

ABSTRACT:

CHross Lab: a diffuse laboratory on Cultural Heritage

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The CHross Lab is a diffuse laboratory dedicated to the study of cultural heritage. The laboratory brings together all researchers working on cultural heritage within the DSCTM department of the CNR. We have pooled our expertise to ensure the "scientific management" of world cultural heritage. The aim of the CHross Lab is to become a reference point at local and international level for all those involved in the management of cultural heritage. The laboratory has expertise in the study of materials and their degradation phenomena aimed at basic material knowledge for restoration interventions. In this field, too, the laboratory is able to contribute with the development and characterization of intelligent, compatible and durable materials that can adequately support restoration interventions. We also contribute to the development of techniques of investigation or conservation as respectful as possible of the cultural good. The focal points are a) the design of green and recyclable materials for cleaning, consolidation and protection of archaeological and historic-artistic assets and historical building complexes; b) the development of intelligent, multifunctional and eco-friendly solutions sustainable for monitoring and conservation and restoration of the environment, c) development of sustainable methodologies and analytical tools for archaeometry, conservation, protection and restoration, d) the development of advanced non-invasive and non-destructive diagnostic methods/protocols for the characterization and monitoring of cultural assets, including IoT disciplines, AI, meeting the eco-sustainability requirement and adhering to the concept of circular economy, e) dissemination, training and awareness activities for an increasingly wide and diverse public, including national and international professionals, stakeholders and cultural institutions. My main activity is dealing with archaeometrical studies, but also with the development of geopolymeric materials for restoration.