

RESEARCH

Development of a multi-analytical micro-invasive approach, through to the combined use of FTIR spectroscopy with optical microscopy by employing micro-ATR or micro diamond cell and fiber optic microfluorimetry. Analytical applications to micro-samples from paintings and artifacts of historical and artistic value, have allowed us to study painting techniques and materials, polymeric materials used for objects of design, products of degradation and specific treatments for the conservation of works of art.

RESEARCH GROUP

MIDAr & CUSBO

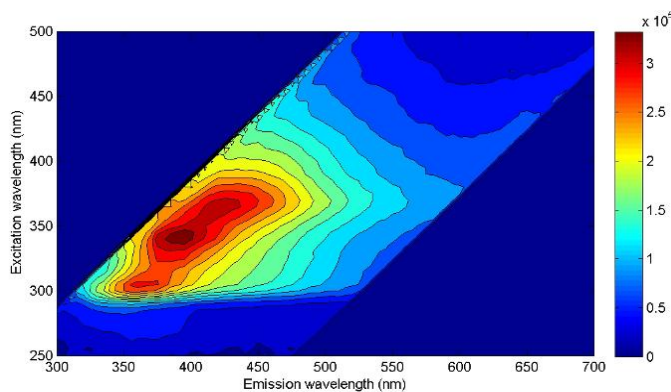
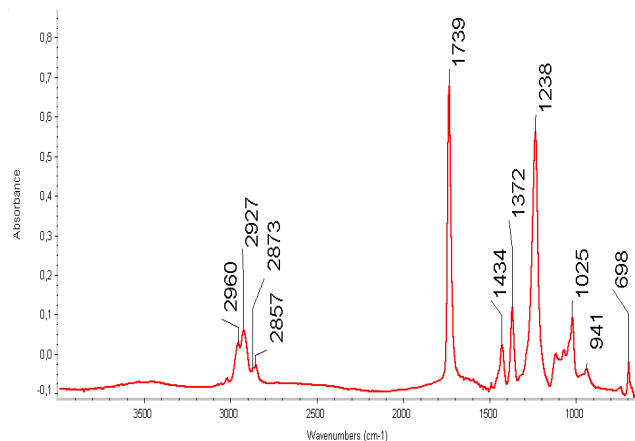
<http://midar.chem.polimi.it>

<http://www.laserlabeuropa.net/partners/partners-cusbo>

Politecnico di Milano –Dept. of Chemistry and Physics:

Daniela Comelli
Rinaldo Cubeddu,
Sara Goidanich
Austin Nevin
Lucia Toniolo,
Gianluca Valentini

MICRO-FTIR E MICROFLUORIMETRY



ADVANTAGES

The FTIR analysis provides a molecular characterization of the micro-sample and allows us to detect any molecular change due to degradation processes; the spectrofluorimetric analysis with the collection of matrices of excitation/emission can highlight specific deterioration problem on the surface.



APPLICATION PORTFOLIO

- Study of varnishes on panel paintings
- Study of design objects from various collections
- Study of the aging behavior of natural products for preservation, such as oils, waxes and gums.