



The ninth conference on Lasers in the Conservation of Artworks (LACONA IX)

Wednesday 7th to Saturday 10th September 2011

The British Museum and University College London

Provisional Programme (correct 01 September 2011)

Session A

Laser cleaning of zinc and lead sculptures

J. Agresti, M. Lebel, V. Parfenov and S. Siano

Laser cleaning of graffiti, deposits and oxide stains in dolomitic marble. Comparison with traditional methods

Vanessa Antúnez Pérez, María del Pilar Ortiz Calderón, José María Martín Ramírez, María Auxiliadora Gómez Morón, Bruno Martínez-Haya and Francisco Gámez

Particulate Laser Removal from Artefacts

S. Arif, M. Forster, V. Ljubic, T. Nagy, U. Pacher, S. Batishche, S. Bushuk, A. Kouzmouk, H. Tatur and W. Kautek

Modifications on Iron Corrosion after Laser Cleaning Irradiation

João Avelãs Resende, Anabela Hipólito and Margarida Pires

Raman spectroscopy of textiles dyed with organic synthetic dyes

Rosemary Molly Baker

LIBS analysis and laser cleaning of metal objects rescued from the corvette H.M.S. Swift

Gabriel M. Bilmes, Natalia Perez Zoloza and Alberto A. Orsetti

Novel approach to ablation rate measurements

Ilaria Cacciari, Daniele Ciofini, Marta Mascalchi, Andrea Mencaglia and Salvatore Siano

Use of laser ablation for cleaning of white marble: evaluation and comparison of techniques at the Porta Della Carta Palazzo Ducale, Palazzo Verdamin Calergi and the New York Public Library

Giancarlo Calcagno, Jonathan Hoyte and Kyle C. Normandin

LIF and ultrasound techniques to study thermal modification induced on white marbles

L. Caneve, F. Colao, C. Giancristofaro, F. Persia, G. Ricci and A. Tati

Use of Laser Profilometry to Evaluate Cleaning Methods for Marble Cemetery Monuments

Jason W. Church and Mary F. Striegel

Analysis of stone by laser induced fluorescence

F. Colao, L. Caneve, P. Ortiz, J.M. Martín, M.A. Vázquez and R. Ortiz

LIF Measurements of Frescos by Giusto de' Menabuoi in the Padua Baptistery

Francesco Colao and Ramiro Dell'Erba

Integrated device for real-time profilometry and multispectral reflectography for a complete analysis of curved paintings

Claudia Daffara, Raffaella Fontana, Marco Barucci, Enrico Pampaloni and Luca Pezzati

Removal of carbon deposits from fire damaged marble with the Er:YAG laser

A. DeCruz and M. Camaiti

Copper(II) hydroxychlorides: other varieties of verdigris pigment. First results

Jose Manuel De la Roja, Margarita San Andrés, Natalia Sancho, Sonia Santos and Valentín G. Baonza

Ultra short pulse laser cleaning of gilded surfaces

Paul Fitzsimons, Ken Watkins, Zoe Allen and Abdelrazek Elnaggar

Comparative Study of Non-Destructive Methods and Applications of Laser Cleaning on Gold-Foil Paintings of Tongnan Buddha

Feng Gao, Zhou Xiao, Wolfgang P. Weinhold, Helen Wang, Zhou Hua, Yuan Hu, Yanzhong Sun and Jihong Zhang

Non-Destructive Documentation and Evaluation of Laser Cleaning Optimization on YunGang Grottoes

Feng Gao, Hua Zhou, Xiao Zhou, Wolfgang P. Weinhold, Helen Wang, Yang Qi and Weiqiang Zhou

Evaluation of laser cleaning of old copper roofing and gildings using tunable length of laser pulses

Halina Garbacz, Elżbieta Fortuna-Zalesna, Jan Marczak Marek Strzelec Andrzej Koss and Anna Zatorska

Laser cleaning of overpaintings on canvas and wood

Maria Auxiliadora Gómez Morón, María del Pilar Ortiz Calderón, José María Martín Ramirez and Vanessa Antúnez Perez

LIBS analysis of ancient ceramics from V century B.C. and V millennium B.C.

