C U R R I C U L U M V I T A E

Personal Information

First Name LAURA
Surname VESPIGNANI

Work experience

May 2023 – Dec 2023 **PhD visiting student**

Maflon S.p.A. (Bergamo, Italy)

Developed new materials for the protection of wood and stone artefacts. Synthesis of fluorinated compounds and fluorine-free derivatives. Utilized FTIR-ATR spectroscopy, differential scanning calorimetry (DSC), drop shape analyzer, colorimetry, accelerated weathering tester and mechanical tests to characterize the developing products and analyze their performance on wood and stone samples..

Jan 2022 – currently **PhD student in Chemical Sciences**

University of Florence – Chemistry Department 'Ugo Schiff' (Florence, Italy), partnership with Maflon S.p.A. (Bergamo, Italy)

Development of new materials that can be used for the protection of artefacts of historical and artistic interest in place of long-chain perfluoroalkyl compounds (PFAS). Synthesis of low fluoride oligomeric products and fluorine-free derivatives soluble in organic solvents. Preparation of new formulations and their characterization in terms of chemical structure, interactions with the substrate and protective capacities. Study of their behavior after aging. Use of FTIR and NMR spectroscopy, colorimetry, contact angle measurements.

Jan 2021 – Dec 2021 **Research fellowship**

University of Florence – Department of Agriculture, Food, Environment and Forestry (DAGRI (Florence, Italy)

Optimization of naturalized dyes, a new type of water-soluble and environmentally friendly dyes, and study of their possible use in wood coloring. Use of UV-Vis spectroscopy for the analysis of dyeing baths, study of color fastness through colorimetric measurements.

Feb 2020 – Aug 2020 **Erasmus+ Traineeship**

University of Oslo: Museum of Cultural History (Oslo, Norway)

Erasmus+ Traineeship within the Saving Oseberg project. Developed new materials for the consolidation and deacidification of alum treated archaeological wood. Utilized FTIR-ATR, Micro-Raman and EDX spectroscopy, UV-Vis, imaging (SEM), chromatography (GS-MS), XRD, colorimetry, ultrasonic tester, and mechanical tests to analyze Oseberg wood and the developing products.

Mar 2019 – Jul 2019 **Internship**

University of Florence – Chemistry Department 'Ugo Schiff' (Florence, Italy)

Developed new materials from natural compounds for the protection of archaeological wood. Synthesis of polymers. Utilized colorimetry and spectroscopy (FTIR-ATR, and NMR) for the analyses.

Oct 2018 – Jun 2019 **Dance Teacher**

Hidron Service S.r.l. (Campi Bisenzio, Italy)

Hip-hop dance teacher for kids from 7 to 13 years old. Preparation of classes and shows.

May 2017 – Sep 2017 **Internship**

University of Florence – Chemistry Department 'Ugo Schiff' (Florence, Italy)

Optimization of consolidating products for waterlogged archaeological material, in particular wood and leather. Preparation of solutions and samples, analysis with FT-IR spectroscopy, ATR, colorimetry and optical microscope.

Jul 2013 – Sep 2014 **Entertainer**

Hidron Service S.r.l. (Campi Bisenzio, Italy)

3-months work per year as entertainer at kids' summer center. Areas of expertise: music, theater, and dance.

Apr 2012 – May 2014 **Work/school alternation**

Museo Galileo (Florence, Italy)

School-work alternation experience lasted 3 weeks per year, conducted for 3 consecutive years. Catalogued the exhibited objects, involved in museum organization and events, observed the restoration laboratory work, design a new interface for the website.

Education and Training

2017-2019 **Master's degree in Science for Conservation and Restoration**

University of Florence

Thesis: Synthesis of hydroxylated perfluorinated oligoamides for their use as protective coating

Grade: 110/110 with honors

2014-2017 **Bachelor's degree in Diagnostic for Conservation and Restoration**

University of Florence

Thesis: Optimization of consolidants for the conservation of waterlogged archaeological finds

Grade: 110/110 with honors

Personal Skills

Mother tongue **ITALIAN**

Other language

ENGLISH

- Reading C1
- Writing C1
- Listening C1
- Speaking B2

COMMUNICATION SKILLS	Good ability to adapt to multicultural environments, achieved thanks to a work experience abroad Team spirit, acquired through years of dance at a professional level and thanks to various workshops followed during the course of the studies Good writing skills Capability to synthesize Empathy and listening skills
ORGANIZATIONAL SKILLS	Flexibility/adaptability Time Planning and Management Concentration skills Sense of organization
JOB-RELATED SKILLS	Good competence in the use of laboratory instrumentation and analytical techniques, including optical microscopy, FTIR, UV-Vis, Raman and EDS spectroscopy, imaging (SEM), colorimetry, diffractometry (XRD) and chromatography (GC-MS) Good knowledge of the chemical-physical aspects, degradation processes and conservation treatments of wood Good mastery of the synthesis processes of oligomeric and polymeric substances Data analysis skills Technical reports
OTHER SKILLS	Excellent drawing and painting skills, both traditional (watercolor, oil, tempera) and digital, acquired by self-taught from an early age Over 20 years of training in dance, classical, modern and hip hop, accompanied by one year of teaching
DRIVE LICENCE	B

Publications

Vespignani, L.; Bonanni, M.; Marradi, M.; Pizzo, B.; Bianchini, R.; Goli, G. Naturalized Dyes: A New Opportunity for the Wood Coloring. Polymers 2023, 15, 3632. https://doi.org/10.3390/polym15173632

Zhang, Y.; **Vespignani, L.**; Balzano, M.G.; Bellandi, L.; Camaiti, M.; Lubin-Germain, N.; Salvini, A. Low Fluorinated Oligoamides for Use as Wood Protective Coating. Coatings 2022, 12, 927. https://doi.org/10.3390/coatings12070927.

Andriulo, F.; **Vespignani, L.**; Steindal, C.C.; Bortolini, M.; De Ferri, L. Evaluation of sol-gel hybrid nanocomposites for dry medieval wood. J. Cult. Herit. 2022, 56, 96–107. https://doi.org/10.1016/j.culher.2022.06.004

Conferences

Involved in the organization of the X Workshop Nazionale del Gruppo Interdivisionale di Green Chemistry – Chimica Sostenibile Ia giornata congiunta Divisione Chimica Industriale Società Chimica Italiana, Florence, 6 october 2023

Presentation of oral and poster communications at various national and international conferences.

Additional Information

References

Prof.ssa Antonella Salvini
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Prof. Giacomo Goli
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Date and Place

13/11/2024, Florence

Signature

Firma autografa sostituita a mezzo stampa, ai sensi dell'art. 3, comma 2, del D.Lgs.n. 39/1993.
L'originale della presente dichiarazione è conservato presso il Dipartimento di Chimica "Ugo Schiff".