

## High Resolution & Multi-angle Light scattering Characterization of ANISOTROPIC NPs



- DLS, SLS & DDLS measurements combined in one instrument!
- Continuous multiangle from 30° to 160°
- Time resolved measurements: 200 msec resolution

Nanotube (CNT)  
Gold nanoparticles  
Anisotropic virus  
Magnetic particles  
Nanorod

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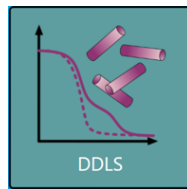
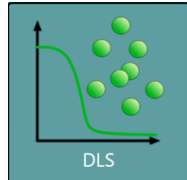
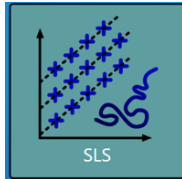
Enlight the nanoworld

# THETIS™

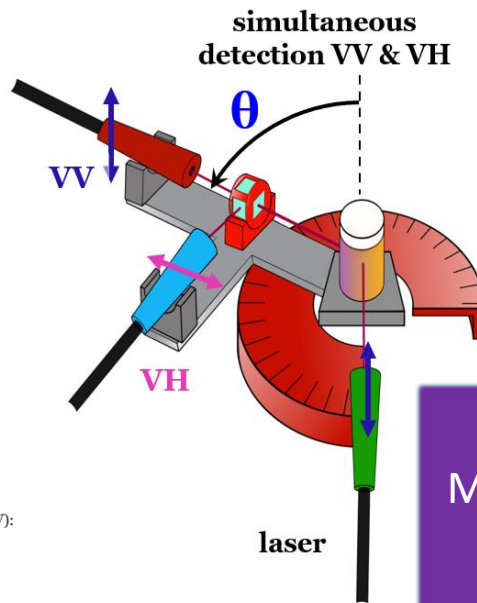


## 3 measurement modes in one instrument :

- Continuous Multi-angle SLS (Particle molecular weight, gyration radius)
- Time Resolved DLS (Particle size distribution),
- DDLS (Particle aspect ratio)

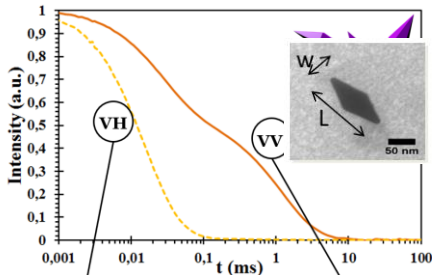


DDLS: Length & width/Aspect ratio measurements



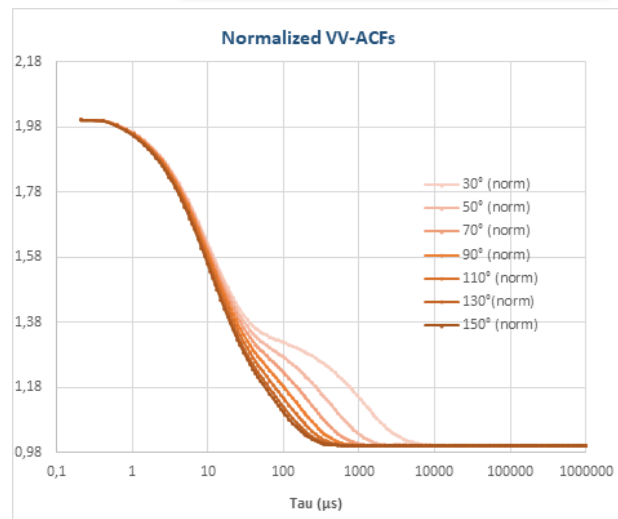
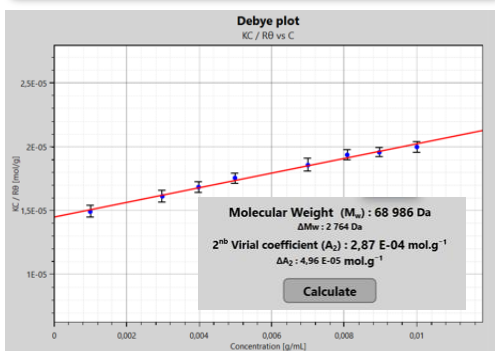
High resolution Multi-angle TR DLS: particle size measurements