Margarita Grozeva, Kiril Blagoev, Galina Malcheva, Stefan Karatodorov, Peter Zahariev, Desislava Vasileva, Petia Penkova and Kamen Boyadzhiev

Application of 3D Technology to Digitization and Visualization of Architecture and Surface Texture

Sybille Herkner and Rainer Drewello

Application of Confocal Laser Scanning Microscopy in Monitoring Protochlorophyllide Content during Photodynamic Treatment of Phototrophic Biofilms from Roman Catacombs

Paul Hsieh, Elena Romano and Patrizia Albertano

Removal of hard burial encrustation from ceramic sherds using Er:YAG and Nd:YAG laser irradiation

S. Kogou, S. Chlouveraki, P. Pouli and C. Fotakis

An initial investigation into the use of the Nd-YAG laser to remove resins from archaeological bone

Capucine Korenberg, Clare Ward and Helene Delaunay

Cleaning of artificially soiled papers by infrared and mid-infrared lasers

Domna Kotsifaki, Simone Pentzien, Jörg Krüger and Alexandros Serafetinides

Study of the influence of atmospheric pollution on the open-air collection of the Railway Museum in Warsaw

Anna Kozelska, Karolina Brama, Jan Marczak, Marek Strzelec, Wojciech Skrzeczanowski, Anna Zatorska, Janusz Mróz and Terje Grøntoft

Laser Cleaning of Cu-based coins

Antonella Lorusso, Emilia D'Anna, Maria Luisa De Giorgi, Andrea Della Patria, Horacio De Rosa and Alessio Perrone

Potentials and challenges of terahertz time domain spectroscopy for the investigation of hidden wall paintings

Michael Josef Panzner, Udo Klotzbach, Andreas Wetzig, Eckhard Beyer, Wolfram Köhler and Andrea Schmid

3D Laser digitisation for the condition monitoring of the De Maiano Terracotta Roundels – five years on.

Zoe Roberts and Kathryn Hallett

Session B

Laser ablation – The removal of Dammar with ultra-short pulse lasers. A successful alternative?

Hanna Gräbeldinger

Femtosecond, picosecond and nanosecond pulse laser cleaning of artificially soiled paper model samples

Jörg Krüger, Simone Pentzien, Andrea Conradi and Robert Koter

Laser cleaning of ancient copper-based metals

Ruth Lahoz, Luis Alberto Angurel, Germán F. De La Fuente, María Luisa González-Pena and Juan Paz

Restoration work on the Loggia Della Mercanzia, Siena (Italy)

Stefano Landi and Francesca Droghini

Experimental Study of Nd:YAG Laser Cleaning of Epoxy, Acrylic and Cellulose Resins from the Surfaces of Archaeological Iron Objects

Hye-Youn Lee, Nam-Chul Cho, Jong-Myoung Lee and Jae-Eun Yu

Diagnostics of Earliest Galvanoplastic Artefacts

V. Ljubic and W. Kautek

A Semi-Quantitative Raman-LIBS Analysis on *Terra Sigillata* Wares

Cristiana Lofrumento, Marilena Ricci, Philippe Sciau, Yoanna Leon and Emilio Mario Castellucci

Evaluation of the effectiveness of UV laser for the removal of graffiti from ornamental granite

Ana J. López, Teresa Rivas, María Paula Fiorucci, Santiago Pozo Antonio, Javier Lamas and Alberto Ramil

Analysis of the damage in 16th century mural paintings from A Ribeira Sacra by means of Electronic Speckle Interferometry (ESPI)

Ana J. López, Emanuel Boaglio, Javier Lamas, Alberto Ramil, Lucía Pereira, Beatriz Prieto and Benita Silva

XVIIth century Russian Orthodox wall paintings: optimization of a laser cleaning treatment

M.Mascalchi, K.Maslov, V.Parfenov, M.Rogozny and S.Siano

On-line diagnosis and monitoring for real time non-contact and non-invasive investigation

