Besides, new species from other bacterial groups are also being identified as it was the case of *Phyllobacterium catacumbae* isolated from the Roman catacombs (Jurado et al. 2005d) and *Aurantimonas altamirensis* (Jurado et al. 2006) isolated from Altamira cave (Figure 4). *Phyllobacterium catacumbae* and *Aurantimonas altamirensis* are members of the Rhizobiales (Alphaproteobacteria) which is a bacterial group commonly found in subterranean environments. Some members of the Rhizobiales are involved in nitrogen fixation usually in association with plants. Since hypogean environments do not allow the growth of plants, we hypothesised that *P. catacumbae* might be involved in a symbiotic relationships with phototrophic microorganisms, such as the Cyanobacteria. *Aurantimonas altamirensis* is related to marine species and represents the first known representative living under no-salt, freshwater-like, conditions as opposed to the other members of the *Aurantimonas/Fulvimarina* group within the Rhizobiales. These microorganisms remained unknown until discovered through microbiological studies for conservation.

Cultural Heritage microbiology represents a preliminary approach to the discovery of a large bacterial diversity waiting to be discovered, and certainly having serious implications on the conservation of the sites as well as the understanding of the role and functioning of microorganisms in our planet, both at the local and global scales.

**References**


**Forthcoming Congresses**

**THE PROTECTION OF CULTURAL HERITAGE FROM AIR POLLUTION:**

The need for effective local policy, maintenance and conservation strategies

Paris, France, 15-16 March 2007

Joint workshop of the EU Project CULT-STRAT and ICP Materials Task Force of the Convention on Long-Range Transboundary Air Pollution
**Aims**
The purpose of the workshop is to bring together heritage building managers and policy makers and CULT-STRAT partners so that practitioner experiences and requirements are fully represented in the work of the project. This is an important opportunity for practitioners in the field to influence the policy review of the project and ultimately to help ensure that future policy properly reflects their needs. The project will be widely disseminated across Europe to appropriate local, national and international policy and decision-making bodies.

**Conference Topics**
- Presentation of the project’s findings to date and the key issue facing the protection of cultural heritage.
- Methods for estimating the damage (corrosion & soiling) caused to materials following exposure to air pollution, including differences between indoor and outdoor exposures.
- A discussion and evaluation of prevention, maintenance and conservation strategies and plans.
- The impact and importance of air pollution relative to other factors including an assessment of economic and legal issues and public attitudes.
- Policy at local, national and international levels.

More information:
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**Conservation Science 2007**

**CONSERVATION SCIENCE 2007**

Milan, Italy, 10-11 May 2007

**Aims**
The Institute of Conservation Science, in collaboration with the Centre for Conservation and Promotion of Cultural Heritage of the Politecnico di Milano and the Department of Food Science, Technology and Microbiology (DiSTAM) of the University of Milan, is organising an international conference, building on the earlier ICS conference held at the National Museums of Scotland, Edinburgh, Conservation Science 2002.

Conservation science is an international discipline which involves a great deal of international collaboration among scientists coming from all over the world. The venue has been chosen to reflect the links between the sciences and the humanities, and between architects and scientists. The hosting institutions have carried out research into the conservation of the cultural heritage for many years, and they offer good conference facilities in the university quarter of Milan.

**Conference topics**
- Planning and monitoring conservation works
- New trends for architectural heritage: projects and case studies
- New, non-invasive techniques for analysis
- Polymers in Cultural Heritage – deterioration and preservation.

More information:
CS2007@chem.polimi.it

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**BIOCORYS 2007**

International Conference on Biocorrosion of Materials

Paris, France, 11-14 June 2007

**Aim of the Conference**
This international conference on biocorrosion of materials is in continuity of the 4 previous European workshops on microbial corrosion organized in agreement with the WP “biocorrosion” of the European Federation of Corrosion (EFC) in 1988, 1992, 1995, 1999. This event takes place in the frame of a four year French interregional R&D program, “Biocorys-interrégional”.
It will provide an international exchange of information on the recent advances in the understanding and control of biocorrosion.

