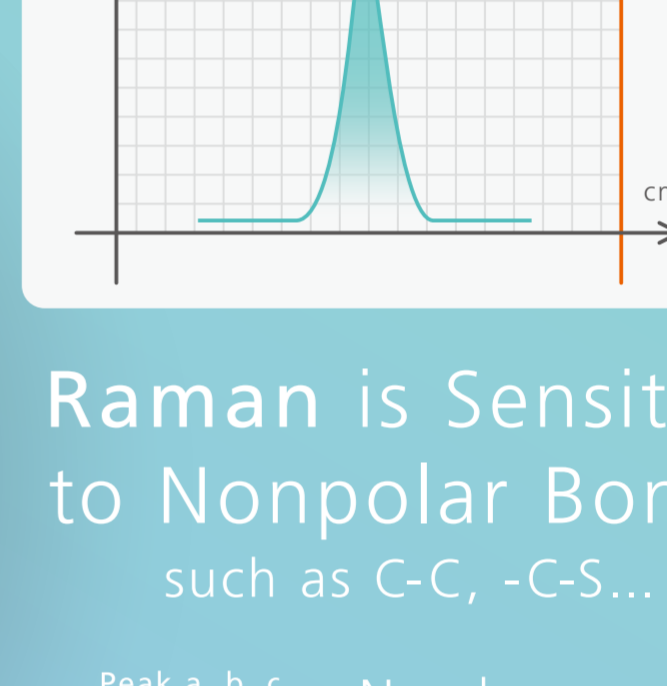
IR Data



IR is Sensitive to Polar Bonds such as -O-H, H-Cl...

Peak a, b, c Need more data! +a

Raman Data



Raman is Sensitive to Nonpolar Bonds such as C-C, -C-S...

Peak a, b, c Need more data! +a

IR and Raman present a more comprehensive picture as a combined system than when used as separate platforms.

05

Okay, both are important. But, imagine having two instruments.

The sample position can be mismatched between the two instruments

juggling two software programs

Large footprint



06

Our Two-In-One Solution!



AIRsight

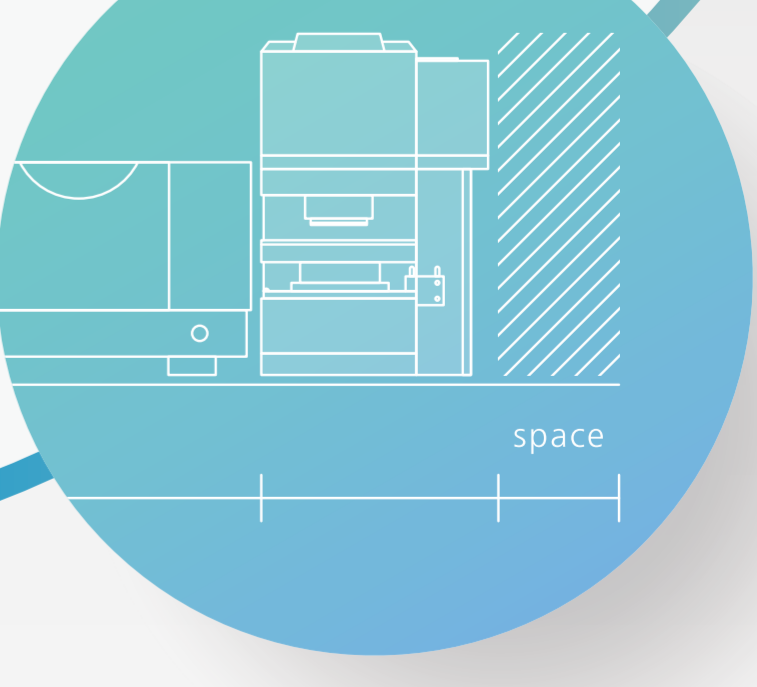
Raman - IR Confocal Optical system

Wavenumber resolution : 4cm⁻¹
Spatial resolution
Minimum : 3μm

3S Microscope



Same position is measured by IR and Raman



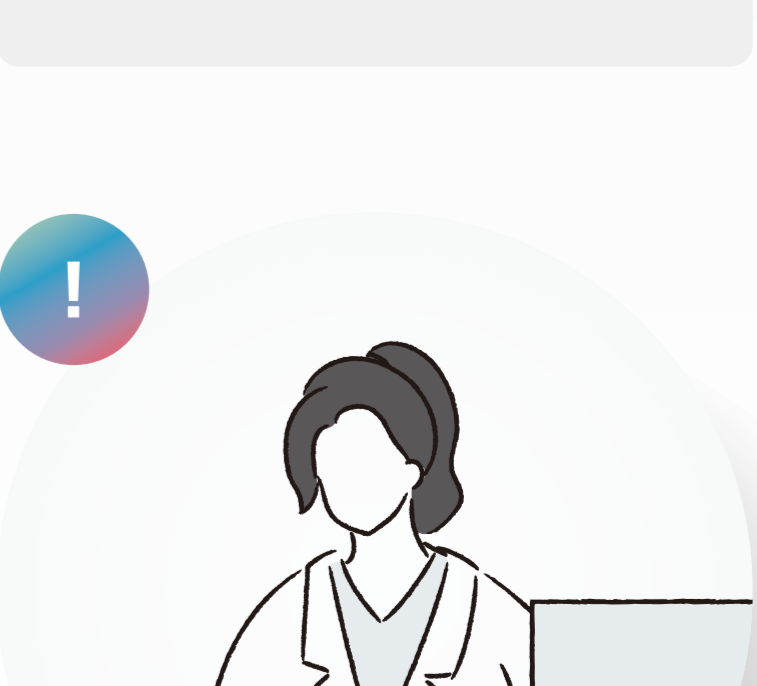
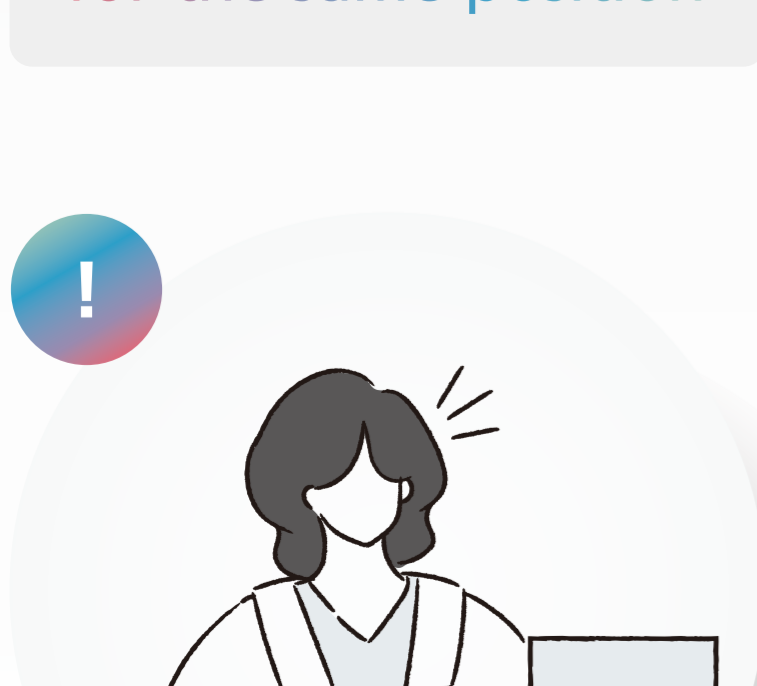
Single system saves space



Smart software controls IR and Raman

No need to search for the same position

Small footprint



Please check our website for more details.

[Click Here](#)