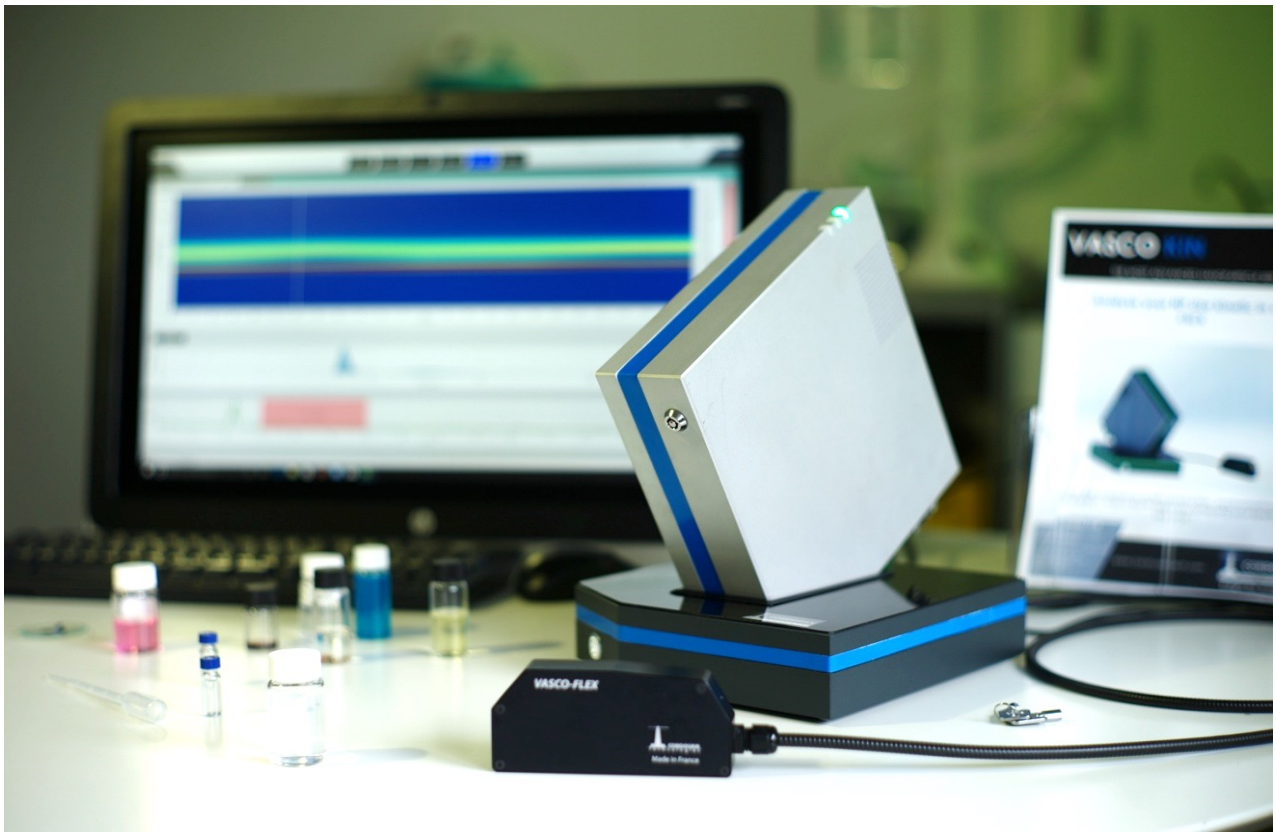
VASCO KIN

CORDOUAN Technologies

THE MOST ADVANCED NANOPARTICLE SIZE ANALYZER

Real Time Correlation for Time-Resolved analyses



For monitoring of NPs synthesis, agglomeration or suspension stability study, Vasco Kin™ helps you analyzing your Kinetics in real time !

IDEAL FOR

- Real-time nanoparticle synthesis process monitoring,
- *In situ* measurement (inside reactor),
- Coupling particle size measurements with other instruments (SAXS, spectroscopy, etc),

