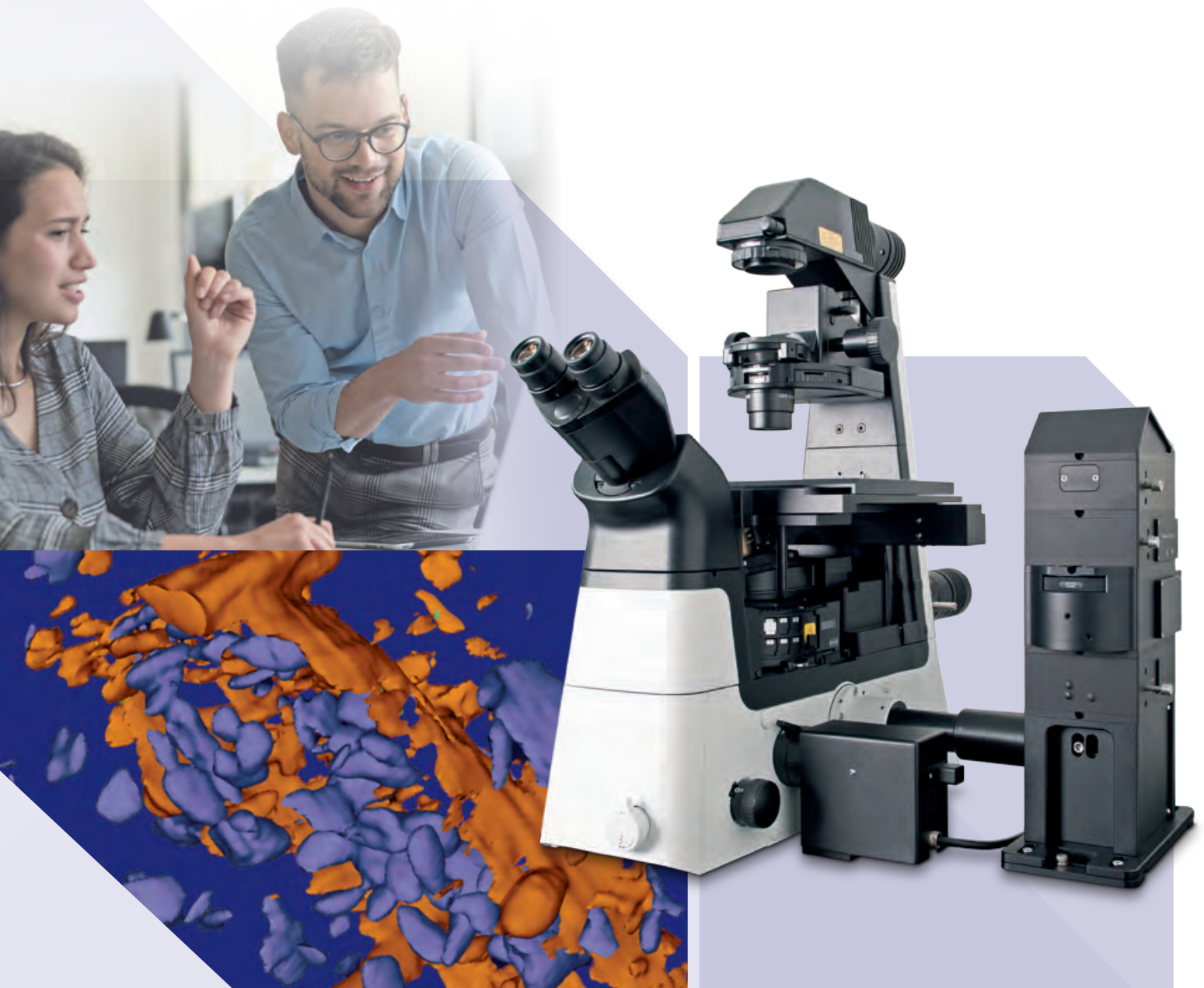


Inverted Confocal Raman Imaging

alpha300 Ri



3D Raman image of banana pulp

alpha300 Ri

Inverted Raman imaging for chemical analysis of liquid or bulky specimens

The alpha300 Ri turns 3D chemical imaging upside down. Its inverted beam path preserves all of the functionality and high performance of WITec's alpha300 confocal Raman microscope series while introducing a new angle in access and handling.

