

Elemental Insight

HIGH-SPEED ELEMENTAL IMAGING

FEATURES

- 1 KHZ LIBS IMAGING
- 5-200 μm RESOLUTION (PIXEL SIZE)
- FULL ELEMENTAL COVERAGE
- LARGE SAMPLES 200 X 300 mm

Water-cooled, 1000 Hz 193 nm ArF excimer laser for high-speed imaging

Laser spot size adjustable between 5-200 μm

~2 million pixels per hour

Multi-channel CMOS detector

Optional ICCD upgrade

Debris removal



Elemental Insight

High-speed Elemental Imaging | 1k Hz LIBS Imaging

INNOVATION TO ILLUMINATE

HEPA Filtration Unit

- Ensures clean and safe laboratory conditions by filtering out dust from LA process

Robust Beam Delivery System

- Simple yet efficient beam delivery system including robust mirrors and lenses
- Sealed and purged with N_2
- Robust for hundreds of millions of laser shots

LIBS Detection Module

- 5 or 6 channel CMOS-based spectrometer array
- Optional ICCD detection

200 mm x 200 mm XY Stage

- High speed imaging of large samples at 400 mm per second
- Linear encoders for high accuracy pixel placement
- Optional 300 mm Y axis

Onboard Gas Storage

- Onboard storage of ArF and He cylinders

Mobile and Compact Cart

- Rugged, cart-based system ensures Elemental Insight can be moved as desired without risk of misalignment

Multi-fiber Light Collection

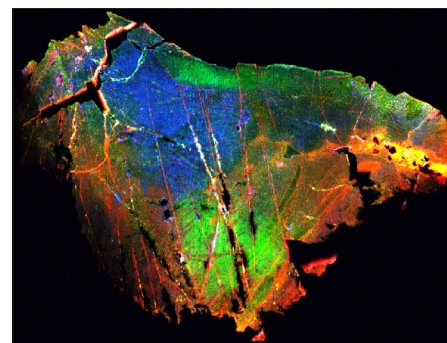
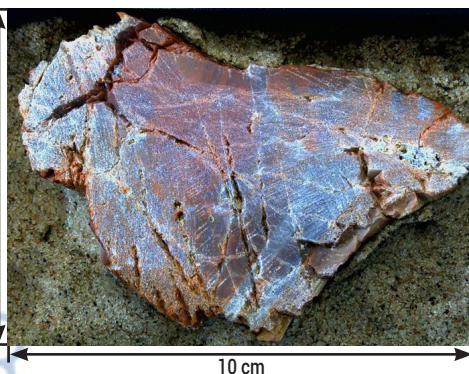
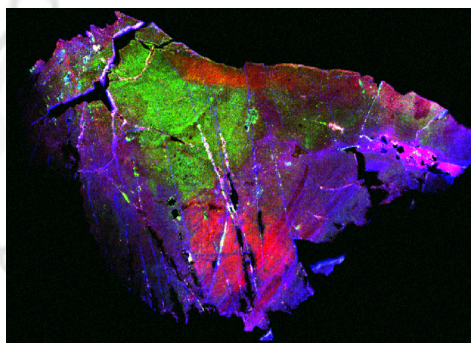
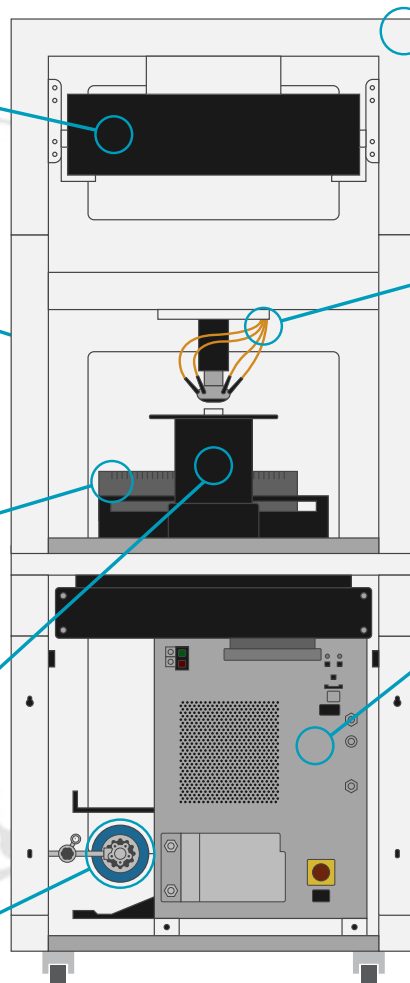
- Dedicated light collection optics and transport per channel leads to lowest LOD's
- Robust collection optics less susceptible to misalignment

193 nm, 1000 Hz Excimer Laser Source

- Efficient coupling with a wide variety of sample types
 - Provides low LOD's
- Enables high speed imaging at 1000 pixels per second

Simple UI with Onboard Data Processing

- ESL's ActiveView2 control software including iolite data processing and image generation



Elemental Scientific
LASERS

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