



LABORATORY OF LASER SPECTROSCOPY

Fast multi-elemental chemical analysis

SERVICES

- qualitative and quantitative elemental analysis
- solid-state samples, analysis of surfaces
- 2D elemental imaging and depth profiling of thin layers
- Providing reference analysis (wet chemistry) and complementary analysis (Raman)
- capability of sample preparation
- data processing, including chemometrics and neural networks

TECHNOLOGY

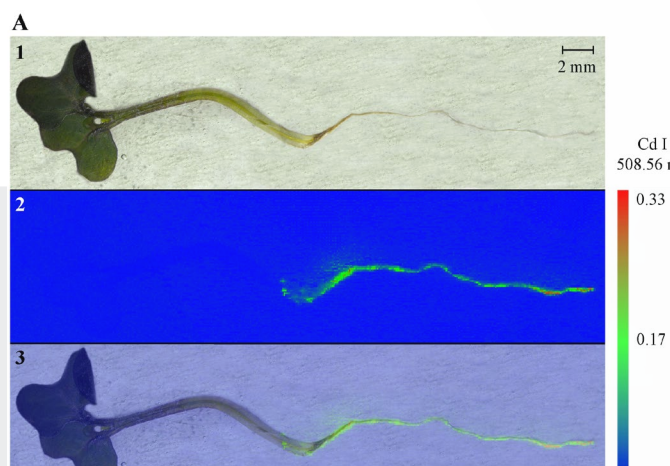
- main interest in Laser-Induced Breakdown Spectroscopy (LIBS)
- possibility of analysis using X-Ray Fluorescence and wet chemistry methods, incl. Inductively Coupled Plasma Optical Emission Spectrometry
- capability sample analysis using Raman Spectroscopy

INSTRUMENTATION

- laboratory-build LIBS system equipped with ns-laser sources
- optical spectrometers in Czerny-Turner and Echelle arrangement covering 178-1050nm wavelength range
- shadowgraphy and plasma imaging with ns-time resolution
- vacuum interaction chamber enabling analysis in inert gas atmosphere (Ar, He) or under under- or overpressure (1-1300 mBar)

MORE INFO

Jozef Kaiser | jozef.kaiser@ceitec.vutbr.cz
libs.ceitec.cz



Spatial distribution of Cd in White Mustard