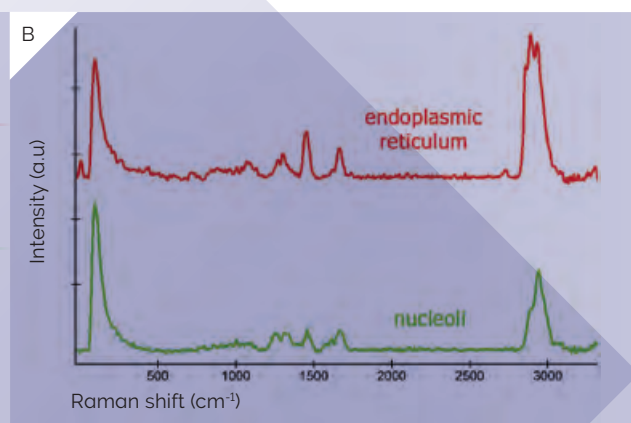
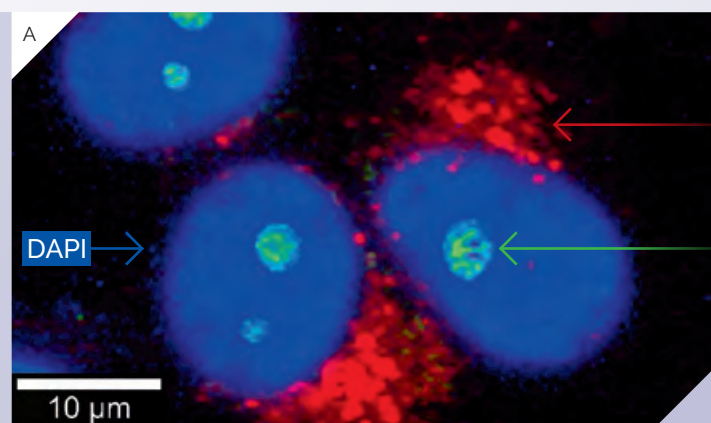
Confocal Raman imaging is a powerful and nondestructive method for visualizing a sample's molecular composition in 2D and 3D. WITec's alpha300 confocal Raman imaging microscopes provide high speed, sensitivity and resolution simultaneously for fast and comprehensive sample analysis.

The ability to view and investigate samples from below is a great advantage when working with aqueous solutions or oversized specimens. Studies in life sciences, biomedicine, pharmaceuticals and geosciences in particular will benefit from the flexibility and performance provided by the alpha300 Ri.

Many accessories and upgrade possibilities developed for the WITec alpha300 series are compatible with the alpha300 Ri. Other techniques associated with inverted microscopes, such as fluorescence microscopy, can be easily integrated, which enables correlative imaging.

Key features

- Nondestructive, label-free chemical characterization
- Convenient handling of liquid and bulky samples
- Confocal beam path, which enables 3D image generation
- Spatial resolution limited only by physical law
- Modular design and extensive upgrade options
- Compatibility with other microscopy techniques including: fluorescence, dark field, bright field, differential interference contrast (DIC) and phase contrast



(A) Correlative Raman – fluorescence microscopy image of eukaryotic cells. Nuclei were stained with DAPI (blue). Endoplasmic reticulum (red) and nucleoli (green) were identified by their Raman signals. **(B)** Raman spectra corresponding to nucleoli (green) and endoplasmic reticulum (red).

Bulky samples that would be challenging to investigate underneath a conventional microscope objective turret can be accommodated on the stage of the alpha300 Ri.

An inverted beam path allows liquid samples to be placed on the fixed plane of the stage for quick and repeatable measurements.

The motorized sample stage facilitates the mounting of environmental enclosures and other accessories.



WITec Microscopes



alpha300 S:
Scanning Near-field
Optical Microscope

alpha300 A:
Atomic Force
Microscope

alpha300 R:
Confocal Raman
Microscope

alpha300 Ri:
Inverted Confocal
Raman Microscope

RISE®: Raman Imaging
and Scanning Electron
Microscope

alpha300 apyon™: Automated
Confocal Raman Microscope

alpha300 access:
Confocal Micro-Raman System

Find your regional WITec and Oxford Instruments
contact at <https://raman.oxinst.com/contact>

WITec Headquarters

WITec Wissenschaftliche Instrumente und Technologie GmbH
Lise-Meitner-Str. 6, D-89081 Ulm, Germany
Phone +49 (0) 731 140 700, Fax +49 (0) 731 14070 200
info@witec.de, <https://raman.oxinst.com>

Explore the alpha300 Ri product page

[https://raman.oxinst.com/products/
raman-microscopes/alpha300ri](https://raman.oxinst.com/products/raman-microscopes/alpha300ri)

