

Chiara Genova

EDUCATION AND TRAINING

PhD in Earth Sciences, curriculum Environment and Cultural Heritage (Doctor Europaeus – SSD: CHIM/12)

Department of Earth Sciences, Sapienza University of Rome [01/11/2017 – 16/03/2021]

Address: P.le Aldo Moro 5, 00185 Rome (Italy)

Field(s) of study: Natural sciences, mathematics and statistics: *Chemistry, Biology, Earth sciences, Interdisciplinary programmes and qualifications involving natural sciences, mathematics and statistics*

Final grade: Ottimo (*Excellent*)

Thesis: Ecosustainable and phytobased alternative methods for the conservation of biodeteriorated stone materials

Science and Technologies for the Conservation of Cultural Heritage Materials (Master's Degree)

Department of Environmental Biology, Sapienza University of Rome [01/10/2015 – 29/05/2017]

Address: P.le Aldo Moro 5, 00185 Rome (Italy)

Field(s) of study: Natural sciences, mathematics and statistics: *Chemistry, Biology, Earth sciences, Interdisciplinary programmes and qualifications involving natural sciences, mathematics and statistics*

Final grade: 110/110 cum laude

Thesis: Metodologie chimico-fisiche non invasive e non distruttive per la valutazione dello stato di conservazione del Tempio del Divo Romolo al Foro Romano

(Non- invasive and non- destructive physico-chemical methodologies for the evaluation of the conservation status of Tempio del Divo Romolo at the Roman Forum)

Technologies for the Conservation and the Restoration of Cultural Heritage Materials (Bachelor's Degree)

Department of Environmental Biology, Sapienza University of Rome [01/10/2010 – 12/01/2015]

Address: P.le Aldo Moro 5 , 00185 Roma (Italy)

Field(s) of study: Natural sciences, mathematics and statistics: *Chemistry, Biology, Earth sciences, Interdisciplinary programmes and qualifications involving natural sciences, mathematics and statistics*

Final grade: 110/110

Thesis: Caratterizzazione chimico-fisica e colorimetrica di un campione di intonaco proveniente da “Palazzo Governi”, Cagliari (Italia).

(Physico-chemical and colorimetric characterization of a plaster sample coming from “Palazzo Governi”, Cagliari (Italy))

PUBLICATIONS

Single-sided portable NMR investigation to assess and monitor cleaning action of PVA-borax hydrogel in

Travertine and Lecce stone, Stagno, V., Genova, C., Zoratto, N., Favero, G., Capuani, S., *Molecules* 2021, 26, 3697.

<https://doi.org/10.3390/molecules26123697>

An integrated approach to the recovery of travertine biodegradation by combining phyto-cleaning with genomic characterization, C. Genova, A. Grottoli, E. Zoppis, C. Cencetti, P. Matricardi and G. Favero, *Microchem. J.* 2020, 156, 104918.

<https://doi.org/10.1016/j.microc.2020.104918>

Phytochemical compounds as cleaning agents on granite colonized by phototrophic subaerial biofilms, C. Genova, E.

Fuentes, P. Sanmartin, G. Favero and B. Prieto, *Coatings* 2020,10(3), 295. <https://doi.org/10.3390/coatings10030295>

A cheap protocol for colour measure and for diagnostic in planning a cultural heritage restoration. Case study: main

façade of Palazzo Governi (Cagliari, Sardinia, Italy), M.P. Sammartino, C. Genova, S. Ronca, G. Cau and G. Visco, *Environ Sci Pollut Res* 2017, 24, 13979–13989. <https://doi.org/10.1007/s11356-016-8160-5>

PROJECTS

Eco-friendly phytochemical based products for the conservation of wooden cultural heritage

[12/2020 – Current]

Progetti di Ricerca Piccoli, Sapienza University of Rome

Application of advanced eco-friendly phytochemical based systems for the elimination of a multispecies biofilm from travertine samples

[01/10/2019 – Current]

Avvio alla Ricerca, Sapienza University of Rome

Introduction to thesis and practical seminars: Advanced chemical methods in archaeological material science, Sapienza University of Rome

[01/10/2018 – 01/10/2019]

Tutoring and support activities

CONFERENCES AND SEMINARS

Science ABC2020

[Sapienza University of Rome, 19/02/2020 – 21/02/2020]

Oral Presentation: **Green biocides embedded in a hydrogel matrix. Cleaning effects on granite colonized by phototroph**, *C. Genova, E. Fuentes, P. Sanmartin, G. Favero and B. Prieto*