www.cordouan-tech.com

CORDOUAN Technologies

Enlight the NanoWorld

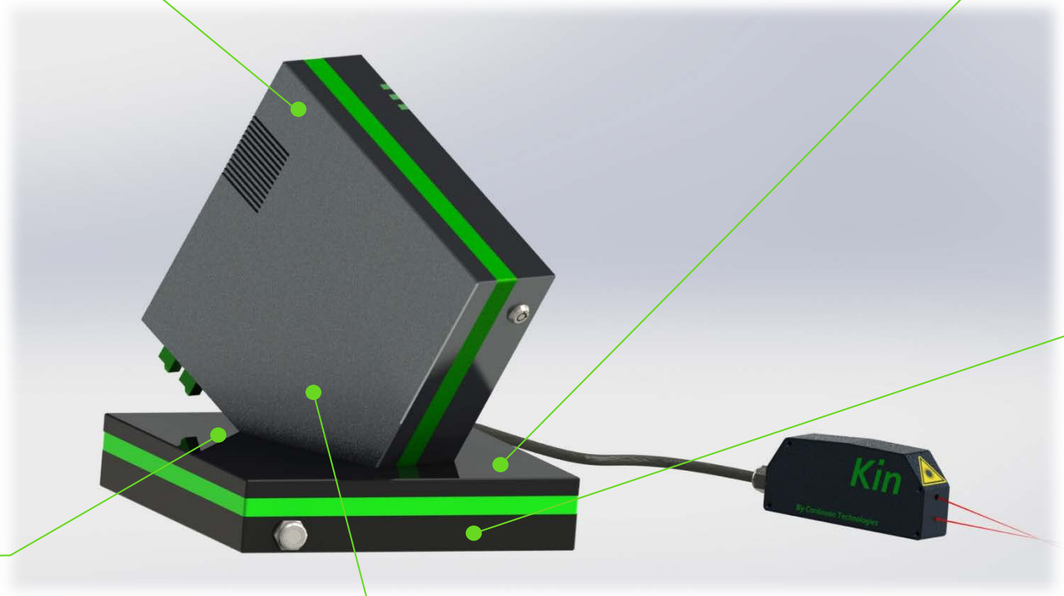
VASCO KIN

A new generation of Time - Resolved instrument for accurate kinetic analyses

PLUG & PLAY,
AND AUTOMATIC SETTINGS

IMPROVED **REPEATABILITY**
OF MEASUREMENT

IN SITU AND CONTACTLESS
MEASUREMENT



CUTTING-EDGE TECHNOLOGIES

- **Frequency stabilised Laser**
- Artefact-free Avalanche Photodiode (APD) detector
  - → **High measurement accuracy**
  - → Measurement of diluted & sub-nanometer samples (i.e. proteins)

NANO KIN™

- Complete & **user-friendly software**
- Dedicated to dynamic analysis
  - → With a **unique « time slicing » function**
  - → A Full report including kinetic analysis

SMALL FORM FACTOR (SFF)

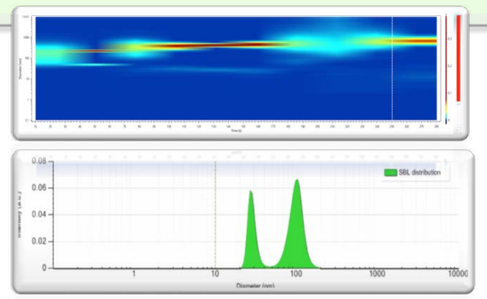
- → OEM integrability, remote control
- → Very small footprint

SOFTWARE CORRELATION

- **Photoncounts storage**
  - → Time-resolved analysis and post-analysis
  - → For an innovative approach for dynamic study
- **Rapidity**
  - → Realtime measurement
  - → Higher number of acquisitions → higher statistic

ENHANCED MATHEMATIC MODELS

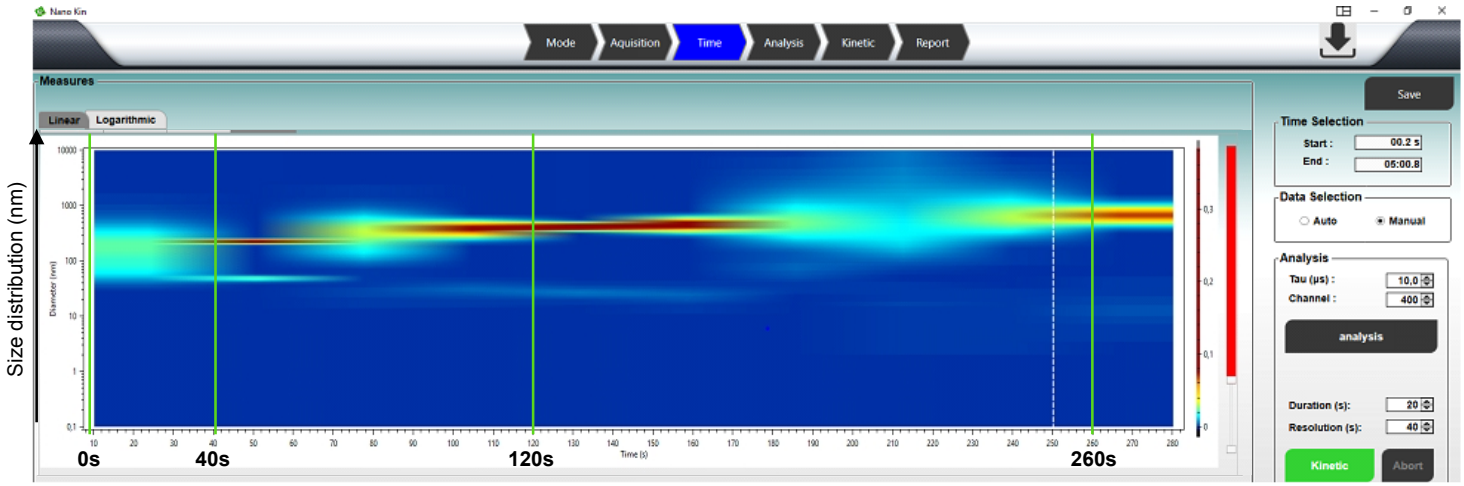
- **Sparse Bayesian Learning algorithm**
  - → For a better reliability of results
  - → **Colormap** of size distribution over time



