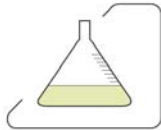


CMST



Chemistry and Molecular Sciences and Technologies

Chemical Interactions between Indoor Environment and Cultural Artefacts

ENVIART

By John Havermans
Chair Cost D42

Networks: COST Actions

European **CO**operation in the field of **S**cientific and **T**echnical Research

Pan-European network

Cost launched in 1971

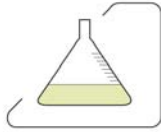
- Now: over 200 ACTION
- 31 countries
- 16 research domain

COST Cultural Heritage Interest Group

Funded by EU FP7 program

The logo for the European Science Foundation (ESF) consists of the words 'EUROPEAN SCIENCE FOUNDATION' stacked vertically in a green, sans-serif font.The COST logo, featuring a stylized blue 'C' icon followed by the word 'cost' in a bold, blue, sans-serif font.

CMST



Outdoor
pollutants

Indoor
pollutants

Deterioration

Storage

Analyze

Harmonization



Travelling on bike is healthy



Our 3 working groups

Working Group - 1 Preservation		Working Group - 2 Analysis		Working Group - 3 Guidelines	
Task Group 1 Degradation & Stabilisation	Task Group 2 Prevention	Task Group 1 Materials	Task Group 2 Environment	Task Group 1 Methods	Task Group 2 Storage & Health
Focus 1.1 Effects air pollution on degradation Strategies for stabilisation Field and lab studies	Focus 1.2 pollutants and artefact Chemical air purification Development new strategies & Innovative methods	Focus 2.1 Analyses object Analyses environment Non destructive tools Building materials	Focus 2.2 Assessment VOC Endogeneous and exogeneous emissions Particulate matter Sampling	Focus 3.1 Assessment and evaluation of current methods and standards	Focus 3.2 Healthy storage guidelines Handling Exhibition
Common Focus <ul style="list-style-type: none"> •Fundamental Research •Dissemination Activities 					

Steering Committee

CMST



Thomasz (WG2)

John (Chair)

Matija (WG2)

David
(WG1)

Vasco
(WG3)

Mieke
co-chair

Morten
(WG3)

Pjotr
(COST)

Missing
Anne-Laurence (WG1)
Jana (STSM)



WG-1

- WG 1 has two focus areas:
 - *Degradation & Stabilisation and Prevention.*
- Understanding of chemical changes by
 - AFM, HPLC and synchrotron FTIR and XRD
 - Proteinaceous materials in different environments.
- Correlations between
 - the microscopic and physical properties of such materials
- Initiated at the COST strategic conference, 'Past, Present, Prediction' in Orhid (2007)
 - improved knowledge on experimental ageing experiments



WG-2

- The *object* and the *environment* makes
 - the focus of WG 2 on analysis of D42 complex and challenging.
 - So far, three principal meetings were held:
 - Ohrid (MK, June 6), Padua (IT, October 4th) and in Copenhagen (DK, November 24).
 - These areas of research seem to be on the rise
 - spectroscopic methods in combination with chemometrics,
 - chromatographic methods for
 - environmental analysis and
 - polymeric materials (natural and synthetic),
 - And environmental monitoring.



WG-3

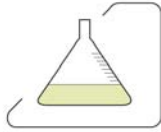
- Focussing on guidelines for both
 - *methods and storage and health* makes that there is a strong synergism between D42 'WG3' with the CEN TC346 'WG4-Environment'.
- Serious discussion on the harmonized application of simple industrial devices measuring the relative humidity.
 - Here standardized sensors are applied, however the housing design made the sensors not responding adequately.
- Items as:
 - 'new specification for light and lighting for exhibitions of art and artworks';
 - 'harmonization of indoor environmental conditions';
 - scientific differences between current methods for artificial pollution';
 - 'RH in cultural heritage and interaction of moisture with historic materials ';
 - 'the role of a historical climate' were frequently discussed. WG3 is focusing on guidelines in methods and on storage conditions and health aspects.



Meetings

- Workgroup meetings
 - MC meetings
 - Workshops
 - STSMs
- WG3 meeting in Padova 10th April 2008
 - WG1 meeting in Vienna 16th April 2008
 - Workshop at the ART2008 event (25-30 May, 2008)
 - WG and MC meeting in Ljubljana, 15th November
 - WG 1.2.3 meeting in Istanbul (date will be announced later)
- BOOKs:
 - Basic environmental mechanisms
 - Indoor atmosphere and its interactions with heritage

CMST



Preventing man's head against
Sunlight
WG-1

Measuring the speed
WG-2

Standardizing size of the wheel
WG-3



Thank you!

The D42 bike