

LIGHT. PRECISION. ANALYTICS.



CORALIS Combined Raman LIBS System

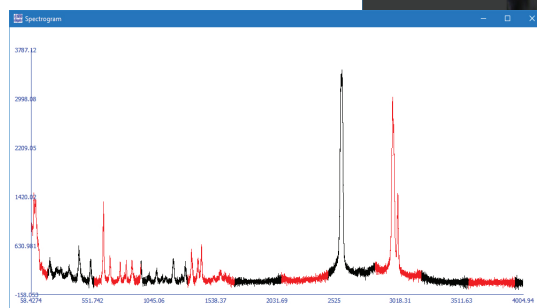
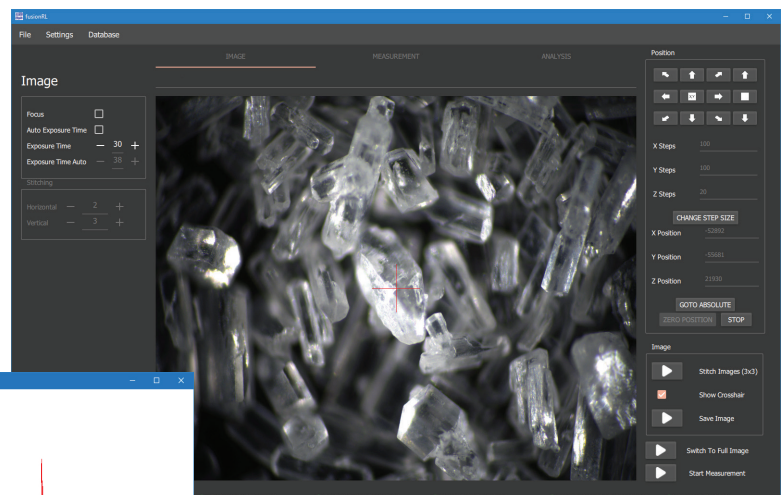
Analyze what you want:

- Elemental composition or chemical structure
- Material identification, classification or quantification
- Particles or surfaces
- Solid samples or liquids
- Single spots or area scans

The CORALIS system unites the two high complementary techniques LIBS and RAMAN. By means of a high-quality sample image, pre-selected measurement positions are analysed either with Raman or LIBS or with both methods sequentially of solid and liquid samples. The unique two wing echelle spectrometer as core part is able to provide high resolution, large range and high light-throughput on an unbeatable level. The laser-safe housing and the integrated interlocking circuit ensure user-friendly handling of the device and protection of the installed components.

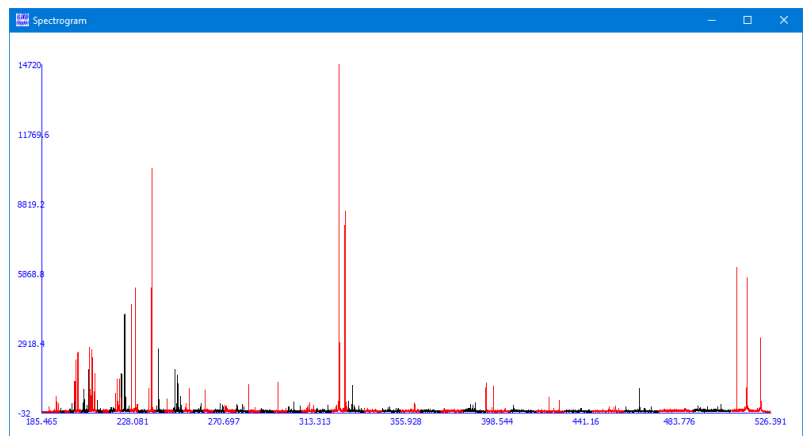
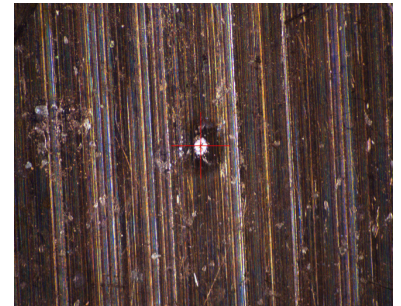
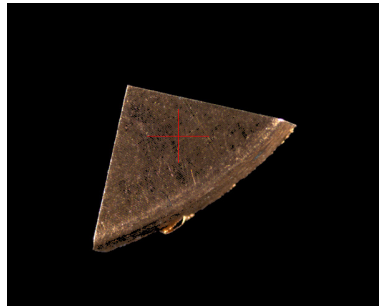
Applications:

- Particle analysis
- Gemology
- Forensics
- Mineralogy
- Environmental
- Cleanliness



By means of the powerful software package FusionRL the CORALIS user is given:

- High quality sample imaging – with micrometer sized resolution and centimeter sample overview
- The free choice and free combination of LIBS or/and Raman measurements
- A convenient tool for rapid particle recognition
- An unbeatable flexibility in the design of the experiment
- FusionRL supports single spot measurements, area scans in one ROI (region of interest), multiple ROI's and mapping of depth profiles
- A powerful and yet continuously expanded data analysis software package
- It provides fast methods of material classification for both, LIBS and Raman data as state-of-the-art tools for sample quantification
- Included are advanced tools for data pretreatment (base line correction, normalization,...), calibration and uni- and multivariate data analysis



Specifications

Measuring technique	Laser-induced breakdown spectroscopy (LIBS) RAMAN spectroscopy	Qualitative and quantitative multi-element analysis Analysis of molecule structures by the detection and interpretation of scattered light
LIBS	Laser Wavelength range Resolution	1064 nm (up to 50 mJ pulse energy) 190 nm - 520 nm 0,013 nm - 0,035 nm
Raman	Laser Wavelength range Resolution	532 nm and 785 nm (up to 50 mW) 530 nm - 950 nm (up to 6000 cm-1) 532nm: 2,5 - 2,0cm-1 785nm: 1,7 - 1,4cm-1
XYZ stage	Travel range Resolution Repeatability	X = 50 mm , Y = 50 mm , Z = 35 mm 1 µm 1 µm
Sample Imaging	Overview image Detail image	Image field (28 x 19) mm magnification 10 x Image field (3,5 x 2,5) mm magnification 80 x
General	Dimensions Safety	1200 x 750 x 750 mm Laser class 1
Software Features	Measuring methods Analysis	Single or average spectra recording Sample mapping and depth scans Particle and particle size identification Univariate and multivariate analysis Material identification analysis Database with reference spectra for fast sample identification
Accessories	Standard samples	Certified standard samples for size calibration Certified reference samples for LIBS and Raman