

RayShield Coupler for alpha300 and alpha500 Series

Lise-Meitner-Straße 6, D-89081 Ulm, Germany
Tel. +49 (0) 731 140 700, Fax. +49 (0) 731 140 70200
www.witec.de, info@witec.de

WITec
focus innovations

Raman spectral access at very low wavenumbers and effective Rayleigh light blocking

The new RayShield Coupler for the alpha300 and alpha500 microscope series allows the acquisition of Raman spectra at wavenumbers down to below 10 rel. cm^{-1} .

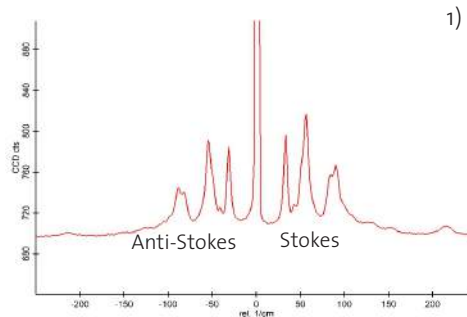
This high-transmission coupler system includes a specialized narrow-band filter set which is optimally aligned to detect Raman

lines extremely close to the Rayleigh line while maintaining ideal Rayleigh shielding. The RayShield Coupler is available for a variety of laser wavelengths from 488 to 785 nm. Currently installed alpha300 and alpha500 microscopes can be upgraded with the RayShield Coupler.

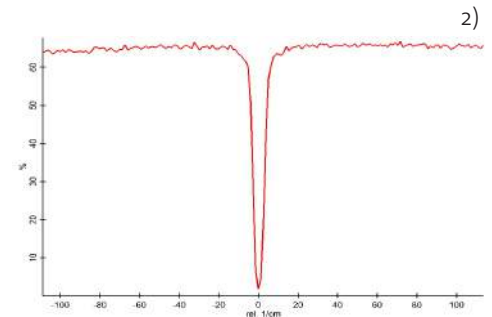
Applications in semiconductor research, the pharmaceutical industry, life sciences, nano carbon research, and materials sciences in particular will benefit from WITec's RayShield Coupler.

Features and Benefits

- RayShield Coupler for Raman spectral measurements at extremely low wavenumbers down to below 10 rel. cm^{-1}
- High-transmission coupler system featuring a specialized filter set with effective Rayleigh light blocking, Stokes and Anti-Stokes scattering detection
- Provides access to additional spectral information from Stokes and Anti-Stokes Raman signals close to the Rayleigh line for a more comprehensive sample characterization
- Easy-to-use, pre-aligned unit for convenient implementation
- Available for a variety of laser wavelengths (488, 532, 633, and 785 nm)
- Upgrade option for currently installed alpha300 and alpha500 microscopes
- Compatibility with all existing WITec microscopes guaranteed

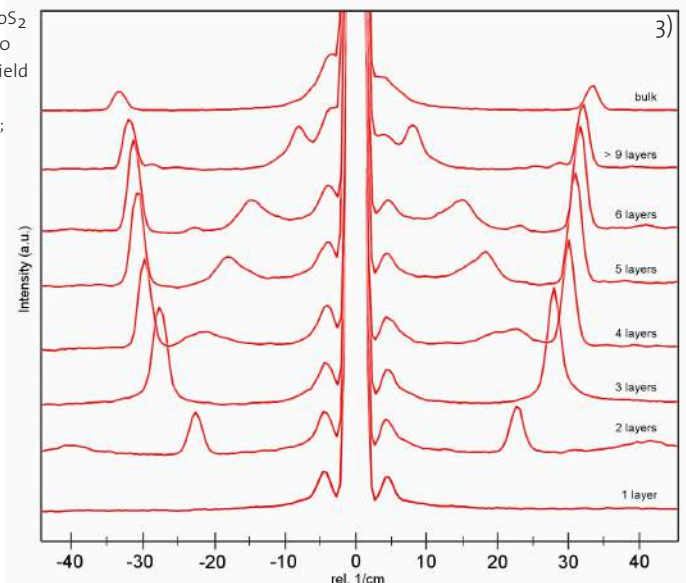


1) Raman spectrum of a pharmaceutical sample acquired with an alpha300 microscope including the RayShield Coupler for effective Rayleigh light blocking.



2) The graph shows the extremely high transmission rate (in percentage) for Stokes and Anti-Stokes signals at wavenumbers down to below 10 rel. cm^{-1} .

3) Raman spectra of different MoS₂ layers acquired with an alpha300 microscope including the RayShield Coupler (excitation wavelength: 532 nm; grating: 2400 lines/mm; integration time: 5s).



Example of an alpha300 microscope equipped with the RayShield Coupler.