

Programme of the 12th International Congress on the Deterioration and Conservation of Stone

MONDAY 22 OCTOBER 2012

ORAL PRESENTATIONS - DETERIORATION

SESSION I

1. "Modelling the crystallization behavior of mixed salt systems: input data requirements," Michael Steiger and Alison Sawdy-Heritage
2. "Mirabilite and heptahydrate characterization from infrared microscopy and thermal data," Mélanie Denecker, Ronan Hébert, Ann Bourgès, Beatriz Menendez and Eric Doehne
3. "Crystallization behavior of NaNO_3 - Na_2SO_4 salt mixtures in sandstone and comparison to single crystal behavior," Nadine Lindstrom, Nicole Heitmann, Kirsten Linnow and Michael Steiger
4. "Crystallization of sodium sulfate in porous media by drying, L. Pel and S. Saidov"
5. "Study of the kinetics of salt crystallization during rewetting/drying and humidity cycling," Julie Desarnaud and Noushine Shahidzadeh-Bonn
6. "Salt-enhanced weathering of ornamental stone," Mara Schiro, Encarnacion Ruiz-Aguido, Fadwa Jroundi, Maria Teresa Gonzalez-Munoz and Carlos Rodriguez-Navarro

SESSION II

1. "Risk assessment and conservation strategy of a salt laden limestone mausoleum and the surrounding funeral chapel in Boussu, Belgium," Sebastiaan Gods, Hilde De Clercq, Roald Hayen and Judy De Roy
2. "Influence of salt solution nature on the drying of clayey sandstone," Estel Colat, Jean-Didier Mertz, Vincent Barbin, Céline Thomachot- Schneider
3. "Swelling pressure and stress development in clay-bearing sandstone," Timothy Wangler, Elaine Ngo and George W. Scherer
4. "Role of swelling clay minerals in the spalling decay mechanism of the 'Molasse du Midi' limestone (South-east of France)," Jérémie Berthonneau, Olivier Grauby, Alain Baronnet, David Dessandier, Philippe Bromblet and Jean-Marc-Vallet

SESSION III

1. "Mass balance evidence for hydrochloric acid vapor attack on the marble of the statue of Phoenicia," Richard Livingston
2. "Monitoring frost susceptibility of limestones," Tim De Kock, Jan Dewanckele, Marijn Boone, Wesley De Boever, Delphine Vandevoorde, Matthieu Boone, Geert De Schutter, Eberhard Lehmann, Patric Jacobs and Veerle Cnudde

3. "Recording of the thermal evolution of limestones undergoing experimental accelerated ageing tests," Ronan L. Hébert, Matthieu Angeli, Sandra Dochez, Eric Doehne and Andrea Hamilton
4. "Fabric influences on microcrack degradation of marbles," Victoria Shushakova, Edwin R. Fuller, Jr., Florian Heidelbach and Siegfried Siegesmund
5. "Quantitative assessment of post-restoration accelerated stone decay due to compatibility problems (St. Sebastian's Abbey Church, Manglieu, French Massif Central)," Marie- Françoise André, Bruno Phalip, Olivier Voldoire, Franck Vautier, David Morel and Erwan Roussel

TUESDAY 23 OCTOBER 2012

ORAL PRESENTATIONS - TESTING AND (RE-)EVALUATION; DOCUMENTATION

SESSION IV

1. "Numerical study of the stability of restoring damaged sculpture," Laura Michel, Duc Phi do, Dashnor Hoxha, Benoit Coignard, Xavier Brunetaud and Muzhaim Al Mukhtar
2. "Fracture mechanics: a new approach to tackle stone conservation," Ann Bourgès
3. "Pietra d-Istria: quarries, characterization, deterioration of the stone of Venice," Lorenzo Lazzarini
4. "Natural stone monitoring - investigation methods for a reliable evaluation of the effectiveness of conservation measures," J. Meinhardt, R. Snethlage and M. Auras
5. "Correlation of stone properties using standardised methodologies and non-standardised micro-destructive techniques" M. Theodoridou, F. Dagrain and I. Ioannou
6. "Non-destructive in situ surface strength tests vs. laboratory strength tests: their use and misuse in stone condition assessment " Ákos Török

