

INSIGHTS IN MANUFACTURING TECHNIQUE AND MATERIALS OF DOWRY CHESTS FROM NORTH ROMANIA

Irina Huica^(1*), Stefania Mesteriuc⁽²⁾, Gheorghe Niculescu⁽³⁾

¹ *National University of Arts, Department of Conservation and Restoration, Bucharest, Romania*

² *Institute of Archaeology "Vasile Pârvan", Bucharest, Romania*

³ *National History Museum of Romania*

BUILDING FAIR DATA SERVICES: RECENT DEVELOPMENTS OF THE INFRA-ART SPECTRAL LIBRARY

Ioana Maria Cortea

Department of Optoelectronic Methods and Techniques for Artwork Restoration and Conservation, National Institute of Research and Development for Optoelectronics INOE 2000, Magurele, Romania

AIR POLLUTION IN URBAN AREAS AND IMPLICATIONS ON CULTURAL HERITAGE DEGRADATION

Jeni Vasilescu^(1*), Alexandru Dandocsi⁽¹⁾, Florica Toanca⁽¹⁾, Andrei Dandocsi⁽¹⁾, Alexandru Ilie⁽¹⁾, Camelia Talianu⁽¹⁾, Doina Nicolae⁽¹⁾

¹ *National Institute of Research and Development for Optoelectronics INOE 2000, Măgurele, Romania*

**corresponding author: jeni@inoe.ro*

POSSIBILITIES OF REFLECTANCE TRANSFORMATION IMAGING (RTI) AND IMAGING TECHNIQUES AS USEFUL TOOLS FOR THE EVALUATION OF CONSERVATION TREATMENT IN PANEL PAINTINGS

Ioana Olteanu^(1*), Andrei Rădoi⁽¹⁾, Cristina Serendan⁽¹⁾

1 National University of Arts, Bucharest, Romania

**corresponding author: ioana.olteanu@unarte.org*

REVEALING THE ORIGINAL ICONOSTASIS OF ST. GEORGE WOODEN CHURCH FROM IONEȘTI (ARAD COUNTY-ROMANIA). A NON-INVASIVE STUDY BASED ON COMPLEMENTARY SPECTROSCOPIC TECHNIQUES

L.C. Ratoiu^{*1}, M. Dinu¹, L. Ghervase¹, I.M. Cortea¹, A. Ignuța²

¹ *Centre of Excellence for Restoration by Optoelectronic Techniques CERTO, National Institute of Research and Development for Optoelectronics INOE 2000, Magurele, Romania*

² *The Wooden Churches Association, Romania,*

**corresponding author: lucian@inoe.ro*

THE ARTMAP LIF SYSTEM: A CUSTOM IN-HOUSE LASER-INDUCED FLUORESCENCE SCANNING DEVICE FOR THE STUDY OF CULTURAL HERITAGE SURFACES

Ioana Maria Cortea^{1*}, Luminița Ghervase¹, Laurențiu Angheluță¹, Tom Savu^{2,3}

¹ Centre of Excellence for Restoration by Optoelectronic Techniques CERTO,
National Institute of Research and Development for Optoelectronics INOE 2000, Magurele, Romania

² Department of Manufacturing Engineering, Faculty of Industrial Engineering and Robotics,
University Politehnica of Bucharest, Bucharest, Romania

³ DOLSAT Consult, Bucharest, Romania

*corresponding author: ioana.cortea@inoe.ro

THE USE OF OPTOELECTRONIC TECHNIQUES FOR THE INVESTIGATION OF MEDIEVAL WEAPONS

L. Ghervase^{1*}, M. Dinu¹, S. Oța², L.M. Angheluță¹, I.M. Cortea¹

¹ Centre of Excellence for Restoration by Optoelectronic Techniques CERTO,
National Institute of Research and Development for Optoelectronics INOE 2000, Magurele, Romania

² National History Museum of Romania, Bucharest, Romania

*corresponding author: ghervase@inoe.ro

WHEN DEGRADATION PRESERVES: THE PTAH STATUE CASE STUDY

E. A. Furgieuele^(1*)

¹ Junior Conservator, Museo Egizio di Torino, via Accademia delle Scienze 6, 10123, Torino (TO)

