



Maddalena Redi

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Gender: Female | **Date of birth:** Jul 21 2000 | **Nationality:** Italy

WORK EXPERIENCE

[11/2025 - present]

PhD student

Alma Mater Studiorum - Università di Bologna, Gobetti 85 - BOLOGNA (BO) Italy

Company sector: R&D and patents

Business or sector: chemistry

Main activities and responsibilities: PhD in Nanosciences for Medicine and the Environment, carried out within the Molecular Crystal Engineering research group at the Department of Chemistry "G. Ciamician", University of Bologna.

Project title: Crystal engineering of molecular materials for antimicrobial and pharmaceutical applications: from cocrystals and complexes to solid solutions.

Acquired skills and achieved objectives: Mechanochemical synthesis; X-ray diffraction (powder and single-crystal); crystal structure solution and refinement; thermal analysis (DSC, TGA); hot-stage microscopy

[11/2025 - 12/2025]

academic advisor

Università di Bologna - Dipartimento di Chimica G.Ciamician, Gobetti 85 - BOLOGNA (BO) Italy

Company sector: Human Resources

Business or sector: chemistry

Main activities and responsibilities: Academic Tutor at the Crystal Engineering Laboratory for the Master's Degree in Photochemistry and Molecular Materials, supervised by Prof. Dario Braga.

[11/2024 - 10/2025]

university research assistant

Alma Mater Studiorum - Università di Bologna, Gobetti 85 - BOLOGNA (BO) Italy

Company sector: R&D and patents

Business or sector: chemistry

Main activities and responsibilities: Development of polymer-based nanostructured materials for the treatment of surfaces in healthcare and for the conservation and restoration of historical and artistic heritage, within several research projects, including:

- FISR Surf-ACE: 'Safe surfaces against pathogen contamination: new self-disinfectant, auto-diagnostic, and regenerable materials'

- PRIN SuPerStar: 'Sustainable Preservation Strategies for Street Art'

- European GoGreen project: 'Green strategies to conserve the past and preserve the future of cultural heritage'

Acquired skills and achieved objectives: Development and functionalization of nanostructured electrospun polymer-matrix materials using green solvents and biobased and/or biodegradable polymers, with the integration of photothermal agents and solvatochromic dyes.

Materials characterization techniques: thermal analysis (differential scanning calorimetry, thermogravimetry), contact angle measurements, colorimetric measurements, spectroscopic analysis (ATR-FTIR, Raman), electron microscopy (SEM and TEM), optical microscopy and stereomicroscopy, chemometric methods for the analysis of hyperspectral data (PCA).

[01/2020 - 08/2024]

tutor

cliente privato (BO) Italy

Business or sector: other services

Main activities and responsibilities: One-to-one tutoring in mathematics and science subjects for upper secondary school students, as well as preparation for university entrance exams and academic examinations.

Acquired skills and achieved objectives: development of an effective and engaging teaching method; adaptability

- [02/2024 - 03/2024] **academic advisor**
Alma Mater Studiorum - Università di Bologna , Gobetti 85 - BOLOGNA (BO) Italy
Company sector: Human Resources
Business or sector: education, training, research and development
Main activities and responsibilities: Support for laboratory activities for high school students within the 'Piano Lauree Scientifiche (PLS)' 2023–2024 project
Subproject: Chemistry and Forensic Investigations
- [09/2020 - 09/2022] **nanny**
cliente privato (LC) Italy
Business or sector: other services
Main activities and responsibilities: Organization of recreational activities, supervision and management of children aged between 2 and 6 years
Acquired skills and achieved objectives: time management, creativity, flexibility, problem solving, conflict management
- [06/2014 - 07/2020] **summer camp counselor**
Oratorio San Luigi-Lecco (LC) Italy
Business or sector: entertainment services and cultural activities
Main activities and responsibilities: Summer camp counselor: responsible for planning recreational activities for children, coordinating and managing these activities on a daily basis.
Educator for preadolescents and adolescents: preparation of reflection sessions, recreational activities, and event organization for groups of children aged 11 to 17.
Acquired skills and achieved objectives: teamwork, time management, problem solving, flexibility, creativity, conflict management

EDUCATION AND TRAINING

- [2022 - 2024] **Chemistry**
Alma Mater Studiorum - Università di Bologna
Town: BOLOGNA
2nd level degree in Chemistry
Final degree mark: 110/110 cum laude
EQF level: 7
NQF level: 2nd cycle degree/Master of Science (2 years)
Dissertation/thesis title: Development of polymer-based nanostructured materials coupled with 'green' solvents for applications in restoration
Principal subjects/occupational skills covered:
Production of electrospun materials, thermal analysis, characterization of polymeric materials, spectroscopy, optical and electron microscopy, chemometrics applied to hyperspectral data (PCA)
- [2019 - 2022] **Chemical Sciences and Technologies**
Università degli Studi di MILANO-BICOCCA
Town: MILANO
1st level degree in Chemistry
Final degree mark: 110/110 cum laude
EQF level: 6
NQF level: 1st cycle degree/Bachelor (3 years)
Dissertation/thesis title: Characterization of painting materials of cultural heritage interest through high-performance liquid chromatography and UV-induced luminescence imaging spectroscopy
Principal subjects/occupational skills covered:
Characterization of painting materials of historical and artistic interest, application of a hyperspectral camera for the acquisition of UV-induced luminescence, and HPLC analysis for the identification of organic dyes

PRE-UNIVERSITY STUDIES

- [2019] **Secondary school diploma:** Classical High School
Italian secondary school diploma

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s)

English

LISTENING: B2 READING: B2 WRITING: B2
SPOKEN INTERACTION: B2 SPOKEN PRODUCTION: B2

Diploma(s) or certificate(s)

English: Bbetween Lingue – Inglese B2 - Università degli Studi di Milano-Bicocca, 20 05 2020

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

DIGITAL COMPETENCES

SELF-ASSESSMENT				
INFORMATION AND DATA LITERACY	COMMUNICATION AND COLLABORATION	DIGITAL CONTENT CREATION	SAFETY	PROBLEM SOLVING
Independent user	Independent user	Independent user	Independent user	Independent user

Digital competences - Self-assessment grid

DRIVING LICENCE

Driving licence category B