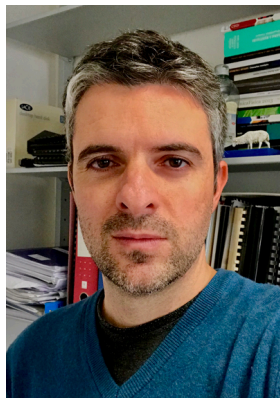


**PERSONAL
INFORMATION****Michele Baglioni**

📍 Via di Ripoli 181/B, Firenze, 50126, ITALY

✉ mihele83@gmail.com

Sex Male

Date of birth 04/07/1983

Nationality Italian

ORCID ID 0000-0003-1079-7298

SCOPUS ID 36129551600

WORK EXPERIENCE

Oct 2022 – Present

Researcher (RTD-B, SC 03/A2 – CHIM/12)

Department of Biotechnologies, Chemistry and Pharmacy (DBCF), University of Siena

Jan 2022 – Sep 2022

Researcher (RTD-A, SC 03/A2 – CHIM/02)

Department of Biotechnologies, Chemistry and Pharmacy (DBCF), University of Siena

Dec 2018 – Dec 2021

Research fellow (*Assegno di ricerca ai sensi dell'articolo 22 della legge 240/2010*, SC 03/A2 – CHIM12 – assigned with a peer-review process) - Project PRIN 2017249YEF

Chemistry Department, University of Florence

2015 – 2018

Research fellow (International open position, published on the EU EURAXESS website, and assigned with a peer-review process – NANORESTART EU H2020 Project)

CSGI and Chemistry Department, University of Florence

2014 – 2015

Research fellow (FIRB Italanononet 8.2.9h)

CSGI and Chemistry Department, University of Florence

2012 – 2014

Research fellow (NANOFORART FP7 EU Project)

CSGI and Chemistry Department, University of Florence

2010 – 2011

PhD student/Post-Doc researcher (TEMART Project)

CSGI and Chemistry Department, University of Florence

2009

PhD student (ARAN project – FIRB 2001)

CSGI and Chemistry Department, University of Florence

EDUCATION AND TRAINING

- 2008 – 2010** **PhD in Science for Conservation of Cultural Heritage (SC 03/A2 – SSD CHIM/12)**
Chemistry Department, University of Florence
- 2005 – 2007** **Master Degree in Science for Cultural Heritage (LM11, ex 12s)**
University of Florence (110/110 cum laude)
- 2002 – 2005** **Degree in Technology for the Conservation and Restoration of Cultural Heritage (L43, ex c41)**
University of Florence (110/110 cum laude)
- 1997 – 2002** **Diploma di Maturità Scientifica (*High School*)**
Liceo Scientifico Piero Gobetti, Bagno a Ripoli (FI) (100/100)

SCHOOLS AND MASTERS

- 19 October 2023** **4th MS-Wine School (CREA – SCI)**
Conegliano (TV) - ITALY
- 28 May 2012** **Training on Differential Scanning Calorimetry and MDSC (TA Instruments)**
Sesto Fiorentino - ITALY
- 8-16 March 2012** **Berlin School on Neutron Scattering**
Helmoltz Zentrum Berlin, Berlin - GERMANY
- 12-16 October 2009** **5° Scuola Specialistica di Grafica Interattiva – Conoscenza e Valorizzazione del Territorio e dei Beni Culturali**
Centro di Calcolo del CINECA, Casalecchio di Reno (BO) - ITALY
- 21-25 September 2009** **I Scuola Nazionale di Chimica per l'Ambiente e I Beni Culturali**
Società Chimica Italiana – Divisione Ambiente e Beni Culturali, Villa Gualino, Torino - ITALY

RESEARCH ACTIVITY, SKILLS, AND EXPERTISE

Fields of interest

- Soft matter systems and colloid science
- Microemulsions and micelles formulation and characterization
- Hydrogels (physical, chemical and semi-interpenetrated polymer networks) – synthesis and characterization
- Dewetting of polymeric coatings
- Inorganic nanoparticles' dispersions – synthesis and characterization
- Science for conservation of cultural heritage
- Amphiphilic and biocompatible polymers

- Homecare detergents
- Nutraceutical and natural extracts
- Green chemistry and exploitation of byproducts coming from agricultural productions
- Environmental chemistry
- Geographical characterization of agri-food products (wine, olive oil, ...)
- Agri-food chemistry

Research activity

My past research activity has mainly been devoted to the development and characterization of innovative soft-matter systems, i.e. micelles, microemulsions and gels, for the conservation of cultural heritage. In particular I have experience on the removal of undesired organic material from painted or unpainted porous substrates, such as the removal of organic coatings from wall paintings. I also have experience in the synthesis and characterization of inorganic nanoparticles dispersions, i.e., $\text{Ca}(\text{OH})_2$ in alcohols, for the consolidation of stones and wall paintings or the pH control of wood, paper, parchment or leather.