*corresponding author: leonora.furgieuele@museoegizio.it

A LASER-BASED BOTTOM-UP APPROACH FOR THE CHARACTERIZATION AND CONSERVATION OF HISTORICAL TEXTILES

Laura Maestro-Guijarro(1,2), Paula María Carmona-Quiroga(3), Marta Castillejo(1), Mohamed Oujja(1), Verónica García(4), Almudena López(4), Salvatore Siano(5), Juri Agresti(5), Iacopo Osticioli(5), Daniele Ciofini(5*)

1 Instituto de Química Física Blas Cabrera, CSIC, C/ Serrano 119, 28006 Madrid, Spain

2 Facultad de Ciencias Químicas, UCM, Pl. de las Ciencias, 2, 28040 Madrid, Spain

3 Instituto de Ciencias de la Construcción Eduardo Torroja, CSIC, / Serrano Galvache 4, 28033, Madrid, Spain

4 Real Fábrica de Tapices, C/ Fuenterrabía 2, 28014 Madrid, Spain

5 Istituto di Fisica Applicata "N. Carrara", CNR, Via Madonna del Piano 10, 50019 Firenze, Italy

*corresponding author: d.ciofini@ifac.cnr.it

WOOD SURFACE MODIFICATION FOR SUSTAINABLE AND SAFE USE

Ioana Dobre⁽¹⁾, Ludmila Motelica⁽²⁾, Roxana Doina Trusca⁽³⁾, Denisa Ficai^(1,2,3,4), Ovidiu Cristian Oprea^(1,2,3,4), Irina Fierascu^(5,6), Radu Claudiu Fierascu^(1,4,5*), Anton Ficai^(1,2,3,4), Irina Gheorghe-Barbu^(7,8), Andreea Stefania Dumbrava^(7,8), Viorica Maria Corbu^(7,8)

¹ Faculty of Chemical Engineering and Biotechnologies, National University of Science and Technology POLITEHNICA Bucharest, 1-7 Gh. Polizu, 011061 Bucharest, Romania

² Research Center for Advanced Materials, Products and Processes, National University of Science and Technology POLITEHNICA Bucharest, 060042 Bucharest, Romania

³ National Center of Micro and Nanomaterials, National University of Science and Technology POLITEHNICA Bucharest, Splaiul Independentei 313, 060042 Bucharest, Romania

⁴ Academy of Romanian Scientists" (AOSR), Splaiul Independentei 54, 050094 Bucharest

⁵ National Institute for Research & Development in Chemistry and Petrochemistry—ICECHIM Bucharest, 202 Spl. Independentei, 060021 Bucharest, Romania

⁶ University of Agronomic Sciences and Veterinary Medicine of Bucharest, 59 Marasti Blvd, 011464 Bucharest, Romania.

⁷ Faculty of Biology, University of Bucharest, Intrarea Portocalelor No. 1-3, 060101 Bucharest, Romania

⁸ The Research Institute of the University of Bucharest (ICUB), 050095 Bucharest, Romania

INNOVATIVE CROSS-DISCIPLINARY STRATEGIES IN DEVELOPING MODERN CONSTRUCTION MATERIALS.

Radu Claudiu Fierascu^(1,2,3), Irina Fierascu^(1,4*), Toma Fistos⁽¹⁾, Roxana Ioana Matei⁽¹⁾, Anda Maria Baroi⁽¹⁾, Ioana Silvia Hosu⁽¹⁾, Adriana Moanta⁽⁵⁾, Ionela Petre⁽⁵⁾

¹ National Institute for Research & Development in Chemistry and Petrochemistry—ICECHIM Bucharest, 202 Spl. Independentei, 060021 Bucharest, Romania

² Faculty of Chemical Engineering and Biotechnology, National University of Science and Technology Politehnica Bucharest, 1-7 Gh. Polizu Str., 011061 Bucharest, Romania

³ Academy of Romanian Scientists, 3 Ilfov, 050044 Bucharest, Romania

⁴ Faculty of Horticulture, University of Agronomic Sciences and Veterinary Medicine of Bucharest, 59 Marasti Blvd, 011464 Bucharest, Romania

⁵ Ceprochim S.A, 6 Preciziei Street, 062203 Bucharest, Romania

*corresponding author: irina.fierascu@icechim.ro

HYDROXYAPATITE-BASED TREATMENTS FOR THE CONSERVATION OF TRADITIONAL BUILDING MATERIALS.

