



Ilario Biblioteca

📍 **Work** : Rome, Italy

ABOUT ME

Postdoctoral researcher in Chemical, Materials, and Environmental Engineering, motivated to pursue further academic and research careers. Among the most stimulating topics covered in recent years have been life cycle analysis, chemical analysis of agricultural products, construction materials, and zeolites. With a view to improving human health and protecting the environment, in collaboration with other European universities, participation in various research projects has led to the publication of scientific articles and participation as a speaker at national and international conferences. A broad basic preparation, demonstrated by over 300 hours of classroom tutoring for Bachelor's Engineering courses, completes the profile of a versatile, curious, reliable, and ambitious person.

WORK EXPERIENCE

Sapienza University of Rome

City: Roma

[01/10/2024 – 30/09/2025]

Postdoctoral researcher

Optimization of zeolite conditioning processes for nickel capture and characterization of zeolites.

Sapienza University of Rome

City: Roma | **Country:** Italy

[01/2022 – 05/2025]

PhD

Production of synthetic zeolites with a high crystalline percentage and adsorption specificity for the elimination of nickel in the management of aeroponic vegetable growth systems that are normally fixative towards nickel ions.

Sapienza University of Rome

City: Roma | **Country:** Italy

[2022 – 2024]

University teaching assistant

- Analisi 1, Ingegneria Chimica - A.A. 2022/2023
- Elementi di Analisi Matematica, Professioni Tecniche Edilizia e Territorio - A.A. 2022/2023
- Analisi 2, Ingegneria Chimica - A.A. 2022/2023
- Tutor DSA - Ingegneria Civile e Industriale - A.A. 2023/2024
- Analisi 1, Ingegneria Chimica - A.A. 2023/2024
- Analisi 1, Ingegneria Civile e Ambiente - A.A. 2023/2024
- Analisi 2, Ingegneria Clinica - A.A. 2023/2024

EDUCATION AND TRAINING

[01/2022 – 05/2025]

Ph. D.

Sapienza University of Rome

City: Roma | **Country:** Italy | **Field(s) of study:** Electrical, Materials and Nanotechnology Engineering | **Level in EQF:** EQF level 8

[2016 – 2020]

Master's Degree

Sapienza University of Rome

City: Roma | **Country:** Italy | **Field(s) of study:** Chemical, Biotechnological and Food engineering | **Level in EQF:** EQF level 7

[2014]

Bachelor's Degree

Sapienza University of Rome

City: Roma | **Country:** Italy | **Field(s) of study:** Chemical Engineering | **Level in EQF:** EQF level 6

PUBLICATIONS

[Sustainable repurposing of polyvinyl chloride waste as aggregates in limestone-calcined clay cement](#)

[2025]

Journal Name: Journal of Cleaner Production | **Volume, Issue and Pages:** Volume 491, 144862

[Alkali activated materials with recycled unplasticised polyvinyl chloride aggregates for sand replacement](#)

[2023]

Journal Name: Construction and Building Materials | **Volume, Issue and Pages:** Volume 409, 134188

[Zeolite-Clinoptilolite conditioning for improved heavy metals ions removal: A preliminary assessment](#)

[2023]

Journal Name: Ceramics International | **Volume, Issue and Pages:** Volume 49, Issue 23, Part B, 39649-39656

[Lightweight alkali-activated materials and ordinary Portland cement composites using recycled polyvinyl chloride and waste glass aggregates to fully replace natural sand](#)

[2023]

Journal Name: Construction and Building Materials | **Volume, Issue and Pages:** Volume 368, 130399

[Life Cycle Assessment \(LCA\) of 3D Concrete Printing and Casting Processes for Cementitious Materials Incorporating Ground Waste Tire Rubber](#)

[2023]

Journal Name: Recycling | **Volume, Issue and Pages:** 8(1), 15

[Mechanical and physical characteristics of alkali- activated mortars incorporated with recycled polyvinyl chloride and rubber aggregates](#)

[2022]

Journal Name: Journal of Building Engineering | **Volume, Issue and Pages:** Volume 60, 105043

[Thermoplastic Composite Materials Approach for More Circular Components: From Monomer to In Situ Polymerization, a Review](#)

[2022]

Journal Name: Journal of Composites Science | **Volume, Issue and Pages:** 6(5), 132

HONOURS AND AWARDS

[02/2024]

Winner of Hackathon RRIstarthack Awarding institution: Sapienza University of Rome

"The Design Marathon for Responsible, Innovative and Sustainable Solution" called by Saperi&Co and Lazio Innova.

Winning team: Pavingreen.

CONFERENCES AND SEMINARS

[06/2024] **XIV Convegno INSTM** Cagliari, Italy

Speaker: Different cultivation systems for more eco-sustainable and healthy products: traditional cultivation vs hydroponic system for nickel-free tomato

[03/2023] **28TH ETRA Annual Conference on Tyre Recycling** Bruxelles, Belgium

Speaker: Waste tyres rubber's possible use for a more eco-sustainable approach in the construction industry

[01/2023] **30 years of INSTM: past, present and future of the consortium** Bressanone, Italy

Proposal and evaluation of conditioning process for clinoptilolite/zeolite material finalized for nutraceutical application in nickel intolerance disease

[06/2022] **The First Symposium for YouNg Chemists: Innovation and Sustainability**

Department of Chemistry - Sapienza University of Rome

Speaker: Nickel intolerance disease: surface modification of a zeolite for direct human assumption and cultivation eco-sustainable strategy

[07/2022] **Life Cycle Assessment e SimaPro by Pré** Web

[07/2022] **21° Scuola AIMAT "I Materiali nella Transizione Energetica"** Ischia Porto

[10/2022] **testXpo 30th Expo for Material Testing** Ulm, Germany

[2023] **Introduction to Circular Economy Management by ENI** Web

[10/2023] **7th Biochar School "Biochar and the city"** Torino, Italy

[2024] **Formazione generale salute e sicurezza sul lavoro per lavoratori ed equiparati**
Web

LANGUAGE SKILLS

Mother tongue(s): Italian

Other language(s):

English

LISTENING C1 READING C1 WRITING C1

SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

Autorizzo il trattamento dei miei dati personali presenti nel CV ai sensi dell'art. 13 d. lgs. 30 giugno 2003 n. 196 - "Codice in materia di protezione dei dati personali" e dell'art. 13 GDPR 679/16 - "Regolamento europeo sulla protezione dei dati personali".

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