Adrian-Septimiu Moldovan, Laurentiu - Marian Angheluta and Dragos-Valentin Ene

Non-destructive assessment of parchment degradation using Raman spectroscopy

Alenka Možir, Irena Kralj-Cigić, Ira Rabin, Oliver Hahn and Matija Strlič

30 Years of Lasers for Cleaning of Artworks in Austria - From Highly Sophisticated Prototypes to Daily Routine Application

Johann Nimmrichter, Klaus Wedenig and Robert Linke

Portable LIPS spectrometer for quantitative analysis of the elemental composition of ancient ceramics

Iacopo Osticioli, Juri Agresti, Marco Giamello, Isabella Turbanti Memmi, Andrea Mencaglia, Marcello Miccio and Salvatore Siano

Wavelength and pulse duration effects on laser induced changes on raw pigments used in painting practices

Mohamed Oujja, Pablo Moreno, Mikel Sanz, Esther Rebollar, Sotiria Kogou, Paraskevi Pouli and Marta Castillejo

Laser cleaning of building materials: discolouration effects studied by Raman spectroscopy

Aldara Pan Cabo, Ruth Lahoz and Germán F. De La Fuente

A high spatial and spectral resolution imaging system for the analysis of Cultural Heritage objects

V. Papadakis, Y. Orphanos, S. Kogou, K. Melessanaki and P. Pouli

Molecular and microtextural characterisation of paint samples from the *Nasrid Madrasah Yusufiyya* (Granada, Spain): a Raman Microscopy and Micro X-ray Diffraction study

Julia Romero-Pastor, Adrian Durán, Alejandro Rodríguez-Navarro, África Yebra and Carolina Cardell

Validity of chemometric tools to discern molecular changes in model paint samples during thermal ageing test: the use of internal standards

Julia Romero-Pastor, Alejandro Rodríguez-Navarro, África Yebra and Carolina Cardell

3D laser scanner application in preventive conservation plans of cultural heritage. Case of study: ceramic, stoned and iron set made by Antoni Gaudi and Josep Maria Jujol at the cathedral of Majorca.

Juan Antonio Ruiz Gómez, Simón Garcés Rayo, Mercè Gambús Saiz, Xisco Ponseti Barceló and Francisco José Perales López

Laser cleaning of granitic stones: Modelling the heat-affected zone by means of a finite elements method

Emilio Saavedra, Ana J. López, María Paula Fiorucci, Javier Lamas, Alberto Ramil and Teresa Rivas

Innovative survey and 3D modelling technologies for a restoration project: the case study of the Saint-Maxime Chapel in Challand-Saint-Victor, Valle d'Aosta

Paolo Salonia, Tommaso Leti Messina and Andrea Marcolongo

Saving Finishings on Terracotta Tiles with Laser Cleaning

Antonio Sansonetti, Chiara Colombo, Claudia Conti, Stefano Della Torre, Rebecca Fant and Jana Striova

A novel approach: laser cleaning intermediated by agar gel

Jana Striova, Marilena Anzani, Leonardo Borgioli, Anna Brunetto, Alfio Rabbolini, Giacomo Roati and Antonio Sansonetti

Laser cleaning of artificially corroded metal alloys and implementation of the experimental results to corroded historical artefacts

Alexandros Serafetinides, Eleni Drakaki, Panayiota Vassiliou, Olga Papadopoulou and Jelica Novakovic

Conservation - Restoration works at the peristyle of the Diocletian's Palace in Split, Croatia.

Application of lasers in stone cleaning

Ivan Sikavica

Underwater real-time analysis of archaeological objects using Laser Induced Breakdown Spectroscopy (LIBS)

Monica Simileanu and Roxana Radvan

Chromium containing pigments as indicators of ageing of the linseed oil binding

Tamás Ferenc Tóth and Zsuzsanna Márton

Nd:YAG laser cleaning of encrustation layers of historical stained glass windows

Malgorzata Walczak, Katarzyna Kundstman Szelagowska and Pawel Karaszkiwicz

Laser Techniques for Titanium Jewellery and Objects

Margaret Wegener, Sean Tapner, Alex Buddery and Matt Dargusch