

Analyses of paintings : new advances in the development of micro-destructive and non destructive techniques.

Venue: University of Bologna, Italy
Chemistry Department "G. Ciamician"

Date: **14th June, 2013**

In September 2007 an analogous workshop aimed at presenting and discussing the available micro-destructive analytical techniques used to characterize the organic materials in paint cross sections was organized by the Microchemistry and microscopy art diagnostic laboratory (M2ADL) of the University of Bologna.

This workshop will provide an occasion to broaden the available analytical methods to non-destructive ones. This will be achieved by presenting and discussing the results of a two years research project [Scientific Research Programme of National Relevance (PRIN08)], coordinated by the University of Bologna (M2ADL Laboratory) in collaboration with the Universities of Perugia and Florence, on the setting up of micro-destructive analytical methodologies for the characterization and spatial location of organic substances (varnishes, binding media, organic pigments, etc.) in paintings. It will also be an occasion to present the research results achieved by other colleagues who have been developing new advanced non-destructive techniques (i.e.: *profile* NMR-MOUSE, Optical Coherence Tomography, Terahertz, etc.) for the stratigraphic characterization of paintings materials.

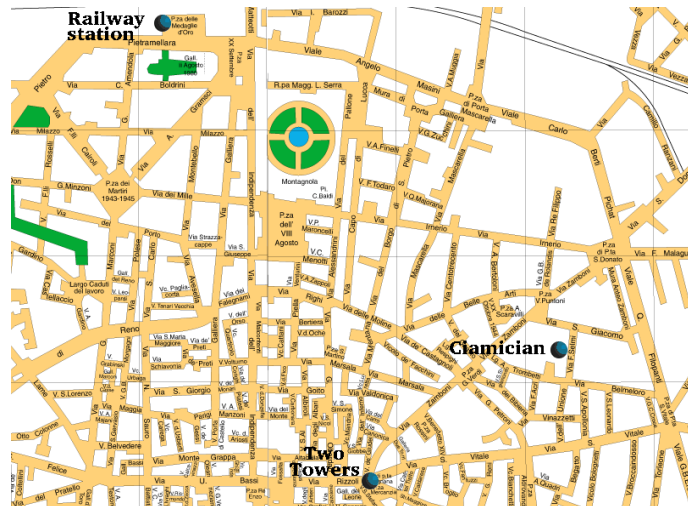
The international workshop foresees presentations given by **B. Bluemich** (RWTH Aachen University), **B. Brunetti** (University of Perugia), **M.E. Castellucci** (University of Florence), **M.P. Colombini** (University of Pisa), **R. Mazzeo**, **A. Roda**, **M. Marcaccio**, **S. Prati** (University of Bologna), **M. Menu** (Centre de recherche et de restauration des musées de France, Paris), **M. Ricci** (University of Florence) and **P. Targowski** (Nicolaus Copernicus University, Torun) (see attached workshop agenda).

SCIENTIFIC COMMITTEE

Rocco Mazzeo, University of Bologna
Silvia Prati, University of Bologna
Aldo Roda, University of Bologna
Bruno Brunetti, University of Perugia
Marilena Ricci, University of Florence
Emilio Mario Castellucci, University of Florence

WORKSHOP LOCATION

The workshop will be held at the Chemistry Department "G. Ciamician", via Selmi 2,



By air

[The airport](http://www.bologna-airport.it/uk/?LN=UK) (<http://www.bologna-airport.it/uk/?LN=UK>) is located outside the city, towards Borgo Panigale. For information about the airport, flights, etc.: Aeroporto G. Marconi, Via dell'Aeroporto 50, Ph. 0039 051 6479615 (05.00 - 24.00)

From the airport

- Take the [Aerobus](#), [alight](#) at the railway station and take bus n. 32 (stop Filopanti) and walk to the Department
- Take the [Aerobus](#), stop in via Indipendenza (VIII Agosto) and walk to the Department (10 min)
- Take a taxi (The airport is 6 Km far from the centre of Bologna)

By train

For timetables and ticket purchases use the Trenitalia web site (<http://www.trenitalia.com>) website, which gives useful information on train stations, special deals, agencies, and a complete railway timetable.

From the railway station:

- Take bus n. 32 in front of the railway station to stop Filopanti (4th stop). On foot, take the 1st street right (via S. Giacomo), then the first left (via Selmi).
- On foot it takes about 20 minutes following via Indipendenza, via Innerio, via DeRolandis, via S.Giacomo, via Selmi

Taxi

Co.Ta.Bo.: Ph. 051 372727

Radiotaxi: Ph. 051 534141

Taxi sharing

For more information about taxi sharing, in which at least three passengers are taken from the same starting point to the same destination, contact:

UFFICIO TAXI e N.C.C.

Via Brugnoli 6/c, Ph. 051 203071 Fax 051 203052 Mon-Tues-Fri from 8:30 to 12:30, Thurs from 15:00 to 17:00

WORKSHOP REGISTRATION

The workshop is free, however due to the limited seats available, prospective participants are kindly asked to send, as soon as possible, to Silvia Prati (s.prati@unibo.it) an email confirming their interest to participate in the workshop.

WORKSHOP AGENDA
Chairmanship: Rocco Mazzeo

<i>Speaker</i>	<i>Title</i>
10.00-10.30	Registration and welcome addresses
NON DESTRUCTIVE TECHNIQUES	
10.30-10.55	P. Targowski Nondestructive Testing of Paintings by Optical Coherence Tomography
10.55-11.20	B. Bluemich Nondestructive Testing of Paintings by Mobile Magnetic Resonance Imaging (MRI).
11.20-11.45	M. Menu Terahertz application to reveal hidden faces on fresco
BULK TECHNIQUES	
11.45-12.10	M. P. Colombini Looking at contemporary paintings by Py-GC/MS, GC/MS and HPLC-Q-TOF techniques.
MICRO DESTRUCTIVE TECHNIQUES-SPECTROSCOPIC	
12.10-12.35	R. Mazzeo Evaluation of the effects of sample preparation on the results achievable by means of FTIR spectroscopy in ATR mode
12.35-13.00	B. Brunetti Micro-infrared reflection spectroscopy for the study of paint-cross section
13.00-14.00	<i>Lunch break</i>
14.00-14.25	S. Prati Analysis of paint cross-sections: a combined multivariate approach for the interpretation of μ ATR-FTIR hyperspectral data arrays
14.25-14.50	E. M. Castellucci Novel SERS-Raman methodologies for cultural heritage
14.50-15.15	M. Ricci Cinematographic film: a SERS-active substrate?
MICRO DESTRUCTIVE TECHNIQUES-IMMUNOLOGICAL	
15.15-15.40	L. Cartechini Immunologic strategies for detection of proteinaceous binders in painting materials
15.40-16.05	A. Roda New immune-based systems for the selective detection of proteins in paint cross sections
16.05-16.30	M. Marcaccio Localization of Proteins in Paint Cross-Sections by Scanning Electrochemical Microscopy as an Alternative
16.30-17.30	Round Table Immunochemical Detection Technique The examination of paintings: identification of future research priorities