


PERSONAL INFORMATION



DAVIDE CARBONI

 Via Galileo Galilei 51/B, 61032 FANO (PU)
 Via Pietro Albertoni 23, 40126 BOLOGNA (BO)
 +39 3316359387
 davidecarboni1996@gmail.com

Gender Male | Date of birth Feb 7 1996 | Nationality Italy

WORK EXPERIENCE

-
- Nov 2021 - present** **PhD student**
Synthesis of chiral pyrrolidine as new organocatalysts, employing Elman's Auxiliary.
Development of new photocatalytic reactions using metal photocatalyst (Ir(ppy)₃) or organic dyes.
Alma Mater Studiorum - Università di Bologna, Via Piero Gobetti 85 - BOLOGNA (BO) Italy
Business or sector chemistry
- Oct 2023 - Nov 2023** **Teaching Tutor**
Laboratory assistance for the course: 'Laboratory of Organic Synthesis and Characterization' for the students of the first cycle degree programme in Chemistry and Materials Chemistry.
Alma Mater Studiorum - Università di Bologna, Via Piero Gobetti 87 - BOLOGNA (BO) Italy
Business or sector chemistry
- Feb 2023 - Mar 2023** **Teaching Tutor**
Laboratory assistance for the course: 'Organic Chemistry Laboratory' for the students of the first cycle degree programme in Chemistry and Materials Chemistry.
Alma Mater Studiorum - Università di Bologna, Via Piero Gobetti 87 - BOLOGNA (BO) Italy
Business or sector chemistry
- Sep 2021 - Oct 2021** **Attending Graduates**
Synthesis of chiral pyrrolidine as new organocatalysts, employing Elman's Auxiliary.
Alma Mater Studiorum - Università di Bologna, Via Selmi 2 - BOLOGNA (BO) Italy
Business or sector chemistry
- Mar 2021 - Jul 2021** **Research Fellow in the Melchiorre Group (Erasmus + Visiting Student)**
Development of a new photo-organocatalytic method for the enantioselective allylation of enals.
Synthesis and purification of the required starting materials for the photocatalytic reaction. Use of the principal methods (NMR, HPLC - MS, GC - MS) for products characterization.
ICIQ - Institut Català d'Investigació Química, Avinguda dels Països Catalans, 16 - TARRAGONA Spain
Business or sector chemistry
- Mar 2020 - Nov 2020** **Curricular internship**
The thesis' internship focused on the development of a new Photocatalytic method for the synthesis of 2,3 - Dihydrofurans. In particular, the main activities dealt with the optimization of the photocatalytic process, the determination of the reaction scope and the synthesis of the required starting materials. The most common purification (Flash chromatography and distillation) and characterization techniques (NMR, HPLC - MS, GC - MS) were also respectively used for the purification and characterization of the obtained products.
Alma Mater Studiorum - Università di Bologna, Via Selmi 2 - BOLOGNA (BO) Italy
Business or sector chemistry
- Mar 2018 - Jun 2018** **Curricular internship**
The main activities dealt with the total synthesis of an intermediate that is necessary for the synthesis of a new fluorescent probe for mitochondrial Magnesium.
Alma Mater Studiorum - Università di Bologna, Via Selmi 2 - BOLOGNA (BO) Italy
Business or sector chemistry

EDUCATION AND TRAINING

- 2021 - present **Dottorato di Ricerca in Chimica** EQF level 8
Alma Mater Studiorum - Università di Bologna
Doctor of Philosophy (Ph.D.)
- 2018 - 2020 **Master degree in Chemistry** EQF level 7
Alma Mater Studiorum - Università di Bologna - School of Science
2nd cycle degree/Master of Science (2 years)
Principal subjects/occupational skills covered:
- Organic Synthesis
- Catalysis and Biocatalysis
- Computational Chemistry and Chemoinformatics
- Natural Products Chemistry
- 2015 - 2018 **Bachelor degree in Chemistry and Material Chemistry** EQF level 6
Alma Mater Studiorum - Università di Bologna - School of Science
1st cycle degree/Bachelor (3 years)
Principal subjects/occupational skills covered:
- Analytical Chemistry
- Organic Chemistry
- Inorganic and Coordination Chemistry
- Physical Chemistry
- Pre-university studies**
Secondary school diploma: Vocational School, Technological sector, Chemistry, materials and biotechnology specialisation, Chemistry and materials focus
School-leaving examination taken in (year): 2015
Italian secondary school diploma

