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CMST Action COST D42

## Chemical Interactions between Cultural Artefacts and Indoor Environment (EnviArt)

Descriptions are provided by the Actions directly via e-COST.

The description of the state-of-the-art showed that research on the chemical interactions between cultural artefacts and the indoor environment and standardisation is performed already at the international level, but still needs serious efforts for coordination. Only a close multidisciplinary cooperation will ensure that our current collection of cultural artefacts will be accessible for future generations.

The main objective of the Action is to explore chemical interactions through field studies and laboratory experiments and to translate the results into preventive conservation practice.

In more detail the technical objectives are to:

- \* contribute to a better understanding of natural ageing of historic materials particularly due to the indoor environment;
- \* assess the chemical degradation rates connected to defined environmental conditions with laboratory experiments;
- \* investigate the chemical interaction of materials with typical indoor pollutants;
- \* monitor conditions in museums, archives and libraries as to the chemical composition of the indoor air and the air corrosivity parameters;
- \* disseminate knowledge on the potential damage of chemical and physical parameters in the indoor environment;
- \* understand the chemical composition of the indoor environment in relation to the chemical interactions of the environment and the artefact
- \* provide a platform between chemical scientists in the field of conservation research and other scientist and workers such as collection keepers, museum curators and engineers, aiming to improve best practice in preventive conservation;
- \* contribute to the standardisation of methods in conservation such as the harmonisation of chemical analyses, measures and prevention in order to better protect our movable cultural heritage against continuous deterioration by the indoor environment.

The Action will improve the multidisciplinary collaboration between key players and will thus improve preventive conservation practices in museums, archives, libraries and also increase the knowledge in the field of chemical deterioration of historical artefacts by the indoor environment. Furthermore, young researchers will benefit, as they will have the opportunity to experience international cooperation and participate in student exchanges and training schools. Because of this COST Action, activities on pre-normative work in cultural heritage will be enhanced.

The outcome of this Action will:

- \* provide a better knowledge of the chemical interactions between the indoor environment and artefacts;
- \* create possibilities for exchange of knowledge between chemists and materials scientists working in the field of preventive conservation with museum staff and decision makers;
- \* provide arguments necessary for the discussion with governmental organisations and the object owners to set higher priorities on funding of preventive conservation;
- \* contribute to establishing guidelines for indoor air quality in museums, archives and libraries;
- \* help to set priorities for investments in collections on display and for

### Chemistry and Molecular Sciences and Technologies COST Action D42

▶ Description

▶ Parties

▶ Management Committee



### General Information\*

**Chair of the Action:**

[Dr John HAVERMANS](#) (NL)

**Vice Chair of the Action:**

[Prof. Annemie ADRIAENS](#) (BE)

**DC Rapporteurs:**

[Prof. Antonio LAGANA](#) (IT)

**Science officer of the Action:**

[Dr Lucia FORZI](#)

**Administrative officer of the Action:**

[Milena STOYANOVA](#)

### Downloads\*

**Action Fact Sheet**

[Download AFS as .RTF](#)

**Memorandum of Understanding**

[Download MoU as PDF](#)

**Progress Report**

[Download Progress Report as PDF](#)

### Websites\*

**Action website:**

<http://www.costd42.org>

**Domain website:**

<http://www.cost.eu/cmst>

\* powered by e-COST

### Publications

- ▶ Basic Environmental Mechanisms Affecting Cultural Heritage: Understanding deterioration mechanisms for conservation purposes
- ▶ International School of Quantum Electronics: 43rd Course - Matter in Super-Intense Laser Fields
- ▶ European Perspectives & Randstad Holland: Synergy in Urban Networks
- ▶ more...

### Videos

- ▶ COST Foresight 2030 - Aubrey de Grey
- ▶ COST Foresight 2030 - Melae Langbein
- ▶ COST Foresight 2030 - Magdalena Radwanska

the concept of risk assessment in general.

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