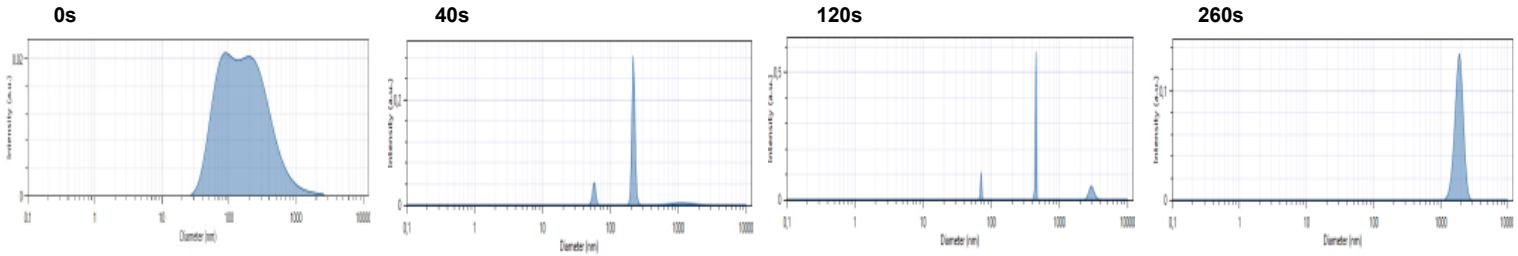
DYNAMIC SAMPLE TESTING

Example: **Kinetics study** of reaction and gel structure monitored by pH, salinity and particles concentration.

Colormap of size distribution over time



Size distribution for the chosen times



With a **single** and **continuous** measurement, VASCO KIN™ gives you access to all characterization data of your reaction (size distribution evolution over time).

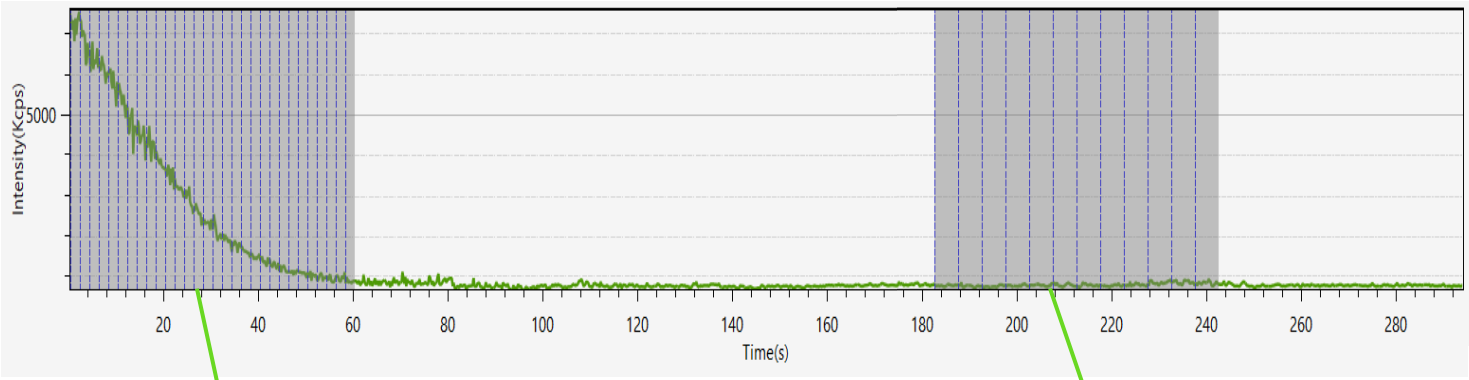
Resolved instrument for accurate kinetic analyses

TIME SLICING AND ACCURATE MEASUREMENTS

The unique “time slicing” function allows VASCO KIN™ users to **choose measurement’s resolution**, by selecting **a posteriori** the analysis’ time scale.