The main and most relevant results of my research activity so far regarded the peculiar interactions that take place between aqueous nanostructured fluids and hydrophobic polymer coatings. Dewetting/swelling processes are the key of the cleaning effectiveness of these systems, while classical detergency rules do not apply in this case. The combined action of organic solvents and surfactants, in the presence of water, which is a non-solvent for hydrophobic polymeric coatings, thermodynamically and kinetically drives the cleaning action of nanostructured fluids.

I investigated colloidal formulations for homecare cleaning products, investigating the role of hydrotropes and amphiphilic polymers in the formation of self-assembly structure, coacervates and capsules in the presence of surfactants and raw perfume materials.

I am also studying, characterizing and developing gelled matrixes based on biocompatible polymers, loaded with biocidal and active natural chemicals, extracted from *brassicaceae*, *solanaceae*, etc., to be used as innovative green systems for the disinfection of soils to be used for cultivation.

Recently I devoted part of my research activity to characterization of geographical origin of agri-food products, such as wine and EVO oil, by the exploitation of several different analytical techniques, by means of a multivariate analysis approach.

PARTICIPATION IN NATIONAL OR INTERNATIONAL PROJECTS

- EU-funded (NextGenerationEU – PNRR) Project AGRITECH – National Center for Technology in Agriculture
- MIMIT-funded Project (Bando MIMIT 2022) “Nuovo prodotto alimentare panificato, nutraceutico, salutistico, completo, equo ed etico che utilizza originali biomasse proteiche vegetali alternative alle proteine animali estratte da colture agricoli alimentari ad alta sostenibilità climatica attualmente destinati alla zootecnica, realizzate con moderno sistema produttivo ad alta efficienza in termini di risorse, destinato anche al frugale, pratico e veloce consumo, Made in Italy” (Capofila GITOMA S.r.l.)
- MUR/EU-funded Project (PON Ricerca e Innovazione) PROFOOD IV – Prodotti e processi innovative della filiera di IV gamma (PON ARS01_00755)
- EU-funded Project (Horizon 2020) NANORESTART – NANOMaterials for the RESToration of works of ART". (I had a 42 months collaboration contract with CSGI – Project coordinator)
- EU-funded Project (FP7) NANOFORART – “NANOMaterials FOR the conservation and preservation of movable and immovable ARTworks". (I had a 36 months collaboration contract with CSGI – Project coordinator)

- Tuscany Region-funded Project TEMART (POR CReO/FESR 2007-2013, Asse 1 Attività 1.1 Linea d'intervento D) – “Tecniche Avanzate per la Conoscenza Materica e la Conservazione del Patrimonio Storico-Artistico”. (I had a collaboration contract with CSGI – Project partner)

AWARDS AND ACHIEVEMENTS

- **95th JSCM Anniversary Conference Sustainability Research Award** – “for the excellent quality of your paper and the best presentation” – Tokyo, 26 October 2022.
- **Young Physical Chemistry Award** - “for the outstanding oral presentation given at the XLVII National Congress of the Chemical Physics Division of the Italian Society of Chemistry” – Società Chimica Italiana, Divisione Chimica Fisica, Rome, 1-4 July 2019
- The study titled “*Selective removal of over-paintings using an environmentally friendly nanostructured fluid loaded in highly retentive hydrogels*”, which I presented at the ACS Spring meeting on 13th April 2021, was publicized as an **highlight contribution by a dedicated press release by ACS** (<https://www.acs.org/content/acs/en/pressroom/newsreleases/2021/april/rescuing-street-art-from-vandals-graffiti.html>). I also held a press conference, and more than 30 press articles were published, about the presented work, on webzines, websites, and newspapers.

