



FILIPPO PIERO BATTAGLIA

CHEMISTRY GRADUATE

Passionate about **photochemistry** and **electrochemistry**, I am eager to apply my knowledge in the **energy conversion** and environmental **sustainability** sectors. I thrive on challenges, continuous learning, and roles that combine independence in decision-making with professional growth. I am highly motivated, adaptable, and not afraid of demanding workloads.

CONTACT

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09/02/1998

SOFT SKILLS


- Passion
- Dedication
- Perseverance
- Autonomy
- Creativity

TECHNICAL SKILLS


 B2 level - CEFR


 ChemDraw; Origin, Sigmaplot,
MestreNova, Python

HOBBIES

 Play basketball

 Study piano

 Listening to music

 Drawing

EDUCATION AND TRAINING

Research Fellow University of Bologna | May 2024 - present

Project - **Synthesis of catalytic cobalt complexes for hydrogen production with innovative molecular-based hybrid photoelectrodes design**

Supervisor - Prof. Andrea Fermi

Thematic - Synthesis and characterization of cobalt complexes and evaluation of the catalytic efficiency in terms of photoactivated Hydrogen Evolution Reaction both in homogeneous and heterogeneous phase by electrodes functionalization

Master's degree: Chemistry University of Bologna | 2021-2024

Thesis title - **Photophysical study of the interaction between CuInS₂ quantum dots and photochromic units.**

Supervisor - Paola Ceroni

Grade - 110/110 cum laude

Internship and thesis project University of Bologna | March-December 2023

Synthesis and characterization of CuInS₂ quantum dots and surface functionalization with synthesized azobenzene derivatives. Study of the photophysical behavior of the hybrid system.

Bachelor's degree: Chemistry University of Ferrara | 2017-2021

Thesis title - **Photoelectrochemical and photophysical properties of WO₃/BiVO₄ junctions.**

Supervisor - Stefano Caramori

Grade - 103/110

Internship and thesis project University of Ferrara | September-December 2020

Research and literature study of the charge transport pathways in WO₃/BiVO₄ heterojunctions, with specific applications in photoelectrochemical water splitting.

PUBLICATIONS

Bellatreccia, C.; Ziani, Z.; Germinario, A.; Engelaar, S.; Battaglia, F. P.; Gradone, A.; Villa, M.; Ceroni, P. **Dual Luminescent Mn(II)-Doped Cu-In-Zn-S Quantum Dots as Temperature Sensors in Water.** *Small* 2024, 20 (48), 2404425.

Ziani, Z.; Bellatreccia, C.; Battaglia, F. P.; Morselli, G.; Gradone, A.; Ceroni, P.; Villa, M. **Copper Indium Sulfide Quantum Dots Enabling Quantitative Visible Light Photoisomerisation of (E)-Azobenzene Chromophores.** *Nanoscale* 2024, 16 (27), 12947-12956.

CONFERENCES, WORKSHOPS, AND SCHOOLS

IPM 2024

Type of Contribution - Poster presentation

Title - Synthesis of catalytic cobalt complexes for hydrogen production with innovative molecular-based hybrid photoelectrodes design