

## PERSONAL INFORMATION

Elisa Calà



## STUDIES APPLIED FOR

Master's Degree in Chemistry

## EDUCATION AND TRAINING

Nov 2015–Present

**PhD in Chemistry & Biology**

Università degli Studi del Piemonte Orientale "Amedeo Avogadro", Alessandria (Italy)

Diagnostic studies and characterization of natural dyes and pigments used for illuminated manuscripts and codices in antiquity, especially purple, through non-destructive and micro-invasive techniques (FORS, Raman-SERS, fluorescence spectroscopy).

Traceability and authentication studies of food products, mainly of vegetable origin.

Techniques used: Raman, SERS, FORS, fluorescence spectroscopy, UV-Visible spectrophotometry, FT-IR, ICP-MS, ICP-AES, HPLC-MS.

Area: Analytical chemistry

Apr 2015

**Master's Degree in Chemistry**

Università degli Studi del Piemonte Orientale "Amedeo Avogadro", Alessandria (Italy)

Study on cultural heritage with a thesis of study and characterization analysis of purple natural dyes, historically used for illuminated manuscripts and codices.

Characterisation of natural and plant compounds. Study of natural dyes with a micro-invasive approach; spectroscopic techniques, UV-Visible, IR, Raman SERS, FORS, Fluorescence.

Apr 2013

**Bachelor's degree in Environmental Sciences**

Università degli Studi del Piemonte Orientale "Amedeo Avogadro", Alessandria (Italy)

Environmental chemistry, analytical chemistry, ecology, crystal chemistry.

## WORK EXPERIENCE

Apr 2016–Present

**Tutor in Organic Chemistry**

Università degli Studi del Piemonte Orientale "Amedeo Avogadro", Alessandria (Italy)

## PERSONAL SKILLS

Mother tongue(s)

Italian

Other language(s)

UNDERSTANDING	SPEAKING	WRITING

	Listening	Reading	Spoken interaction	Spoken production	
English	B1	B1	B1	B1	B1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user  
Common European Framework of Reference for Languages

Driving licence B

#### ADDITIONAL INFORMATION

##### Publications

- M. Aceto, E. Calà, A. Agostino, G. Fenoglio, A. Idone, C. Porter, M. Gulmini, "On the identification of folium and orchil on illuminated manuscripts", *Spectrochimica Acta A* (2016);
- M. Aceto, E. Agosta, A. Arrais, E. Calà, E. Mazzucco, S. Lomartire, A. Agostino, G. Fenoglio, "Multi-technique characterisation of adhesives used in medieval jewelry", *Archaeometry* (2016);
- M. Aceto, E. Calà, A. Arrais, M. Clericuzio, F. Marsano, A. Idone, P. Davit, L. Menghini, M. Gulmini, "On the identification of folium by SERS: from crude extracts to illuminated codices", *Journal of Raman Spectroscopy* (2016);
- M. Aceto, D. Musso, E. Calà, F. Arieri, M. Oddone, "The role of lanthanides in the traceability of the milk production chain", *Journal of Agricultural and Food Chemistry* (2017);
- M. Aceto, E. Calà, "Analytical evidences of the use of iron-gall ink as a pigment on miniature paintings", *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy* (2017);
- Serafini, M. Guiso, L. Lombardi, M. Reverberi, M. Aceto, P. Postorino, A. Bianco, E. Calà, F. Sciubba, A. Ciccola, "New advanced extraction and analytical methods applied to discrimination of different lichen species used for orcein dyed yarns: preliminary results", submitted to *Microchemical Journal* (2017).

##### Conferences

- "Preliminary results from the characterisation of folium", *Dyes in History and Archaeology (DHA33)*, Glasgow (United Kingdom) 29/10-01/11/2014, poster;
- "Characterization of Chrozophora tinctoria: preliminary results and biological activity", XIV Congresso della Società Italiana di Fitochimica, Padova 10-12/06/2015, oral communication;
- "Further steps towards the characterization of the ancient folium dye", XXV Congresso della Divisione di Chimica Analitica della Società Chimica Italiana, Trieste 13-17/09/2015, poster;
- "The quest for folium", DHA34 - 34th international conference for Dyes in History and Archaeology, Thessaloniki (Greece) 21-24/10/2015, oral communication;
- "First results on the characterisation of the ancient folium dye", IX Congresso Nazionale AIAR, Arcavacata di Rende (CS) 9-11/03/2016, oral communication;
- "First results of diagnostic investigation on purple dyes from lichens", 8e Giornate Italo-Francesi di Chimica, Avignon (France) 25-26/04/2016, poster;
- "Further investigation on the characterisation of the ancient folium dye", 8e Giornate Italo-Francesi

di Chimica, Avignon (France) 25-26/04/2016, poster;

- "The Purple poor relatives: improvements in the identification of folium and orchilon manuscripts", DHA35 Dyes in History and Archaeology 35, Pisa 5-8/11/2016, Oral communication;
- "A micro-invasive study of a 15 th century Armenian manuscript from Matenadaran Museum" Technart, Bilbao 2-6/05/2017, poster;
- "Micro-invasive study of a 15 th century Armenian manuscript: first identification of lac dye by means of HPLC-MS", XXVI Congresso della Società Chimica Italiana, Paestum 10-14/09/2017, poster;
- "Reproducibility and stability over time of silver colloidal pastes for Surface Enhanced Raman Spectroscopy (SERS) of natural dyes in ancient artworks", XXVI Congresso della Società Chimica Italiana, Paestum 10-14/09/2017, poster;
- "The challenge of orcein dyes: advanced analytical techniques to discriminate the different lichen species", XXVI Congresso della Società Chimica Italiana, Paestum (Italy) 10-14/09/2017, poster;

Honours and awards    Rotary Award Alexandria, "Dr. Corrado Tartuferi 2016", best thesis in Chemistry - 31 Maggio 2016