Irina Fierascu^(1,2), Radu Claudiu Fierascu^(1,3,4*), Toma Fistos⁽¹⁾, Roxana Ioana Matei⁽¹⁾, Anda Maria Baroi⁽¹⁾, Ioana Silvia Hosu⁽¹⁾, Anton Ficai^(3,4), Denisa Ficai^(3,4)

¹ National Institute for Research & Development in Chemistry and Petrochemistry—ICECHIM Bucharest, 202 Spl. Independentei, 060021 Bucharest, Romania

² Faculty of Horticulture, University of Agronomic Sciences and Veterinary Medicine of Bucharest, 59 Marasti Blvd, 011464 Bucharest, Romania.

³ Faculty of Chemical Engineering and Biotechnology, National University of Science and Technology Politehnica Bucharest, 1-7 Gh. Polizu Str., 011061 Bucharest, Romania

⁴ Academy of Romanian Scientists, 3 Ilfov, 050044 Bucharest, Romania.

*corresponding author: fierascu.radu@icechim.ro

CONTRIBUTIONS TO THE KNOWLEDGE OF PAINTINGS MATERIALS OF LATE RENAISSANCE TRANSYLVANIAN MURAL

Irina Huică⁽¹⁾, Maria Dumbrăvician^(1*), Ioana Olteanu⁽¹⁾, Cristina Serendan⁽¹⁾

¹ National University of Arts, Department of Conservation and Restoration, Bucharest, Romania,

*corresponding author: maria.dumbravician@unarte.org

DOCUMENTATION OF EASEL PAINTINGS – CASE STUDY OF TWO 19TH-CENTURY PAINTINGS BY UNKNOWN AUTHOR

L. Ghervase^{1*}, A. Rauca², L. Ratoiu¹, I.M. Cortea¹, V. Dragut³

¹ Centre of Excellence for Restoration by Optoelectronic Techniques CERTO,
National Institute of Research and Development for Optoelectronics INOE 2000, Magurele, Romania

² Arts and Design University of Cluj-Napoca, Cluj-Napoca, Romania

³ National Research and Development Institute for Nonferrous and Rare Metals-IMNR, Pantelimon, Romania

*corresponding author: ghervase@inoe.ro

MORTARS CHARACTERIZATION BY LIBS

Perrine Schloegel⁽¹⁾, Luc Rosenbaum⁽¹⁾, Victoria Aguilar⁽¹⁾, Céline Maujaret⁽²⁾, Mélodie Bonnat⁽³⁾, Fabrice Surma⁽¹⁾

¹ Laboratoire Epitopos, Strasbourg, France

² Restauratrice de peinture, Paris, France

³ Restauratrice de peinture, Le-Havre, France

CHARACTERIZATION OF HISTORICAL FAÇADES WITH MULTIMODAL IMAGING TECHNIQUES

A.M. Pătraşcu, L.M. Angheluţă, L.C. Ratoiu

¹ Centre of Excellence for Restoration by Optoelectronic Techniques CERTO,
National Institute of Research and Development for Optoelectronics INOE 2000,
409 Atomiştilor street, Măgurele, Ilfov, Romania

*corresponding author: andreea.patrascu@inoe.ro

LASER ABLATION INDUCTIVELY COUPLED PLASMA MASS SPECTRYOMETRY (LA-ICP-MS) APPLICATIONS IN HERITAGE SAMPLE INVESTIGATIONS

Claudiu Tănăselia^{1*}, Anamaria Iulia Török¹, Dan Anghel², Roman Cecilia¹

¹INCDO INOE 2000 Research Institute for Analytical Instrumentation subsidiary (ICIA Cluj-Napoca), Donath 67, 400293 Cluj-Napoca, Romania

²The National Museum of the Union in Alba Iulia, Mihai Viteazu 12-14, 510010 Alba Iulia, Romania

*claudiu.tanaselia@icia.ro

NEW APPROACH TO LAYERS REMOVAL IN GILDING CONSERVATION FOR BETTER CONTROL OF Er:YAG LASER SURFACE ABLATION ACCOMPANIED BY ANALYSES FOR SCIENTIFIC DIAGNOSIS

A: S Courtier¹, X.Bai¹, Vincent Detalle²

¹ *French Museums' Research and Conservation Centre (C2RMF) (Ministry of Culture)*