Anisotropic nanoparticles



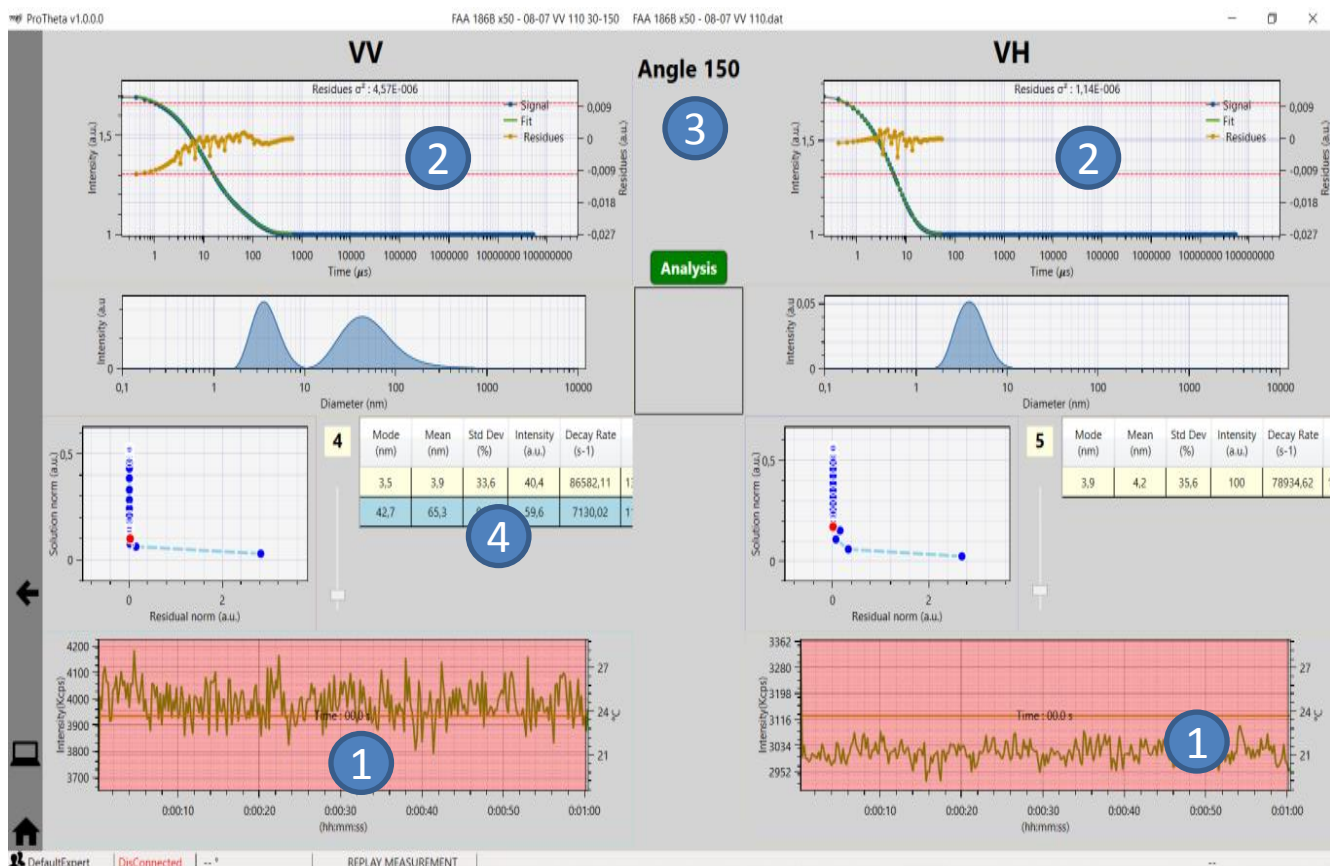
Depolarized configuration (VH): 1 single decay rate  
Polarized configuration (VV): 2 decay rates

Multi-angle SLS measurements: Molecular weight, Gyration radius



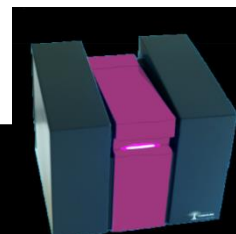
THETIS,

the most compact & advanced Light scattering instrument for your lab



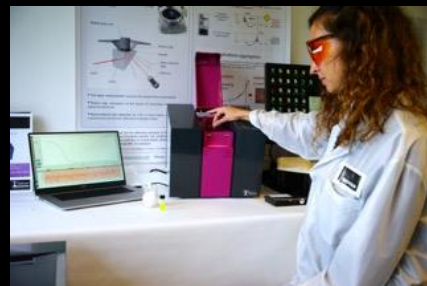
## Advanced functionalities & intuitive menus

- 1- Time resolved D-DLS
- 2- Both VV and VH measurements
- 3- User selected/automatic scattering angle setting
- 4- Automatic calculation of length, width and Aspect ratio / Rotational and Translational Diffusion Coefficient measurements



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## Main characteristics



### SPECIFICATIONS

Particle size range	Particle size : 1 nm up to 1 $\mu$ m
Sample concentration	0.0001% to 10% w/% (solvent dependent)
Temperature control range inside the cell	10°C to 70°C; +/-0,1°C (depending on cuvette cell material)
Sample cell	Cell : optical quality QS cylindrical ; 10 mm light path;
Sample volume	>400 $\mu$ L
Sample type	Aqueous & organic solvents; pH: 1-14 (depending on cuvette cell material)
Anisotropic range	Anisotropic Ratio from 2 to 100

### MEASUREMENT CONFIGURATION & PROCESSING

Measurement technology	Static Light Scattering (SLS), Depolarized Dynamic Light Scattering (DDLS)
Polarization	VV - VH
Laser source	Highly reliable 50 mW diode @635 nm coupled to automated optical attenuation system. Other wavelengths available upon request.
Measurement angles	All angles from 30° to 150°, step = < 0,1°
Data processing algorithm	Real time and Time resolved autocorrelation (TR -DLS)
Detector	High sensitivity Avalanche Photodiode (APD)

### GENERAL

Computer interface	USB 2.0 – Windows 10 32 & 64 bits
Dimensions	33 cm x 33 cm x 38 cm (HWD)
Weight	17 kg
Power supply	100-115/220-240 VAC, 50/60 Hz, 100 W max

### SYSTEM COMPLIANCE

CE certification	CE marked product - Class I laser product, EN 60825-1:2001, CDRH
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