Conference Topics

- Case histories
- Metals and alloys
- Organic materials
- Stone, concrete
- Mechanisms and modeling
- Enzymes and corrosion
- Methods and simulation (local, electrochemical, biological, testing, ...)
- Natural environments (river and sea water, soils, ...)
- Industrial environments (cooling systems, oil & gas storages, ...)
- Biofilms
- Prevention (biocides, coatings, cathodic protection)
- Assisted protection by bacteria
- Control and monitoring
- Other topics (bioleaching, side effects of microbial corrosion, ...)

More information:

The theme chosen for this session, “Water and Cultural Heritage”, refers to the general problem of the interaction between water and construction materials, with a particular emphasis on monuments which are permanently in contact with water, such as quays, bridges, water mills or châteaux surrounded by moats.

Symposium Topics

- Physical and (bio)chemical processes in material deterioration
- Treatments, restoration
- Monuments and natural disasters (in particular high water levels, storms and floods)
- Attendance and conservation
- Economic and managerial aspects
- Professional training and the relationship between restorers and scientific research organizations

More Information:
http://www.valdeloire.org/front.aspx?SectionId=135&PubilId=2363&CHANGELANG=en

7th INTERNATIONAL SYMPOSIUM ON THE CONSERVATION OF MONUMENTS IN THE MEDITERRANEAN BASIN

Water and Cultural Heritage
Orleans, France, 6-9 June 2007

Aims
This international symposium will provide a forum for scientists, technicians and experts in the area of conservation and restoration of monuments to present their work and exchange their ideas and experiences. During the Orléans 2007 Symposium, new opportunities shall be presented to deepen the existing knowledge base regarding the problems of Cultural Heritage.

LACONA VII
Lasers in the Conservation of Artworks
Madrid, Spain, 17-21 September 2007

Aims
LACONA VII continues the tradition of previous LACONA conferences with an increased number of participants and contributors in every event of the series. The field of LACONA has gained enormously in importance in the last decades with a number of monuments of high historical and artistic value (e.g. St. Stephens Cathedral in Vienna, Notre Dame of Paris, Santa Maria dei Fiori, Florence, etc.) been cleaned or measured by laser. In the Spanish arena the list of
monuments that have been restored using lasers include Cathedral of Seville, Burgos Museum, several Mudejar style churches in Aragón (World Heritage listed), Cathedral of Jaca, Cathedral of Santiago de Compostela, etc. As a consequence of the research carried out and the practical demonstration of the advantages of laser tools, the use of lasers has been increasingly implemented worldwide in the activities related with artwork conservation and management.

**Conference Topics**
- Laser cleaning, innovation, case studies, evaluation
- Laser based techniques for analysis and diagnostics
- Imaging, 3D documentation and modelling
- Optoelectronic devices and sensors
- Applications of nanophotonics in Cultural Heritage
- Projects, Networks


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**37th INTERNATIONAL SYMPOSIUM ON ARCHAEOOMETRY**

Siena, Italy, 12-16 May 2008

**Aims**
The aim of the Symposium is to promote the development and use of scientific techniques in order to extract archaeological and historical information from the cultural heritage and the palaeoenvironment. It involves all Natural Sciences and all types of objects and materials related with human activity. In general, papers should deal with the development and/or application of scientific techniques for extracting information related to human activities of the past, including the biological nature of man himself and the environment in which he lived.

**Symposium Topics**
- Field Archaeology (Remote sensing and Geophysical prospecting, sampling and fieldwalking strategies, in situ observations of preservations, site monitoring, etc.)
- Archaeo-chronometry (New developments in dating techniques, novel applications, methods of combining dating strategies, new interpretation strategies, synchronization of cultures, cultural phase analysis, etc.)
- Recent developments in Radiocarbon Dating (special sub-session)
- Human – Environment interactions (Geoarchaeology, Palaeoclimate studies, Landscape Archaeology, Environmental reconstructions, etc.)
- Bioarchaeology (DNA, Human diet, health, mobility, demography, residues, zooarchaeology, archaeobotany, etc.)
- Food preparation and consumption in Antiquity (special sub-session)
- Stone, Plaster and Pigments (technology and provenance)
- Ceramics, glazes, glass and vitreous materials (technology and provenance)
- Integrated site studies (they should combine: excavation procedure, scientific studies of materials and environment, and archaeological interpretation)
- Special Theme Session for Siena: Micro/nano diagnostic and ancient technology