INSTITUTIONAL ROLES AND ADDITIONAL INFORMATIONS

- “In possesso di **Abilitazione Scientifica Nazionale** per le funzioni di professore di II fascia – SC 03/A2” – Validity: 26/05/2021 – 26/05/2030 (art. 16, comma 1, Legge 240/10)
- **Member of the Collegio dei Docenti** of the **PhD School** in Sistemi Agricolo-Forestali Avanzati e Sostenibili – SAFAS (Interuniversity doctorate, Unifi, Unipi, Unisi).
- **Member of the administration board (CDA) of the Prof. Enzo Ferroni Foundation – onlus**, an institution which promotes research activities in the field of Surface Science, Colloids, Interfaces and Nanosystems, and stimulates the application of fundamental research in these areas to the conservation and restoration of Cultural Heritage. (Since April 2022)
- “**Cultore della Materia**” in CHIM/02 and CHIM/12 since 2013 – nominated by the Chemistry Department of the University of Florence, 12/09/2013.
- **Tutor/Co-tutor of more than 15 theses**, at the University of Florence and the University of Siena, in Diagnostic and Materials for Conservation and Restoration (L43), Science and Materials for Conservation and Restoration (LM11), and Chemistry (L27).
- **Reviewer of several ISI international journals**, such as (*ACS Applied Materials and Interfaces*, *Physical Chemistry Chemical Physics*, *Journal of Cultural Heritage*, *Applied Sciences*, *Coatings*, *Polymers*, *Molecules*, and others).
- Currently **member of the Italian Society of Chemistry (SCI)** – Physico-Chemical Division, Tessera N° 16856.

TEACHING EXPERIENCE

- Teacher of the course “*Chimica Ambientale*” (48 hours – 6 CFU), II module of the course “Chimica Fisica III e Chimica Ambientale”, 3rd year of the bachelor degree in Chemical Sciences (L-27), University of Siena. (2022 – present)
- Teacher of the course “*Innovative Materials for Cultural Heritage Conservation*” (48 hours – 6 CFU), 1st

- year of the master degree in “Chemistry” (LM54), University of Siena. (2024 – present)
- Teacher of the course “*Sintesi e caratterizzazione di sistemi gel e microemulsioni per il rilascio controllato di sostanze bioattive nei suoli agricoli*” (6 hours), within the PhD School in Sistemi Agricolo-Forestali Avanzati e Sostenibili – SAFAS (Interuniversity doctorate, Unifi, Unipi, Unisi). (2024)
 - Teacher of the course “*Smart Materials and Nanocarriers*” (48 hours – 6 CFU), 1st year of the master degree in “Chemistry” (LM54), University of Siena. (2022 – 2023)
 - Teacher of the course “*Nanostructured Fluids For The Cleaning Of Works Of Art – Development And Characterization*” (8 hours – 3 CFU), within the PhD in Chemistry, University of Florence. (2020)
 - Teacher (12 hours) within the internship class IDEA376, organized for a group of visiting American students, by the Lafayette College (Easton, Pennsylvania – USA) in collaboration with Chemistry Department – CSGI, University of Florence. (2016)
 - Teacher (15 hours) within the internship class IDEA375, organized for a group of visiting American students, by the Lafayette College (Easton, Pennsylvania – USA) in collaboration with Chemistry Department – CSGI, University of Florence. (2015)
 - Laboratory assistant (about 24 hours per year) of the “Physical Chemistry for Cultural Heritage” class (Prof. Piero Baglioni), held in the Master Degree in Chemistry (LM54), University of Florence (1st year, 1st semester). (Years 2013-2018)
 - Laboratory assistant (about 28 hours) of the “Chemistry for Cultural Heritage with Laboratory” class (Prof. Rodorico Giorgi), held in the Master Degree in Science and Materials for Conservation and Restoration (LM11), University of Florence (1st year, 1st semester). (2010)

PUBLICATIONS

Author of:

- 32 Papers on ISI journals
- 6 Proceedings paper
- 5 Book chapters

Scopus Metrics (08/03/24)

- Total citations: 946
- H-index: 18

WORKSHOPS AND CONGRESSES

Participation in 17 national/international congresses, as a speaker, in 3 international congresses as an invited speaker, and in 5 workshops/schools as an invited lecturer.

13/03/2024

MICHELE BAGLIONI