SESSION V

1. "Comparison of non-destructive techniques for analysis of water absorbing behavior of stone," Delphine Vandevorde, Veerle Cnudde, Jan Dekwanckele, Matthieu Boone, Eberhard Lehmann and Eddy Verhaeven
2. "Innovative water uptake measurements on historic stone surfaces," Miloš Drdáký, Pavel Zima and Hana Hasnikova
3. "Simple field tests in stone conservation," Véronique Vergès-Belmin, Christoph Franzen and Christine Bläuer
4. "Characterization of natural and consolidated stones from Jordan with non-destructive ultrasonic technique and physical-mechanical methods," Abdelraheem Ahmad and Stefan Simon

5. "Ultrasonic velocity measurements for the long-term monitoring of the degradation of marble columns in the cloister of the church of Saint Trophime in Arles," Philippe Bromblet, Véronique Vergès-Belmin and Stefan Simon

6. "Long-term condition survey by ultrasonic velocity testing of outdoor marble sculptures," Marisa Pamplona and Stefan Simon

SESSION VI

1. "The use of a wireless sensor network for high-resolution environmental monitoring of stone monuments in context with investigation of salt weathering - exemplified for rock-cut monuments in Petra, Jordan," Kurt Heinrichs and Rafiq Azzam

2. "Damage assessment of ferruginous sandstone by x-ray tomography – the "Virgin Tower" of Zichem (Belgium)," Hilde De Clercq, Roald Hayen, Veerle Cnudde, Matthieu Boone, Michiel Duser

3. "Learning from the past - a review of treatments carried out to clunch in 1985 and further field and laboratory investigations into the decay mechanisms," David Odgers and Trevor Proudfoot

4. "Marble statues and panes of San Petronio facade in Bologna: state of conservation after 40 years from restoration," Susanna Bracci, Monica Galeotti and Daniela Pinna

5. "Outside the canon: a review of unique approaches to stone conservation," Justine Bello, Dan Lene, Mark Rabinowitz and Joseph Sembrat

6. "Revisiting stone repairs: establishing evaluation protocols and reviewing performance," Dean Koga and Raymond Pepi

POSTER PRESENTATIONS - DETERIORATION; TESTING AND (RE-)EVALUATION; DOCUMENTATION

SESSION VII

"Micro-destructive mapping of salt crystallization in stone," S. Modestou, M. Theodoridou, I. Ioannou and R. Fournari

"Measuring crystallization pressure: can Correns' experiment be repeated," Francesco Caruso and Robert Flatt

"The effects of road salts on masonry structures in Scotland," Callum Graham, Martin Lee, Vernon Phoenix, Maureen Young and Craig Kennedy

"Effect of spraying ferrocyanide ions on NaCl contaminated samples," Sonia Gupta, Leo Pel and Alison Heritage

"Influence of the presence of sulfate salts on the liquid transport properties of marbles," Domna Merahtsaki, Panagiotis Spathis, Vassilios Melfos, Bassile Christaras and Eleni Pavlidou

"Assessment of conservation treatments on Paduan Nanto stone monuments," S. Benchiarin, V. Fassina and G. Molin

"Study on the deterioration and conservation of the vault of the room of plenary session of the town hall of Seville," Dolores Robador, Fatima Arroyo and Almudena Munoz

"Weathering, conservation and restoration of the Santa Monica Church in Guadalajara, Mexico," Karla Jauregui, Wanja Wedekind and Siegfried Siegesmund

"Investigation of degradation phenomena of Luxemburg sandstone – the Royal Museum for Central Africa," Hilde De Clercq, Laurent Fontaine, Sebastiaan Godts, Roald Hayen, Michel Duser and Marleen De Ceukelaire

"Historical building stones on Guanajuato, Mexico: weathering, properties and restoration," Ruben Lopez-Doncel, Wanja Wedekind, Reiner Dohrmann and Siegfried Siegesmund

"Temperature impact on Cotta sandstone," Christoph Franzen, Dana Krause, Heiner Siedel and Bernd Ullrich

"Hygric and hydric expansion of tuffs exclusively caused by clay minerals?" Ruben Lopez-Doncel, Wanja Wedekind, Reiner Dohrmann and Siegfried Siegesmund

"Statistical analyses of petrographical and petrophysical properties of sandstones: an approach for predicting weathering behavior," Heidrun Stuck and Siegfried Siegesmund