Users then obtain corresponding correlogram & size distribution for the chosen time scale.

Example: *Historical data recorded*

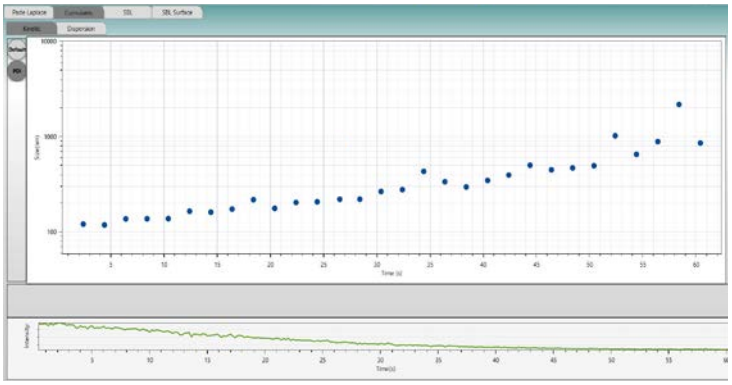


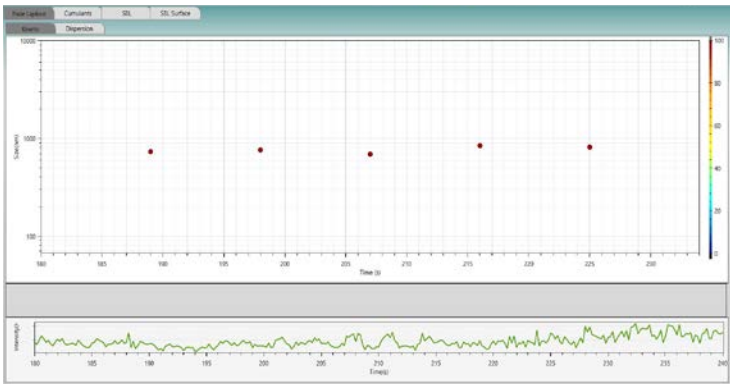
Resolution: **2s**

Time scale: **1min**

Resolution: **9s**

Size distribution over time for the chosen time scales





High resolution for fast kinetics analysis

High measurement’s stability over time

VASCO KIN

OPTICAL HEADS' SPECIFICATIONS	
Measurement principle	Optical Fiber Dynamic Light Scattering (DLS)
Min. Sample Volume (µL)	<50 µL (cell dependant)
Sample Cells	In situ – Contactless remote probe
Solvent compatibility	Aqueous & Organic solvents (Cell dependent)
Scattering Angle (°)	170°
Particle size range	0.5 nm – 10 µm (sample dependent)
Sample concentration range	10^{-5} % to 5~10% volume (sample dependant)
Dimensions / Weight	50 x 25 x 120 mm (HWD) / < 0,5 kg

HARDWARE SPECIFICATIONS (central unit)	
Laser source	High stability laser diode (option blue and green)
Detector	Artefactfree Avalanche Photodiode (APD)
Computing	Embedded dedicated PC
Data processing	Correlation and analysis software: NanoKin®
Measurement time (typ)	Starting from 200 ms, depending on sample and measurement settings
Operating conditions / Storage conditions	15°C to 40°C / -10°C to 50°C – Relative humidity < 70% non condensing
Dimensions / Weight	220 x 220 x 64 mm (upper part) / 2,5 kg 220 x 220 x 48 mm (lower part) / 2,8 kg

SYSTEM COMPLIANCE	
CE certification	CE marked product – Class 3b laser product – EN-60825-1: 2001, CDRH
Normalization	ISO 13321 (1996) & ISO 22412 (2008) compliant, CFR 21 part 11 (option)

ACCESSORIES & SERVICES	
	1 year warranty, on site installation and training, online support
	NanoKin® (already installed) & instruction manual
	Pelicase ™ transportation case (option)
	NIST Certified latex suspension kit (option)
	Monitor display, keyboard, mouse

Distributor details

GMP

GENERAL MICROTECHNOLOGY & PHOTONICS

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