PERSONAL SKILLS

Mother tongue(s)

Italian

Foreign language(s)

	UNDERSTANDING				SPEAKING				WRITING	
	Listening		Reading		Spoken interaction		Spoken production			
English	B2	Independent	B2	Independent	B2	Independent	B2	Independent	B2	Independent

English: Preliminary English Test (PET) - Cambridge English Language Assessment, 06 2014 - European level: B1
English: IELTS Academic - British Council Milan, 31 10 2020 - European level: B2

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

Linguistic experience(s)

European Union program

Erasmus +

Language: English

Duration of studies in months: 5

Foreign country where the academic studies were carried out: Tarragona (Spain)

Digital competences

SELF-ASSESSMENT				
INFORMATION PROCESSING	COMMUNICATION	CONTENT CREATION	SAFETY	PROBLEM SOLVING
Independent user	Independent user	Basic user	Basic user	Basic user

Digital competences - Self-assessment grid

European Computer Driving Licence (ECDL): AICA - Associazione Italiana per l'Informatica ed il Calcolo Automatico, 2013-12-14

Basic digital competence:

OFFICE AUTOMATION

Presentation Software: (Intermediate) | **Spreadsheets:** (Advanced) | **Word Processors:** (Advanced)

APPLICATION SOFTWARE

CAD - Assisted Design: (Foundation) | **Data Visualization:** MestReNova (Intermediate) , Molden e Gaussview (Foundation) | **Structural calculation:** Gaussian (Foundation)

Driving licence B

PUBLICATIONS

- Journal articles**
- "Stereoselective Synthesis of α -Disubstituted β -Homoprolines"; Arianna Quintavalla, Davide Carboni, Maria Simeone e Marco Lombardo ; Organic Letters ; ACS Publications (2023)
 - "Recent Advances in Asymmetric Synthesis of Pyrrolidine-Based Organocatalysts and Their Application: A 15-Year Update"; Arianna Quintavalla, Davide Carboni and Marco Lombardo ; Molecules ; MDPI (2023)
 - "Towards a More Sustainable Photocatalyzed α -Arylation of Amines: Green Solvents, Catalyst Recycling and Low Loading"; Arianna Quintavalla, Davide Carboni, Cecilia Sepe, Liviana Mummolo, Nelsi Zaccheroni, Marco Lombardo ; Advanced Synthesis & Catalysis (2023)
 - "Diastereoselective Synthesis of Chiral Oxathiazine 2-Oxide Scaffolds as Sulfinyl Transfer Agents"; Arianna Quintavalla, Ruben Veronesi, Demetra Zambardino, Davide Carboni, and Marco Lombardo ; Advanced Synthesis & Catalysis (2022)
 - "Photochemical Organocatalytic Regio- and Enantioselective Conjugate Addition of Allyl Groups to Enals"; Martin Berger, Davide Carboni e Paolo Melchiorre ; Angewandte Chemie International Edition (2021)
 - "Chemodivergent Photocatalytic Synthesis of Dihydrofurans and Unsaturated Ketones"; Arianna Quintavalla, Ruben Veronesi, Davide Carboni, Ada Martinelli, Nelsi Zaccheroni, Liviana Mummolo e Marco Lombardo ; Advanced Synthesis & Catalysis (2021)
- Other**
- "Sistema automatizzato per il riconoscimento dei rifiuti (No. 202015000061701)"; Dipietro Giuseppe, Carboni Davide, Carra Alessandro, Valentini Francesco (2017)