"Characterization of the Smithsonian Institution's building stones using conventional and advanced analytical techniques," Emily Aloiz, Carol Grissom, Jeffery M. Davis and Richard Livingston

"Deterioration evaluation and stability diagnosis of stone cultural heritage using non-destructive precision technology," Y.H. Jo, C.H. Lee and M. Suh

"Evaluation of stone works deterioration with non-destructive methods," Danielle Grossi and Eliane Aparecida Del Lama

"Deterioration diagnosis, weathering characteristics of the dinosaur footprint fossils in Haenam Uhangri, Republic of Korea," J.H. Yoo, Y.H. Jo, Y.G. Chun and C.H. Lee

"Weathering of sedimentary stone materials formed under earth surface conditions," Peter W. Mirwald, Ulrich Obojes, Michael Unterwurzacher and Anja Diekamp

"Features and decay of cast-stone elements in New York City buildings in comparison with cast-stone in Milan," Roberto Bugini, Mariachira Faliva and Luisa Folli

"The deterioration of the high crosses of Ireland: a case study," Jason Bolton

"Water alteration in rock discontinuities," Sandra Dochez, Farid Laouafa, Christian Franck, Sylvine Guedon, Francois Martineau and Marion Bost

"Comparison between different methodologies for artificial deterioration of stone aimed at consolidant testing" Elisa Franzoni and Enrico Sassoni

"Biological influences on internal stone temperatures: laboratory procedures and preliminary results for intertidal barnacles," Martin A. Coombes, Heather Viles and Larissa A. Naylor

"Environmental impact on stone decay: crust formation at the Cologne Cathedral," B. Graue, S. Siegesmund, T. Licha, K. Simon, P. Oyhantcabal and B. Middendorf

"Weathering characteristics of stone cultural heritage on the basis of the climate condition in Korea," Chan Hee Lee and Yu Gun Chun

"The effect of increased winter rainfall on biological crusts and their implications for sandstone decay," Alison Wright and Martin Lee

"Alteration patterns of marble and stones from different environmental exposures" a systematic approach from buildings and museum collections in Genoa (Italy)," Simona Scrivano, Laura Gaggero and Adelmo Taddei

"Dust from limestone buildings, the composition and origin in rural and urban settings," Ákos Török, Siegfried Siegesmund, Tobia Licha and Klaus Simon

"Reburial of ruins: assessing the role of soil chemical and physical characteristics on stone deterioration in England and New Mexico," Noreen Zaman and Heather A. Viles

"The Prodomea phasing and compatibility indicators as tools for the planning and design of conservation interventions: assessment and validation in the Santa Clara-a-Velha monastery (Coimbra, Portugal)," Maria Joao Revez, Marta Raposo and José Delgado Rodrigues

"3-D light scanning as a tool in the documentation of the state of preservation of the two Rune stones in Jelling, Denmark," Susanne Trudsø

"Non destructive investigations of dimension stones by infrared spectroscopy," Jorg Bowitz and Angela Ehling

"A critical point of view and recent study with innovative tool to evaluated the penetration depth of a water repellent treatment on porous inorganic materials," Valeria Di Tullio, Vasco Fassina, Anna Maria Mechi and Ilaria Nicolini

"On the effects of the spatial variability on the THM behavior of tuffeau stone of historical buildings," Naima Belayachi and Dashnor Hoxha

"Multidisciplinary characterization of gypsum crust on Lede stone (Belgium)," Tim De Kock, Jan Dewanckele, Marijn Boone, Wesley De Boever, Laszlo Vincze, Gilles Fronteau, Luc Van Hoorebeke, Patric Jacobs and Veerle Cnudde

"Replacement of natural stone in historic buildings," Wido Quist and Rob van Hees

"A large scale mock up...what can we learn? A case study of the performance of Bedford limestone in the main group buildings at MIT," John Spewiek, Gary Tondorf-Dick, Mark Liebman and Battle Brown

"Using 21st century tools for documenting 1896 construction," Battle Brown and Mark Liebman

"The teach EU project: a better strategy to investigate the changing degradation processes by means of new non-destructive technologies for monitoring the overall damage assessment of cultural heritage," Adrianna Bernardi, Francesca Becherini, Luc Pockele and Sandro De Grandi

"Recording data for stone conservation projects: a new approach?" Emily Tracey, Paul Everett and Martin Gillespie