² *Senior conservation scientist, Ph. D in Science and analytical strategy from MiC (Ministry of Culture)*

INTERPRETING THE MATERIALS AND EXECUTION PROCESSES OF THE ARRINGATORE FROM PILA USING ADVANCED PHOTONIC TECHNIQUES

S. Siano^(1*), S. Mugnaini⁽²⁾, I. Osticioli⁽¹⁾, D. Ciofini⁽¹⁾, A.A. Mencaglia⁽¹⁾, M. Giamello⁽³⁾, J. Agresti⁽¹⁾

¹ *Istituto di Fisica Applicata "N. Carrara"- CNR, Sesto Fiorentino (Florence), Italy*

² *Individual enterprise, Monteriggioni (Siena), Italy*

³ *University of Siena, Siena, Italy*

*corresponding author: S.Siano@ifac.cnr.it

Depth Profile Analysis of 19th Century Electrotpe Artefacts by Laser-Induced Breakdown Spectroscopy

Valentina Ljubić Tobisch^(1,2), Verena Fosodeder⁽¹⁾, Ulrich Pacher⁽¹⁾, Tristan Nagy⁽¹⁾, Wolfgang Kautek⁽¹⁾

¹ *University of Vienna, Department of Physical Chemistry, Währingerstrasse 42, 1090 Vienna*

² *Technische Universität Wien, X-Ray Center, Getreidemarkt 9, 1060 Vienna*

THE USE OF ACTIVE FIBER LASER SYSTEMS IN CULTURAL HERITAGE: CASE STUDIES ON SANDSTONE MATERIALS

Francesca Zenucchini^(1*), Chiara Ricci⁽¹⁾, Tiziana Cavaleri⁽¹⁾, Roberta Coco⁽¹⁾, Rut Ballesteros Carrion⁽²⁾, Sara Aicardi⁽³⁾, Marie Claire Canepa⁽¹⁾, Federica Pozzi⁽¹⁾

¹ *Centro Conservazione e Restauro «La Venaria Reale», via XX settembre 18, 10078 Venaria Reale, Turin, Italy*

² *The Royal Commission for AlUla, Al-Riyadh Governorate, Saudi Arabia*

³ *Museo Egizio, via Accademia delle Scienze 6, 10123 Turin, Italy*

*Corresponding author: francesca.zenucchini@ccrvenaria.it

LASER CLEANING OF WOODEN PAINTED ARCHEAOLOGICAL FINDINGS FROM THE EGYPTIAN TOMB OF KHA AND MERIT

Francesca Zenucchini^(1*), Valeria Ponza⁽¹⁾, Chiara Ricci⁽¹⁾, Tiziana Cavaleri⁽¹⁾, Alice Pertica⁽¹⁾, Sara Aicardi⁽⁴⁾, Matilde Borla⁽⁵⁾, Dominique Scalarone⁽²⁾, Yezi Zhang⁽²⁾, Paola Buscaglia^(1,3),

¹ *Centro per la Conservazione ed il Restauro dei Beni Culturali "La Venaria Reale", via XX settembre 18, 10078 Venaria Reale, Turin, Italy*

² *Università degli Studi di Torino, Dipartimento di Chimica, via Pietro Giuria 7, 10125 Turin, Italy*

³ *Politecnico di Torino, Corso Duca degli Abruzzi 24, 10129 Turin, Italy*

⁴ Museo Egizio, via Accademia delle Scienze 6, 10123 Turin, Italy

⁵ Soprintendenza, Archeologia, Belle Arti e Paesaggio per la città Metropolitana di Torino, Italy

*corresponding author: francesca.zenucchini@ccvenaria.it

**Objectification of Er:YAG laser-assisted chemical cleaning :
example of a glue patina removal from a tempera painting**

D. Martos-Levif^{1*}, C. Ceradini², V. Detalle³, X. Bai¹, N. Wilkie-Chancelier³

¹Centre de Recherche et de Restauration des Musées de France (C2RMF), Paris, France

² Private conservator, Paris, France

³ SATIE – Systèmes et Applications des Technologies de l'Information et de l'Energie, CY Cergy-Paris Université, Cergy, France

*corresponding author: Dominique.martos-levif@culture.gouv.fr