# Latest IR spectroscopy with sub-micron spatial resolution

Optical Photothermal IR Spectroscopy (O-PTIR) enables the infrared measurement with a high spatial resolution of less than 1  $\mu$  m. It can be applied to analyze the composition of small foreign substances, the interface composition of multi-layered samples, and even water containing sample.

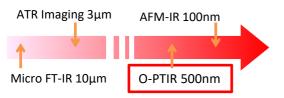
## O-PTIR(Optical Photothermal IR Spectroscopy)

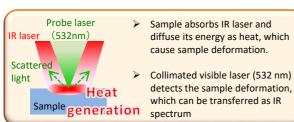
## **♦** Characteristics of O-PTIR

IR spectrum and imaging with sub-micron (around 500 nm) spatial resolution Same spectra as conventional FTIR

Non contact measurement with reflection mode, no need of complicated sample preparation , such as thin specimen

## um to nm level IR spectra available at TRC





# **♦** Application of O-PTIR

Industrial and medical polymer materials Biological materials (Hair, skin, tissues) Medicines and medical devices Foreign substances

### ♦ Information we can provide

Composition and its distribution (layer composition, foreign substance material diffusion etc.)
Reaction and / or degradation distribution, cure extent

♦ Raman spectrometer available
Simultaneious measurement of Raman and IR on the same sample with sub-micron spatial resolution

# **Application**

