

PROGRAM VIEW : 2013 Spring
MY PROGRAM : 2013 Spring

Symposium : Y

WORKSHOP - Protecting and securing our cultural heritage: diagnostics, characterization, conservation and restoration

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Subject	Num.
Session: Diagnostics and Characterization : Michael Stuke	
12:00	<p>Diagnostics of glaze pathologies in ancient (XVII-XVIII cents.) decorative blue-and-white ceramic tiles with the aim of implementing innovative conservation techniques Authors : Teresa P. Silva, Maria-Ondina Figueiredo, Maria-Alexandra Barreiros, Maria-Isabel Prudêncio Affiliations : LNEG, Unity of Mineral Resources and Geophysics, Estrada da Portela, Apt. 7586, 2610-999 Amadora, Portugal; CENIMAT / I3N, Mat. Sci. Dept., Fac. Sci. Technol., New Univ. Lisbon, 2829-516 Caparica & LNEG, Unity of Mineral Resources and Geophysics, Apt. 7586, 2610-999 Amadora, Portugal; LNEG, Unity of Product Engineering, Estrada do Paço do Lumiar, 22, 1649-038 Lisboa, Portugal; ITN/IST, Instituto Tecnológico e Nuclear, Instituto Superior Técnico, Universidade Técnica de Lisboa, EN 10, 2686-953 Sacavém, Portugal Resume : Decorative panels of ceramic glazed tiles configure a valuable cultural heritage in Mediterranean Countries and their preservation requires the development of a systematic scientific approach. Environmental conditions are responsible for the degradation of exposed ancient tile panels originating various pathologies, namely related with the development of micro-organisms and resulting in a very common effect observed nowadays in panels manufactured centuries ago - glaze surface staining. The present work describes a study about the nature of green stains appearing at the surface of Portuguese blue-and-white tile panels from the XVII-XVIII centuries, namely Vista de Lisboa (depicting the city before the great destruction caused by the 1755-earthquake) and Cura do Cego, both belonging to the collection of the National Tile Museum (MNAz) in Lisbon. Tile fragments were directly irradiated using non-destructive but invasive techniques - X-ray fluorescence spectrometry with a wavelength-dispersive system (WDXRF) for chemical characterization of the tile glaze and X-ray powder diffraction (XRD) to assess the phase constitution of both the glaze and the ceramic body. Obtained results are reported and discussed, as a preliminary step for testing an innovative decontamination technique, particularly suitable for overcoming such tile pathologies, making use of gamma radiation. * Work developed within the project RADIART (PTDC/HIS-HEC/101756/2008) financed by FCT/MCTES.</p>
Session: Conservation and Restoration : Giacomo Chiari	
14:30	<p>Novel approach of mural painting materials identification by LIBS (Laser Induced Breakdown Spectroscopy) Authors : V. Detalle (a)*, S. Grégoire (a,d), F. Surma (b), V. Motto-Ross (c), F. Pelascini (d), D. Syvilay (a), Stéphanie Duchêne (a) Affiliations : (a) Laboratoire de Recherche des Monuments Historiques, 29 rue de Paris, 77420 Champs-sur-Marne, France (b) EPITOPOS, , 19 rue de Saint-Junien, 67300 Schiltigheim, France (c) Université de Lyon, F-69622, Villeurbanne, CNRS, France (d) Centre Régional d'Innovations et de Transfert de Technologies Matériaux Alsace, 19 rue de Saint-Junien, 67300 Schiltigheim, France *corresponding Author Resume : Libs (Laser Induced Breakdown Spectroscopy) is well known as elemental technics for detection of solids, liquids or gas. However, it can be used for molecular characterization and some new application can be approach be this way. The laboratory of historical monuments (LRMH, France) was the first laboratory depending from the french ministry of culture to develop (LIBS) in order to identify</p>