

CURRICULUM VITAE

FORMATO EUROPEO / EUROPEAN FORMAT

PERSONAL INFORMATION

Name, Surname Emma ANGELINI

WORK EXPERIENCE

Name and address of employer Politecnico di Torino, Department of Applied Science and Technology, Corso Duca degli Abruzzi 24, 10129 Torino (Italy)

Type of business or sector Higher education , Research

Occupation or position held Full Professor of Applied Physical Chemistry

Main activities and responsibilities She actually works in the Department of Applied Science and Technology, as Professor of Applied Physical Chemistry. She teaches Chemistry in the courses of Electronic Engineering, and in the field of e-learning she recorded a course of Chemistry broadcasted by RAI NETTUNO SAT1 and RAI NETTUNO SAT2, by means of HotBird satellite of EUTELSAT.

2001-2003 – Member of the Academic Senate Politecnico di Torino

From 2012 National Expert of MIUR In the INCO Committee of International Cooperation FP7.

From 2012 : Fellow of Institute for the Study of Nanostructured Materials (ISMN) del CNR – Area della Ricerca di Montelibretti- Roma

From 2012 : Fellow of ASP (Alta Scuola Politecnica)

From 2014 : Il Vice President of ICC (International Corrosion Council)

From 2017 : Vice President of ICC (International Corrosion Council).

EDUCATION AND TRAINING

Graduated in Chemistry at the University of Torino in 1975

RESEARCH ACTIVITIES

Research sectors She is responsible for national and international research projects in the following fields : i) protection of cultural heritage, ii) biomaterials to be employed in restorative dentistry, iii) innovative alloys for employments in electrocatalysis, iiiii) surface modification of materials by low pressure plasmas.

She is responsible, among others, of European Project MATECO (New coatings deposited by PACVD for corrosion protection 2004-2007;(iii)European Project INCOMED EFESTUS (Tailored strategies for the conservation and restoration of archaeological value Cu-based artefacts from Mediterranean Countries 2003-2005), European INCO-MED Project PROMET (Innovative conservation

approaches for monitoring and protecting ancient and historic metals collections from the Mediterranean basin 2004-2007, European Project MEDAL – INCOMED – SSA (Mediterranean Conservation Alliance 2007-2008, Progetto Europeo CBWRMED (INCO-2010-6: Capacity Building for Direct Waste Reuse in the Mediterranean Area, 2010-2013), Internationalization Project San Paolo (2016-17) Italy-Colombia : Developing cooperation in corrosion engineering.

The scientific work carried out and the more than 200 papers published may be grouped according to the following themes:

1. Corrosion and protection of metallic materials - the research has been devoted to the study of the corrosion resistance of superficially treated steels, duplex stainless steels and sintered steels, amorphous and nanocrystalline alloys.
2. PECVD coatings for protection of metals, iron alloys, magnesium alloys, silver alloys
3. Analysis, corrosion processes and restoration problems on archaeological artifacts - studies of degradation processes on archaeological artifacts.
4. Studies on biomaterials - the research is carried out mainly on dental materials in environments simulating the oral cavity, in order to evaluate the corrosion resistance and release of ions.

She is member of the following Associations: AIM (Associazione Italiana di Metallurgia), SCI (Società Chimica Italiana), GMEE (Gruppo Misure Elettriche ed Elettroniche), EFC (European federation of Corrosion); ICC (International Corrosion Council).

Invited lectures:

2005 - EMRS, European Materials Research Society, Spring Meeting, Strasbourg, May 31-June 3, Invited lecture

2007 - 18^o National Symposium on Vacuum Science and Technology, Florence, Italy, 2-4 April, Invited lecture

2007 - Workshop Laserion 2007 - Microfabrication, Nanostructured Materials and Biotechnology, Schloss Ringberg (Tegernsee Munich), 1-6 July 1-6, Invited lecture

2013 –ECASIA '13 - 15th European Conference on Applications of Surface and Interface Analysis, Forte Village Resort, Sardinia, October 13-18 2013, key-note lecture

2014 - EMRS, European Materials Research Society, Spring Meeting, Lille, May 7-13, Invited lecture

2015– Eglycorr, 4th International Conference Corrosion Mitigation and Surface Protection Technologies, Hurghada (Egypt), 14-17 December Invited lecture

Evaluation Activities.