"Chromatic alteration affecting the Cretaceous sandstones between northern Italy and Southern Switzerland," G. Cavallo, G. Corrdig and G. Vola

"Measuring change over time: the use of geolocated images to evaluate the weathering of monuments," Eric Doehne

"Measuring change: stone texture and erosion rates of rapid stone flaking at Howden Minster, UK" Eric Doehne and Sarah Pinchin

"Inclined towards greening?: experimental investigations of algal biofilm colonisation on architectural features," Samin Ishtiaq Ahmad and Heather Viles

"Characterization and biological colonization of the materials of a weathered tombstone," V.G. Rosato, R.A. Garcia and R. Lofeudo

"Orientation affects *Trentepohlia*-dominated biofilms on Mayan monuments of the Rio Bec style," O. Ortega-Morales, C. Gaylarde, A. Anaya-H., M.J.Chan-Bacab and D. Arano-Recio

"Characterization of epilithic microbial biofilms on a sacred Mayan mask at Tikal, Guatemala," Benjamin Otto Ortega-Morales, Gustavo Montejano-Zurita, Christoph C.Tebbe, Seiichi Nakamura, Francisco Castaneda, Antonio Azamar and Patricia Quintana

"19th century cast stone from the French Rhone-Alpes Region: material characterization and restoration solutions," M. Bouichou, E. Marie-Victoire and E. Cailleux

"Assessment of XIX-XXth century conservation interventions in Venetian monuments with artificial products: state of the art and perspectives," M. Favaro, L. Bassotto, A. Chiarelli, C. Menichelli, V. Fassina, P. Tomasin, S. Bianchin, A. Gambirasi and A. Abbate

"Evaluation of conservation treatments applied to the stone of the Cathedral of Jerez del la Frontera (Cadiz, Spain)," Fatima Arroyo Torralvo and Rosario Villegas Sanchez

WEDNESDAY 24 OCTOBER 2012

ORAL PRESENTATIONS - METHODS AND MATERIALS OF CLEANING, CONSERVATION, REPAIR AND MAINTENANCE; LOGISTICS AND PLANNING

SESSION VIII

1. "Conservation of architectural marble at the New York Public Library," Timothy Allanbrook and Andrew Wilson

2. "The New York Public Library - marble deterioration and conservation," Mark Rabinowitz and John Carr
3. "The conservation project of the 'Antiques' in Saint Remy de Provence, France," François Botton, Stefano Marini and Margo Morisse
4. "Interior limestone cleaning at Saint John the Divine: practical and logistical considerations," Claudia Kavenagh
5. "Condition assessment of funerary marble monument to Antonio Canova in the Frari basilica in Venice," V. Fassina, Grazia Fumo and Paolo Cornale
6. "Developing an integrated decision making system for the assessment of cleaning interventions on marble architectural surfaces," E.T. Delegou, Ch. Kiranoudis, J. Sayas and A. Moropoulou
7. "Winter shelters for marble sculptures of the Schossbrücke Berlin: climatic constraints," Siegfried Siegesmund, Stephan Pirskawetz, Frank Weise, Rudolph Plagge and York Rieffel

SESSION IX

1. "Evaluation of the physical and chemical properties of dolomitic lime mortar," Jennifer Schork
2. "Characterization of hydraulic mortars containing nano-titania for restoration applications," N. Maravelaki, E. Lionakis, C. Kapridaki, Z. Agioutantis, A. Verganelaki, E. Aggelakopoulou and V. Perdikatsis
3. "Compatibility of Roman cement with gypsum stones and anhydrite mortars: the example of Valère Castle (Sion Switzerland)," Christophe Gosselin and Fred Girardet
4. "Identification of 19th century Roman cements by phase composition of clinker residues in historic mortars," Nina Gadermayr, Farkas Pinter and Johannes Weber
5. "Criteria of compatibility between mortars and soft limestone," Kévin Beck, Marwen Bouasker, Xavier Brunetaud, and Muzahim Al-Mukhtar
6. "Dolomitic lime mortar and the impact of SO₂-pollution," Anja Diekamp, Jürgen Konzett, Patricia Tartarotti and Peter W. Mirwald

