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**METAL** *Consn*-info



# Bulletin of the Research On MEtal Conservation

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# BROMECC24

## Editorial

This new issue of BROMECC is shorter than ever, but still we wanted to publish it.

Two months ago we had METAL07, our triennial interim conference. Sixty papers and around 40 posters were presented on the five themes of our interim period. That counts! But two months have passed and new projects have been setup. We remind you that the objective of BROMECC is to give these projects a good dissemination within the metal conservation community.

There are three more BROMECC issues to go before September 2008 when I, Christian, will leave the Metal WG. As mentioned during Metal07 I am not intending to pursue in the ICOM-CC Metals working group any of the activities developed in the past 6 years, among which include the BROMECC and the coordination of some of the SubWG activities.

Hopefully a solution will be found in the meantime to continue the good work. To do this, expressions of your interest in making contributions to these activities is requested.

Happy, but brief, reading to you!

### Editor

Christian DEGRIGNY

### Assistant editor

James CRAWFORD

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**New research project**



Conservation and restoration of Goya's engraving copperplates

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## New research projects



### Conservation and restoration of Goya's engraved copperplates (EPS-UCM)

One of the most important treasures of Spain and the universal art of engraving comprises the series of copperplates engraved by Francisco de Goya (Zaragoza, 1746, Bordeaux, 1828). Apart from the natural aging of the material since its creation, the environmental conditions, the travelling, transfers, a lot of prints and different experiences have produced some deterioration.

The collection located in Madrid comprises 228 engraved plates, which were originally of bare copper. At this moment, all of them show galvanic coatings, applied during the 19<sup>th</sup> and 20<sup>th</sup> centuries. All of them are plated with a metal of higher hardness (iron, nickel or chromium). These coatings were deposited in order to extend the usability of the plates, in terms of producing more prints. Sometimes, it was also thought that the coatings would make the plates more corrosion resistant. However, this important collection presents diverse types of damage (73% of the collection) caused by the intensity of the corrosion. The iron coated copperplates are by far the most deteriorated.

Scientific and technological resources can be used to perfectly characterize the deterioration and plan a conservation strategy for the collection (the main aim of our project). Such resources will be used on each of the 228 Goya's plates. Non-invasive techniques will be favoured to characterise all the copper based materials (more particularly inclusions inducing the corrosion of the metal), galvanic coatings, corrosion products and possible remains of chalcographic ink. For example analyses of corrosion products and ink remains will be carried out by infrared spectroscopy.

This work will be completed by similar studies performed on the chalcographies of Paris, Rome and the National Library of Catalonia. The final report will contain all the data with the history of the plates, historical restorations, macro and microscopy of the conservation state and documentary information with digital maps of deterioration (using technical analysis of digital images to obtain and precisely register information and initially imperceptible defects). In addition, the report will contain an analysis of deterioration of successive editions through a comparative study of previous drawings, prints and plates.

**Contact:** Marta Lage de la Rosa (EPS-UCM)

**Funding:** R+D Project (JCI 2005-1892-5) Ministry of Education and Science, Spain.

## General information

### Websites

- **ARTECH network:** [http://server.icvbc.cnr.it/progetti\\_futuri/progetto\\_artech.htm](http://server.icvbc.cnr.it/progetti_futuri/progetto_artech.htm). Network facilitating the access of conservation professionals to different investigation techniques of Cultural Heritage artefacts
  - **BIGSTUFF (Care of Large Technology Objects) 2004:** <http://www.awm.gov.au/events/conference/bigstuff/index.asp>
  - **CAMEO:** website containing chemical, physical, visual, and analytical information on over 10,000 historic and contemporary materials used in the conservation, preservation, and production of artistic, architectural, and archaeological materials  
[http://www.mfa.org/\\_cameo/frontend/](http://www.mfa.org/_cameo/frontend/)
  - **Cost Action G8: Non-destructive analysis and testing of museum objects.** <http://srs.dl.ac.uk/arch/cost-g8>. Abstracts and booklets from previous workshops can be downloaded as well as announcements of past activities (Short Term Scientific Missions deadlines, training schools...).
  - **Cost Action G7: Artwork conservation by laser** <http://alpha1.infim.ro/cost>
  - **Cost Action D42: ENVIART** (Chemical Interactions between Cultural Artefacts and Indoor Environment): [www.enviart.org](http://www.enviart.org). You have to register (free access) to get access to all information.
  - **e-Preservation Science:** <http://www.e-preservation-science.org>. Online publication of papers in conservation science.
  - **European Cultural Heritage Network:** <http://www.echn.net/>. European network of professionals interested in the conservation of Cultural Heritage.
  - **ICOMAM:** International Committee of Museums and Collections of Arms and Military History: <http://www.klm-mra.be/icomam>
  - **IR and Raman for cultural heritage:** <http://www.irug.org/default.asp>
  - **LabS-TECH network** <http://www.chm.unipg.it/chimgen/LabS-TECH.html>
  - **Laboratoire Pierre Sue:** LPS PhD thesis related to the alteration of archaeological artefacts can be downloaded from <http://www-drecom cea.fr/lps/> (in French) and go to “Archéomatériaux et prévision de l’altération.”
  - **METALCons~~n~~-info** homepage: <http://rsc.anu.edu.au/~hallam/METALConsn-info.html>
  - **M2ADL - Microchemistry and Microscopy Art Diagnostic Laboratory** is now available at the following website: [http://www.tecore.unibo.it/html/Lab\\_Microscopia/M2ADL/](http://www.tecore.unibo.it/html/Lab_Microscopia/M2ADL/)
  - **New York Conservation Foundation** website: <http://www.nycf.org/>
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- PROMET website: <http://www.promet.org.gr>
- RESTAURACION METAL SUR AMERICA: [www.restauraciondemetales.cl](http://www.restauraciondemetales.cl)
- TEL (PhDs on line): <http://tel.ccsd.cnrs.fr/>
- Working Group Metals ICOM -Committee for Conservation  
<http://icom-cc.icom.museum/WG/Metals/>
- Online publications of Surface Engineering Journal. Issue addressing specifically to Metal issues: **Surface Modification Issues in Art**, Volume 17, Issue 3, June 2001. Can be downloaded  
from: (<http://www.ingentaconnect.com/content/maney/se/2001/00000017/00000003;jsessionid=1xpmlw91522a3.victoria>)
- ANDRA (Agence Nationale pour la Gestion des Déchets RadioActifs)  
[http://www.andra.fr/interne.php3?publi=publication&id\\_rubrique=82&p=produit&id=5](http://www.andra.fr/interne.php3?publi=publication&id_rubrique=82&p=produit&id=5). The following documents can be ordered for free from this website : *Analogues archéologiques et corrosion* (in French only) and *Prediction of Long Term Corrosion Behaviour in Nuclear Waste Systems* (in English).

