



Analytical instruments for the entire life cycle of materials...

Multi sample adhesion testing for coatings & composites

Dispersibility & Particle size distribution & density, HSP

Direct accelerated separation, stability for original adhesives, paints, pastes



Comprehensive analytical characterization of emulsions & suspensions for:

Additive
Manufacturing
Adhesives
Batteries

Chemicals
Coatings
Composites
Construction
Materials

Fillers
Paints
Printed
Electronics
Sealants

Adhesion Analyser

- Easy & quick preparation of test specimen
- Tensile, shear and bonding strength
- 8 different samples @ identical conditions
- Small & medium samples on any substrate
- No sample clamping
- Increasing & alternating loads (0.1 N-6.5 kN)
- Cost-saving multi-use of test stamps
- Characterization of surface treatments
- Temperature controlled (-11 °C to +40 °C)

Norms: ISO 4624, DIN EN 13144, JIS K 5600-5-7, DIN EN 15870, DIN EN 14869-2, ASTM D4541, ISO 9211-4

X-Ray Separation Analyser

- In-situ analysis of transparent up to very opaque particulate systems
- No dilution of emulsions or suspensions
- Nanoparticle detection
- See/understand complex dispersion behaviour
- Study the various instability mechanisms
- High resolution phase separation
- Detect concentration gradients within phases and sediment
- Determine packing densities in the sediment
- Endless monitoring of sample behavior for long-time storage information
- Real time, non-invasive and non destructive

Norms: ISO/TR 13097, ISO/TR 18811, ISO 18747-1

Multi-wavelength Dispersion Analyser

- Get direct & accelerated stability measurements in original concentration
- Particle size distribution (PSD) with high resolution
- Run up to 12 samples at a time
- See and understand your complete sample from top to bottom
- Measure samples under a broad temperature range (4 °C to 60 °C)
- Measure particle size distribution even at higher concentrations
- Analyse concentrated samples (up to 90%)
- Acquire particle densities
- Comparative and predictive shelf life analysis

Norms: ISO 13318, ISO/TR 13097, ISO/TR 18811, ISO 18747

LUMiFrac®



More info on LUMiFrac.com

LUMiReader® X-Ray



More info on LUMiReader-xr.com

LUMiSizer®



More info on LUMiSizer.com

LUMiSpoc® Single Particle Optical Counter

- Particle counting & size distribution
- Number concentration determination
- Direct number-based particle size distribution of nano- & microparticles
- Classification of nanomaterials

Norms: ISO 21501-2

More info on LUMiSpoc.com



LUMiReader® PSA Separation Analyser

- Real-time stability directly
- Speed up separation analysis time (up to 10-fold)
- Volume and number-based PSD (ISO 13317)
- Volume-based PSD without refractive indices
- Multi-wavelength approach
- Separation velocity distribution
- Temperature stabilization from 4 °C - 80 °C, constant or ramp
- Any dispersing media: water, oils, organic solvents
- Norms: ISO/TR 18811, ISO 13317, ASTM D7827, ISO 18747, ISO/TR 13097

More info on LUMiReader.com



Recent Applications include:

Measuring the strength of different adhesive bonds by means of analytic centrifugation:

<https://bit.ly/3iVVAwz>

Screening of superparamagnetic iron oxide nanoparticles for their application in the human body: Influence of various coatings: <https://bit.ly/3XUebb1>

Synthesis of a Stretchable Polyampholyte Hydrophilic Film with Compositional Gradient for Long Term Stable, Substrate Independent Fouling Resistant Coating: <https://bit.ly/3JFOfMQ>

ISO 9211 4 Optics and photonics Optical coatings Part 4: Specific test methods: abrasion, adhesion and resistance to water: <http://bit.ly/3YomOLh>

Synergistic Effect of Dual Ceramics for Improving the Dispersion Stability and Coating Quality of Aqueous Ceramic Coating Slurries for Polyethylene Separators in Li Secondary Batteries: <http://bit.ly/40okrdo>

Silica coated superparamagnetic iron oxide nanoparticles: New insights into the influence of coating thickness on the particle properties and lasioglossin binding: <http://bit.ly/3YcT6Jk>

Selection of Optimum Multi Component Solvent Mixtures for Particle based Wet Chemical Coating Solutions in Industrial Applications: <https://bit.ly/3wR4rD1>

Biobased Waterborne Polyurethane Urea/SWCNT Nanocomposites for Hydrophobic and Electrically Conductive Textile Coatings: <http://bit.ly/3DFun8B>



LUM social



bit.ly/3GM5p8i



bit.ly/3yIkwx9

LUM community

Visit our platform 'Dispersion Letters' dedicated to professionals working in various fields of R&D, QC:



bit.ly/3HgIILZ

LUM knowledge

For further information, search the LUM Literature Database:



bit.ly/3J1mUUS

Demo & samples

Contact us for sample testing, instrument demonstrations or application support:



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