SESSION X

1. "The combination of calcium hydroxide-sol and silicic acid ester as a new method for the structural consolidation of objects built of tuff lime and marl - latest findings," E. Maryniak-Piaszczyński
2. "The combined application of calcium hydroxide nano-sols and silicic acid ester - a promising way to consolidate stone and mortar," Gerald Ziegenbalg
3. "The consolidation of a porous Portuguese limestone with nanolime: assessment of penetration depth and strength increase," Dória Costa and José Delgado Rodrigues

4. "Consolidation of deteriorated carbonate stones with nano-particles of $\text{Ca}(\text{OH})_2$," A. Zornoza-Indart, P. López-Arce, L.S. Gómez-Villalba, M. Alvarez de Buergo, M.J. Varas-Muriel and R. Fort
5. "TEOS based consolidants for Maltese Globigerina limestone: effect of hydroxyl conversion treatment," S.M. Briffa, Daniel Vella and E. Sinagra
6. "A comparative cleaning study for fragile marble monuments after pretreatment with hydroxylating conversion treatment," Jason W. Church, Stace Miller, Norman Weiss, Irving Slavid and Mary F. Striegel

POSTER PRESENTATIONS: METHODS AND MATERIALS OF CLEANING, CONSERVATION, REPAIR AND MAINTENANCE

SESSION XI

- "The evaluation of nanosilica performance for consolidation treatment of a highly porous calcarenite," Angela Calia, Maurizio Masieri, Donato Colangiuli and Giovanni Baldi
- "Stone, mortar and plaster consolidation by calcium hydroxide nano-sols: characteristics of the available materials and results of applications within the Stonecore project" Gerald Ziegenbalg
- "The preservation of sandstone reliefs at the archaeological site of Tajin, Mexico, Using colloidal silica," Dulce Ma. Grimaldi, Nora A. Perez and Jennifer H. Porter
- "The performance of an induced calcium oxalate surface on Globigerina limestone," Tabitha Dreyfuss and JoAnn Cassar
- "Durability of consolidated porous limestones: a laboratory testing approach," Zita Papay and Ákos Török
- "Consolidation efficiency of in-situ application considering weathering degree for Korean sandstone cultural heritage," Myeong Seong Lee, Jae Mann Lee, Sung Mi Park and Jiyoung Kim
- " TiO_2 - SiO_2 -PDMS nano-composite hydrophobic coating with self-cleaning properties for marble protection," C. Kapridaki and N. Maravelaki-Kalaitzaki
- "Compact limestones as historical building material: properties of the Trani stone (Apulia, Southern Italy) and preliminary study for self-cleaning treatments," Angela Calia, Loredana Matera and Mariateresa Lettieri
- "Optimizing properties of TiO_2 -silica composites for stone self-cleaning," L. Pinho and M.J. Mosquera
- "Performance of nanocomposites for conservation of artistic stones," F. Persia, L. Caneve, F. Colao, R. D'Amato, C. Giancristofaro, G. Ricci, L. Pilloni and A. Rinaldi
- "Methods of microscopy and SEM to assess the performance of nano-lime consolidants in porous solids," Elisabeth Ghaffari, Thoma Koberle and Johannes Weber
- "Consolidation of porous limestone with suspensions of calcium hydroxide nano-particles in alcohols," Zuzana Slizkova, Dita Frankeova and Krzysztof Niedoba

"Evaluation of strengthening effect of consolidants applied on porous and fissured substrates," Dória Costa and José Delgado Rodrigues

"The concept of full structural consolidation with functional silanes: results of a case study on a Baroque tombstone," Martin Pracher and Robert Sobbot

"An experimental assessment of three inorganic consolidants for use on museum artefacts in comparison to organo silanes," Jennifer Booth, Heather Viles and Philip Fletcher

"Damage assessment of the ferruginous sandstone masonry – strengthening effect of consolidation with TEOS - the Virgin Tower of Zichem," Hilde De Clerq, Roald Hayen and Michiel Duser

"Effect of pretreatment for TEOS based stone consolidants," Ji Young Choi, Sung-Jin Park, Jongok Won, Yong Seok Choi, Yong Soo Kang and Myeong Seong Lee

"On-site optimization of soft aero-abrasion cleaning techniques for stone materials by means of an innovative portable laboratory specifically designed for the analysis of historic buildings," D.P. Benedetti, A. Griletto, M. Lancini and Giovannini

"Recent advances in understanding the consolidation of marble," George Wheeler, Norman Weiss, Jennifer Schork and Glenn Boornazian