Poster Session: **Recovery capacity of SABs on granite heritage subjected to climate changes stressors**, *E. Fuentes, C. Genova, P. Castiñeras and B. Prieto*

TECHNART 2019 - International conference on the use of analytical techniques for characterization of artworks

[University of Antwerp, Bruges (Belgium), 07/05/2019 – 10/05/2019]

Oral Presentation: **Ecosustainable alternative methods for the phytoconservation of biodegraded stone materials**, *C. Genova, P. Matricardi, C. Cencetti, M. Reverberi, E. Zoppis, V. Di Tullio, N. Proietti, D. Capitani and G. Favero*

Le scienze e i beni culturali: innovazione e interdisciplinarietà

[Università Statale di Milano, Milano (Italy), 26/02/2019]

Poster session: **Alternative phytochemical treatments for the conservation of biodegraded stone materials**, *C. Genova, P. Matricardi, C. Cencetti and G. Favero*

6th CMA4CH Mediterranean Meeting "Straightforward Approach in Cultural Heritage and Environment Studies Multivariate Analysis and Chemometry"

[Sapienza University of Rome, 18/12/2016 – 19/12/2016]

Oral Presentation: **Physical chemical Characterization of Black Crusts Coming from Cagliari Town Hall, Palazzo Bacareda, Cagliari (Italy)**, *C. Genova, G. Guida, G. Cau, R. Reale, G. Visco, M.P. Sammartino*

8th edition Convegno Calce 2015 "Pompei e la civiltà della calce: storia, tecnologia, restauro"

[Auditorium Scavi, Pompei (Italy)., 29/10/2015 – 30/10/2015]

Oral presentation: **Caratterizzazione chimico fisica e colorimetrica di un campione d'intonaco proveniente da Palazzo Governi, Cagliari (Italia)**, C. Genova, G. Visco, M.P. Sammartino, G. Cau

5th CMA4CH Mediterraneum Meeting "Employ of Multivariate Analysis and Chemometrics in Cultural Heritage and Environment Fields"

[Sapienza University of Rome, 14/12/2014 – 17/12/2014]

Poster session: **Physico chemical, Colorimetric and Mineralogical Characterization of a Plaster Sample Coming from "Palazzo Governi", Cagliari (Italy)**, C. Genova, G. Visco, M.P. Sammartino, G. Cau

WORK EXPERIENCE

Internship

GEMAP, Universidade de Santiago de Compostela [05/2019 – 02/2020]

City: Santiago de Compostela

Country: Spain

Employment of non-invasive and non-destructive analytical methods on biocolonized stone materials, to assess the presence of photosynthetic sub-aerial biofilms (SABs) and the effects of biocidal treatments in the removal of the colonizing microorganisms. In particular, the employed methodologies consisted in:

- Colorimetric investigations
- Pulsed Amplitude Modulated (PAM) Fluorometry for the characterization of the vital activity of photosynthetic microorganisms

Apprenticeship

ArsMensurae - diagnostica e tecnologie per i beni culturali [03/2016 – 10/2017]

City: Rome

Country: Italy

Temporary apprenticeship, consisting in performing non-invasive and non-destructive analyses on cultural heritage materials. In particular:

- Portable XRF spectrometry: elemental characterization of mosaic tiles, Main facade of Santa Maria in Trastevere, Rome (Italy)
- Portable IR spectroscopy: preparatory drawing of a wall paintings, Villino Ximenes Rome (Italy)

Internship

Department of Chemistry, Sapienza University of Rome [07/2016 – 05/2017]

City: Roma

Country: Italy

Non-invasive and non-destructive analyses to characterize the conservation status of Tempio del Divo Romolo at the Roman Forum. Different analytical strategies have been performed, in particular:

- Microclimate analyses

- Characterization of salt efflorescences with Ion Chromatography
- XRF qualitative and quantitative analysis
- Colorimetric analysis

Internship

Department of Chemistry, Sapienza University of Rome [04/2014 – 02/2015]

City: Rome

Country: Italy

Characterization of plaster samples coming from the main facade of Palazzo Governi, Cagliari (Italy)

- Ion Chromatography
- Potentiometric analysis
- Colorimetric analysis
- Optical Microscopy

LANGUAGE SKILLS

Mother tongue(s):

Italian

Other language(s):

English

LISTENING B2 READING B2 WRITING B2

SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2

Spanish

LISTENING B2 READING B2 WRITING B1

SPOKEN PRODUCTION B2 SPOKEN INTERACTION B2