She has been evaluator in several sessions for the European Commission and for the Italian Research Ministry:

1998 - IV FP4: Measurements and Testing Programme for R & D Projects in the field of Protection of Cultural heritage.

2004 - FP5: Co-operative Research under the Horizontal Research Activities involving SMEs FP6-2002-SME1

2004 - FP5: Research Projects German-Israeli Foundation for Scientific Research and Development (GIF)

2003- 2004 Research Projects Czech Science Foundation

2004 German-Israeli Foundation for Scientific Research and Development (GIF)

2006 - FP6: Marie Curie, PHY Panel(EIF, IIF, OIF)

2008-2009 - FP7: Capacities-Regions of knowledge
2008-2009-2010-2012 - FP7: Capacities-Potential of Research
2009 - PRIN (Italian Research projects)
2009- FP7: Evaluator of the Faculty of Chemistry-Sofia (Bulgaria)
2010- FP7: MATERA
2010 - FP7: ENPI CBCMED Cross Border Cooperation in the Mediterranean
2013 - FP7 : Potential of Research, Project post – evaluation
2015-2016 Horizon 2020 : MERAnet-Med

2006-till now Member of evaluation Commissions of CNR (Italian National
Research Council)

EMMA ANGELINI

RECENT PUBLICATIONS

L. Iannucci, M. Parvis, P. Cristiani, R. Ferrero, E. Angelini, S. Grassini, A Novel Approach for Microbial Corrosion Assessment - In: IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, 68:5(2019), pp. 1424-1431.

S. Grassini, S. Corbellini, M. Parvis, E. Angelini, F. Zucchi, F. (2018). A simple Arduino-based EIS system for in situ corrosion monitoring of metallic works of art. MEASUREMENT, vol. 114, p. 508-514

L. Iannucci, M. Parvis, E. Di Francia, S. Grassini, (2018). iHomeX: An Internet-Enabled Laboratory for Long-Term Experiment Management. IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, p. 1-8,

S. Grassini, R. Pisano, A. Barresi, E. Angelini, M. Parvis (2016), Frequency domain image analysis for the characterization of porous products. MEASUREMENT, vol. 94, p. 515-522,

I. Elaissaoui, H. Akrouf, S. Grassini, D. Fulginiti, L. Bousselmi, (2016). Role of SiO_x interlayer in the electrochemical degradation of Amaranth dye using SS/PbO₂ anodes. MATERIALS & DESIGN, vol. 110, p. 633-643

S. Grassini; S. Corbellini; E. Angelini; F. Ferraris; M. Parvis (2015) Low-Cost Impedance Spectroscopy System Based on a Logarithmic Amplifier. In: IEEE TRANSACTIONS ON INSTRUMENTATION AND MEASUREMENT, vol. 64 n. 5, pp. 1110-1117.

E. Angelini, S. Corbellini, M. Parvis, F. Ferraris, S. Grassini (2014) An Arduino-based EIS with a logarithmic amplifier for corrosion monitoring. In: 2014 IEEE International Instrumentation and Measurement Technology Conference: Instrumentation and Measurement for Sustainable Development, I2MTC 2014, Montevideo, Uruguay, 12-15 May 2014. pp. 905-910

Parvis M., Grassini S., Angelini E., Pisano R., Barresi A. (2014) Characterization of freeze-dried pharmaceutical product structures by an FFT-imaging approach. In: 9th IEEE International Symposium on Medical Measurements and Applications, IEEE MeMeA 2014, Lisboa, Portugal, 11-12 June 2014. pp. 302-307

A. Mezzi, C. Riccucci, T. De Caro, E. Angelini, F. Faraldi, S. Grassini, Gouda (2014) Combined use of SA-XPS, XRD and SEM + EDS for the micro-chemical characterisation of Ag-based archaeological artefacts. In: SURFACE AND INTERFACE ANALYSIS, pp. 1-6.