#### Future seminars and conference

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- **23<sup>rd</sup> conference of conservators in archaeology** (08-09 November 2007, Paris). For more information contact Florence Dussère: [florence.dussere@valdoise.fr](mailto:florence.dussere@valdoise.fr)
  - **Materials sciences and cultural heritage – SMPC conference** (06-07 December 2007, Paris, France) organised by the Ministry of Culture and Communication. For more information contact Sylvie Colinart: [sylvie.colinart@culture.gouv.fr](mailto:sylvie.colinart@culture.gouv.fr)
  - **Metallkonservierung – Metallrestaurierung Geschichte, Methode und Praxis** (07-08 December 2007, University of Applied Art, Conservation Department, Vienna, AT), conference organised by the University of Applied Art as a celebration of its 140 years jubilee. For more information visit the following website: <http://www.dieangewandte.at/restaurierung/>
  - **Training Seminars on Research Planning, Characterisation, Conservation and Management in Archaeological Sites – ARCHAIA** (28-30 January 2008, Copenhagen, DK and 15-17 May 2008, Bologna, I) addressed to 90 post-graduate students, scholars and professionals of different backgrounds. The results of some funded EU research projects and COST actions will be presented. For more information visit the following website: [www.archaia.eu](http://www.archaia.eu)
  - **The object in transition: A cross disciplinary conference on the preservation and study of modern and contemporary Art** (25-26 January 2008, Los Angeles, USA) organised by the Getty Conservation Centre. For more information visit the following website:  
[http://www.getty.edu/conservation/science/modpaints/modern\\_materials\\_conf.html](http://www.getty.edu/conservation/science/modpaints/modern_materials_conf.html)
  - **Holding it all together; ancient and modern approaches to joining, repair and consolidation** (21-22 February 2008, London, UK) organised by the British Museum. For more information contact Janet Ambers: [science@thebritishmuseum.ac.uk](mailto:science@thebritishmuseum.ac.uk)
  - **Art2008**, 9<sup>th</sup> International Conference (25-30 May 2008, Jerusalem, Israel) on the non-destructive testing, microanalysis and preservation in the conservation of cultural and

environmental heritage, organised by the Israel National Society for NFT. For more information visit the following website: [www.isas.co.il/art2008](http://www.isas.co.il/art2008)

- **MetalEspaña '08** Conference on Conservation and Restoration of Metallic Cultural Heritage (10-13 April 2008, Madrid, ES) organized by the National Center for Metallurgical Research (CENIM), CSIC and Autonomous University of Madrid (UAM). For more information, contact [congreso.metalespana08@cenim.csic.es](mailto:congreso.metalespana08@cenim.csic.es) or visit [www.cenim.csic.es/metalespana08](http://www.cenim.csic.es/metalespana08)

- **8<sup>th</sup> Indoor Air Quality (IAQ2008) meeting** (17-19 April 2008, Vienna, AT) organised by the Kunsthistorisches Museum. For more information visit the following website: [www.khm.at/IAQ2008](http://www.khm.at/IAQ2008)

- **Ancient mining in Turkey and the Eastern Mediterranean** - AMITEM (15-21 June 2008, Ankara, Turkey) organised by the Institute of Archaeometallurgical Studies, Bogazici University, Istanbul (Turkey), the Deutsches Bergbau – Museum Bochum (D), the Institute of Archaeology, London (UK) and the Atilim University, Ankara (Turkey). For more information visit the following website: <http://amitem.atilim.edu.tr>

#### Abbreviations and acronyms

**EPS-UCM:** Escuela Politécnica Superior, Universidad Carlos III de Madrid

#### Contacts

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