

CURRICULUM AI FINI DELLA PUBBLICAZIONE

FRANCESCA SBARDELLA

Education and qualification

March 2016: Received the qualification of Assistant conservator- technician of restoration at MIBACT- Ministry of Cultural Heritage and Activities and Tourism of the Italian Republic

November 2014 to present: PhD student in a joint research doctoral thesis in “Electrical, Materials and Nanotechnology Engineering” (EMNE) and “Applied chemistry and polymeric materials”
Title: Synthesis of polyacrylate/silica hybrid films for coating applications
University of Rome “La Sapienza” (Italy) and University of Basque country UPV/EHU in San Sebastian (Spain)

September 2011 to December 2013

Master Degree in "Science and Technology for the Conservation of Cultural Heritage
Graduate in Conservation Sciences

Title: Application of NanoSilicates for the Production of Consolidants of Plasters University of Rome “La Sapienza” (Italy)

September 2007 to March 2011

Bachelor Degree in "Science Applied to Cultural Heritage and Diagnostics for their Conservation" Graduate in Conservation Science

Title: Study of painted plasters of the House of Augustus
University of Rome “La Sapienza” (Italy)

Fellowship

Erasmus + Traineeship at Basque Center for macromolecular design and engineering, Polymat San

Sebastian, Spain, Project Title: Synthesis of polyacrylate/silica hybrid films for coatings application, April to July 2015

Research Grant, Project title: Investigation of thermo-mechanical properties of fibre-reinforced porous materials, Department of Structural Engineering and Geotechnics, ‘Sapienza’ University of Rome, Italy, October 2015 to February 2016

Technical skills and competences

Infrared and Raman Spectroscopy analysis (FT-IR, FT-Raman, FTIR- ATR, μ -Raman and μ -FTIR)
Thermal analysis (DSC, TGA, DTA)
Scanning electron microscopy with X-rays microanalysis (SEM-EDX)
Transmission electron microscopy (TEM, cryo-TEM)
X-rays diffraction (XRD, XRPD)
Cross and thin section with the interpretation at the microscope
Atomic Force Microscopy (AFM)
Nuclear magnetic resonance spectroscopy (NMR),
Synthesis in batch and semibatch reactors and characterization of polymeric latexes and films (DLS, Turbiscan, optical contact angle, GC, MFFT, Tensiometer, ultracentrifuge)
Mechanical characterization of polymeric and inorganic material Microclimatic studies indoor and outdoor.

Presentation at Conferences

- “L’innovazione tecnologica per la diagnostica dei Beni Culturali: macro-imaging IR e micro XRF” Roma (IT); 15 March 2013, presentation of “Study of painted plasters of the House of Augustus”.
- “Urban Workshop: Columna, from Object to City”, University of Arkansas Rome Center, Rome (IT); 6 February 2014, presentation of “Study of microclimatic condition and the decay of Trajan’s Column”

Award

- “Ferroni Beni Culturali 2014”, The Foundation Prof. Enzo Ferroni – NPO; for the thesis entitled "Application of NanoSilicates for the Production of Consolidants of Plasters"; April 2014.

Publications

- Bracciale M.P., Broggi A., Bartollini E., Sbardella F., Poldi M., Marrocchi A., Santarelli M.L., Vaccaro L.,
Preparation and characterization of cross-linked polymer supports for catalysts immobilization, International Journal of Engineering Research & Science (IJOER), (February 2016)
- Santarelli ML, Sbardella F, Zuena M, Albé M, Quattrociocchi G, Tirilló J, Valente M, Sarasini F (2014). Malte più performanti con le fibre di basalto. COMPOSITI MAGAZINE, vol. 33, p. 7-16

•Santarelli, M.L., Sbardella, F., Zuenen, M., Tirillò, J., Sarasini, F., Basalt fiber reinforced natural hydraulic lime mortars: A potential bio-based material for restoration, *Materials and Design* (2014), doi: <http://dx.doi.org/10.1016/j.matdes.2014.06.041>

Courses, School and Seminary

•Course on “Emulsion polymerization processes” September 7-11 2015, Polymat, San Sebastian, Spain

•EU project CHARISMA: “Cultural Heritage Advanced Research Infrastructures: Synergy for a Multidisciplinary Approach to Conservation/Restoration” “Itinerant Course on Stone Conservation” - Cultural Heritage Agency of the Netherlands in Amsterdam, NL, 27 May - 7 June 2013

• IV School on the Infrared Spectroscopy applied to the cultural heritage. Focus on Raman Spectroscopy” Center of conservation and restoration of Cultural Heritage, La Venaria Reale, Turin, Italy, 2015

•Approch to multiphysics problems by Comsol, Comsol, Roma, 25-03-2015

•Polymers in sport: the winning technology, Prof. Santarelli, Roma, 18-05-2015

•Organic semiconductors device applications, Prof. Marrocchi, Roma, 22-05-2015

•Seminary “Laboratory of CISTeC: applications in the field of Cultural Heritage” Erasmus Mundus Master – Archeological Materials Science (ARCHMAT), Roma La Sapienza, 25-11-2014

•“La generazione delle idee”, dott. De Palo, Lyondellbasell, Roma, 25-05-2015

•“XX anniversario CISTeC. Passato Presente Futuro”, Roma, 17-04-2015

•“Controlled radical polymerization as a tool for the synthesis of surfactant free polymer particles and organic/inorganic latexes”, JIP-JEP 2015, Muriel Lansalot, San Sebastian, Spain, 17-09-2015

Language skills

ITALIAN: mother tongue

ENGLISH: upper intermediate

SPANISH: upper intermediate

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Francesca Sbardella