



## PROFILE

With experience in academic research and industrial applications involving precious metals, I focus on the organic synthesis of new bioactive compounds and the improvement of production processes. I am seeking technical-scientific, academic or research opportunities that promote innovation, progress and chemical sustainability.

## DETAILS

### ADDRESS

Via Magiotti 47  
Bucine, AR, Tuscany, Italy

### DATE OF BIRTH

08 May 1997

### DRIVER'S LICENSE

Yes

## LANGUAGES

Italian Native  
English B2

## TECHNICAL SKILLS

### SOFTWARE

Microsoft Office 365

MestreNova AutoCAD

### PROGRAMMING

JavaScript Python C++

Fortran 90

## EDUCATION

JAN 2022 - FEB 2025

### Master of Science in Chemistry LM-54

University of Florence

Curriculum: Synthesis, Properties, and Structure of Organic Compounds

JAN 2017 - JUN 2021

### Bachelor's Degree in Chemistry L-27

University of Florence

Curriculum: Chemical Technologies

SEP 2011 - JUN 2016

**Scientific High School Diploma**  
Liceo Scientifico Benedetto Varchi,  
Montevarchi (AR)

## PROFESSIONAL EXPERIENCE

DEC 2025 - PRESENT

### Full-Stack Developer & E-commerce Administrator (Remote)

Frantoio Del Pasqua - delpasqua.vercel.app

Developed and currently maintaining the e-commerce platform fully remotely, overseeing technical operations and site updates.

Managed automated order workflows, real-time inventory sync, and Stripe payment integrations.

**Tech Stack:** Next.js 16 (App Router), React 19, TypeScript, Tailwind CSS v4, Prisma (PostgreSQL), Stripe API, Redis.

JAN 2025 - FEB 2026

### Research Assistant

University of Florence - Department of Chemistry "Ugo Schiff"

Developed microRNA-21 inhibitors as novel chemotherapeutic agents for pediatric gliomas.

Synthesized triazole derivatives via CuAAC click chemistry and designed 2-oxo-piperazine scaffolds through Castagnoli-Cushman reactions to optimize binding affinity.

JAN 2024 - JUL 2024

### Research and Training Activity in Organic Chemistry Laboratory

University of Florence - Department of Chemistry "Ugo Schiff"

Synthesized peptidomimetic inhibitors through palladium-catalyzed C-H (sp<sup>3</sup>) activation reactions.

Designed and synthesized D-proline peptidomimetic derivatives. Used HPLC, NMR and MS analytical instrumentation.

SEP 2023 - JUN 2024

### Secondary School Teacher

Bucine Comprehensive Institute

Subjects taught: Mathematics and Science.

JAN 2021 - JUN 2021

### Research and Training Activity in Chemistry Laboratory

University of Florence - Department of Chemistry "Ugo Schiff"

Developed biopolymeric formulations for controlled-permeability membranes.

Crosslinked gelatin with glutaraldehyde and glycerinaldehyde; studied membrane permeability by UV-Vis.

Performed IR and SEM spectroscopic and morphological analysis.

2017 - 2025

### Private Tutor

Self-employed

Organic, analytical and general chemistry; physics; mathematics.

2022 - 2023

### Production Process Consultant

Private consultant

Developed detergents for the goldsmith industry based on precious-metal ligands.

## PUBLICATION

### How to Cross-Link Gelatin: The Effect of Glutaraldehyde and Glycerinaldehyde on the Hydrogel Properties.

Mugnaini, G.; Gelli, R.; Mori, L.; Bonini, M.

*ACS Applied Polymer Materials*, 2023, 5(11), 9192–9202.



## PRIZES

The Young Group of the Italian Chemical Society and ACS Publications award the

**BEST POSTER COMMUNICATION**

at the Merck Young Chemist's Symposium 2025