"Removal of organic films from stone surfaces," Hanna Dudkowska and Jadwiga Lukaszewicz

"Evaluation of cleaning methods and products for the removal of crude oil from stone," Carol S. Chin, Kristen George, Jason W. Church and Mary F. Striegel

"A cleaning method based on the use of agar gels: new tests and perspectives," A. Sansonetti, M. Casati, J. Striova, C. Canevali, and M. Anzani and A. Rabbolini

"Investigation of the impact of disinfection products on the state of preservation of stone historical objects," Milena Amahwa, Joanna Karbowska-Berent and Jadwiga Lukaszewicz

"The development of a water repellent with biocide effects," Stephanie Eyssautier-Chuine, Claire Moreau, Maxime Gommeaux, Gilles Fronteau, Celine Thomachot-Schneider, Jessica Pleck and Benoi Kartheuser

"Comparison of salt decay susceptibility of NHL repair mortars under different testing conditions," Davide Gulotta, Margherita Bertoldi, Cristina Tedeschi, Elsa Garavaglia and Lucia Toniolo

"The possibility of using Roman cement as a binder of repair mortars to restore porous stones," Jadwiga Lukaszewicz and Iwona Michniewicz

"Sulfate attack of dolomitic lime mortars," Heather Hartshorn

"The role of historic and contemporary mortars in the deterioration process of natural stone on the Cologne Cathedral," Deborah Klein, Birte Graue, Siegfried Siegesmund and Bernhard Middendorf

"Gothic gypsum architectural details and repair mortars based on high-fired gypsum," Magdalena Jakubek, Frank Schlutter, Herbert Juling and Jadwiga Lukaszewicz

"A study of acrylic-based mortars for stone repair," Thibault Demoulin, Fred Girardet and Robert Flatt

"Linostone: a repair product investigated," Alice B. Custance-Baker

"Phillyseal - too good to be true?" Stephanie de Roemer

"The condominiums at Water Tower Place: evaluation and repair of a Georgia marble façade," William Bast, Rachel Michelin, Scott Nacheman and Dziugas Reneckis

"Requirements for replacement stones at the Cologne Cathedral – a systematic approach to general criteria on compatibility," Birte Graue, Siegfried and Bernhard Middendorf

"The monument of Kallimachos: conservation and reassemblage," Constantinos Vasiliadis and Dimitris Maraziotis

"An examination of pinning materials for marble sculpture," Carolyn Riccardelli, George Wheeler, Christina Muir, George Scherer and Joe Vocaturo

"The restoration and subsequent earthquake-safe mounting of four sculpted stone columns broken during an earthquake," Zdravko Barov

"The restoration of a 'composite' marble sculpture of 'Marcus Aurelius' from the Ince Blundell collection at National Museums Liverpool," Nicolas Verhulst and Lottie Barnden

"Conservation of archaeological megalithic sites under marine environment: example of the granitic menhirs at I Stantari [Cauria plateau, Corsica Island, France]," J.-M. Vallet, N. Bouillon. P. Bromblet and E. Heddebaux

"Climatic exposure and protection of the Runic stones in felling, Denmark," Poul Klens Larsen and Susanne Trudsø

"Conservation of Neolithic engravings in drastic environment: first results from the mineralogical and petrographic studies of the red pelites of the Mont Bego's sites (France)," Jean-Marc Vallet Olivier Grauby, Philippe Bromblet, Jean-Jacques Cocheme and Franck Sumera

"The Neopolitan yellow tuff and the Vicenza stone: experimental investigations about effectiveness of antismearing treatment," C. Di Benedetto, S. Bianchin, P. Cappelletti, A. Colella, M' de'Gennaro, A.M. Favaro, A. Gambirasi, A. Langella, G. Luca and M. Soranzo

"Poly(fluorinated methyl methacrylate) block copolymers and its self-assembly behavior in the solvents for conservation application," He Ling and Dong Xia

"Biopolymers as stone protective," Barbara Sacchi, Emma Cantisani, Giulia Giuntoli, Silvia Salvini, Costanza Scopetani, Luca Rosi, Marco Frediani and Pier Frediani

"The influence of osmotic pressure on poulticing treatments," L. Pel and A. Heritage