E. Angelini, D. Assante, S. Grassini, M. Parvis M. (2014) EIS measurements for the assessment of the conservation state of metallic works of art. In: INTERNATIONAL JOURNAL OF CIRCUITS, SYSTEMS AND SIGNAL PROCESSING, vol. 8, pp. 240-245

S. Grassini, E. Angelini, M. Parvis, S. Corbellini, M. Ishtaiwi (2014) Electrochemical characterization of magnesium bioabsorbable implants 2014 IEEE International Symposium on Medical Measurements and Applications (MeMeA). In: 9th IEEE International Symposium on Medical Measurements and Applications, IEEE MeMeA 2014, Lisboa, Portugal, 11-12 June 2014. pp. 1-6

Faraldi F., Angelini E., Riccucci C., Mezzi A., Caschera D., Grassini S. (2014)

Innovative diamond-like carbon coatings for the conservation of bronzes. In: SURFACE AND INTERFACE ANALYSIS, vol. 46 n. 10-11, pp. 764-770. - ISSN 0142-2421

O. Papadopoulou, M. Delagrammatikas, P. Vassiliou, S. Grassini, E. Angelini, V. Gouda (2014)

Surface and interface investigation of electrochemically induced corrosion on a quaternary bronze. In: SURFACE AND INTERFACE ANALYSIS, vol. 46 n. 10-11, pp. 771-775. - ISSN 0142-2421

Emma Angelini, Sabrina Grassini, Marco Parvis, Marco Prioli, Simona Salicone (2014)

An application of the Random-Fuzzy variables for the safeguard of underwater cultural heritage. In: 2014 IEEE International Instrumentation and Measurement Technology Conference: Instrumentation and Measurement for Sustainable Development, I2MTC 2014, Montevideo, Uruguay, 12-15 May 2014. pp. 342-347

E. Angelini, A. Batmaz, T. De Caro, F. Faraldi, S. Grassini, G.M. Ingo, C. Riccucci (2014)

The role of surface analysis in the strategies for conservation of metallic artefacts from the Mediterranean Basin. In: SURFACE AND INTERFACE ANALYSIS, vol. 46 n. 10-11, pp. 754-763.

G. M. Ingo, G. Guida, E. Angelini, G. Di Carlo, A. Mezzi, G. Padeletti (2013)
Ancient Mercury-Based Plating Methods: Combined Use of Surface Analytical Techniques for the Study of Manufacturing Process and Degradation Phenomena. In: ACCOUNTS OF CHEMICAL RESEARCH, vol. 46 n. 11, pp. 2365-2375.

Parvis, M., Ferraris, F., Grassini, S., Angelini, E., Fulginiti, D. (2013)
Biodegradable metallic materials: A measuring approach to predict the corrosion rate. In: 2013 IEEE International Instrumentation and Measurement Technology Conference, Minneapolis, USA, May, 6-9 2013. pp. 228-233

E. Angelini, S. Grassini (2013)

Plasma treatments for the cleaning and protection of metallic artefacts. In: Corrosion and conservation of cultural heritage metallic artefacts / P. Dillmann, D. Watkinson, E. Angelini, A. Adriens (EFC-WP21 on Corrosion of Archaeological and Historical Artefacts). Woodhead Publishing Limited, Cambridge, pp. 552-569

E. Angelini, S. Grassini, S. Tusa (2013)

Underwater corrosion of metallic heritage artefacts. In: Corrosion and conservation of cultural heritage metallic artefacts / P. Dillmann, D. Watkinson, E. Angelini, A. Adriens (EFC-WP21 on Corrosion of Archaeological and Historical Artefacts). Woodhead Publishing Limited, Cambridge, pp. 236-259.

S. Grassini, E. Angelini, M. Parvis, M. Bouchar, P. Dillmann, D. Neff (2013)
An in situ corrosion study of Middle Ages wrought iron bar chains in the Amiens Cathedral. In: APPLIED PHYSICS. A, MATERIALS SCIENCE & PROCESSING, vol. 113 n. 4, pp. 971-979.