"Study on application of capillary zone electrophoresis in the conservation of historical monuments," Wioletta Oberta and Jadwiga Lukaszewicz

"Crust formation processes on archaeological marble: conservation methodology and treatment evaluation," Nikolaos -Alexis Stefanis and Panagiotis Theoulakis

"Conserving stone in turbulent times: impact of armed warfare on immovable heritage," Lisa Mol and Heather Viles

THURSDAY 25 OCTOBER 2012

ORAL PRESENTATIONS - METHODS AND MATERIALS OF CLEANING, CONSERVATION, REPAIR AND MAINTENANCE, CONTINUED

SESSION XII:

1. "Consolidation of wet stone and plaster," Andrew Thorn
2. "Lithium polysilicate as a consolidation treatment on limestone," David Boyer and Courtney Murdock
3. "On the conservation of Guadalajara, Mexico building stones with a new aluminosilicate compound," Nora Pérez, Enrique Lima, Juan Méndez and Pedro Bosch
4. "Nanomaterials for consolidation of marble and wall paintings," Stephanie Duchêne, Vincent Detalle, Monica Favaro, Franco Ossola, Patrizia Tomasin, Chiara De Zorzi and Naida El Habra
5. "Consolidation of a porous limestone by means of a new treatment based on hydroxyapatite," Enrico Sassoni, Elisa Franzoni, George W. Scherer and Sonia Naidu
6. "Development of hydroxyapatite films to reduce the dissolution rate of marble," Sonia Naidu and George W. Scherer

ORAL PRESENTATIONS -THE ROLE OF BIOLOGY IN STONE CONSERVATION

SESSION XIII

1. "Greening stone conservation: exploring the protective role of plants and microbes," Heather Viles
2. "Bioprotective role of lichens on oolitic limestone buildings," Nicolas Concha-Lozano, Jacques Pages, Gisel de Billerbeck, Pierre Gaudon and Dominique Lafon
3. "Biodeterioration of stone in relation to microclimate in the Ta Nei Temple - Angkor (Cambodia)," G. Caneva, S. Ceschin, O. Salvadori, H. Kashiwadani, K.H. Moon and Y. Fugatami
4. "The use of Raman spectroscopy to characterize biological and biomineralic crusts," Alison Wright and Martin Lee
5. "Developing a methodology to evaluate the effectiveness of a biocide," A. Elena Charola, Melvin Wachowiak, E. Keats Webb, Carol Grissom, Edward P. Vicenzi, Wang Chong, Hanna Szczepanowska and Paula DePriest

6. "Side effects on stone of biocidal treatments on endolithic lichens," Annalaura Casenova, Ornella Salvadori, Stefano Bertuzzi and Mauro Tretiach
7. "Physico-chemical and biological evaluation of biocide and water-repellent performance on limestone," M. Favaro, S. Biachin, A. Gambirasi, P.A. Vigato, G. Mognon and S. Manente
8. "Bacteria cleaning technology for marble surfaces affected by black crust: comparison with chemical and laser treatments," Eleonora Gioventù, Paola Lorenzi, Christina Improta and Francesco Cappitelli

ORAL PRESENTATIONS - METHODS AND MATERIALS OF CLEANING, CONSERVATION, REPAIR AND MAINTENANCE CONTINUED

SESSION XIV

1. "Particle modified consolidants in the consolidation of porous stone," E. Ksinopoulou, A. Bakloas and A. Moropoulou
2. "New nanomaterials for stone conservation," Maria J. Mosquera, Juan Illescas, Dario S. Facio, Luis Pinho and Farid Elhaddad
3. "Effect of load and self-restraint on the durability of ethyl silicate consolidants applied to clay-bearing stone," Asel María Aguilar, Francesco Caruso and Robert Flatt
4. "Differences in protection and consolidation effect of two types of biodeposition," W. De Muynck, H. De Clerq, L. Fontaine and N. De Belie
5. "Photocatalytic nanostructured TiO₂ for protection of porous and compact stone," A. Pagliarulo, F. Petronella, A. Licciulli, A. Rocca, D. Diso, A. Calia, M Lettieri, d. Colangiuli, A. Agostano, M. Lucia Curri and R. Comparelli
6. "The possibility of using laser ablation for the removal of organic contaminants on stone monument surfaces," Justyna Hrabaska, Jadwiga W. Lukaszewicz and Jan Marczak