

Andrea Sorato

✉ Email address: andrea.sorato@uniroma1.it

ABOUT ME

Andrea Sorato was born in Terni, Italy in 1996. He is currently pursuing his Ph.D. at the Department of Chemistry and Technologies of Drug, at the University of Rome 'Sapienza' under the supervision of Prof. Alessia Ciogli. He graduated in 2020 in Pharmaceutical Chemistry and Technology. His Ph.D. project focuses on the development of new amino-organocatalysts and study of stereochemistry stability of atropoisomers by HPLC. Andrea was a PhD visiting in the NRG (Noël Research Group, Amsterdam, NL) working on photochemistry in flow from 1st May to 1st November 2022.

WORK EXPERIENCE

Research Ph.D.

Sapienza University of Rome [01/11/2020 – now]

City: Rome

Thesis title: Development of new amino-organocatalysts and study of stereochemistry stability of atropoisomers by HPLC.

University of Amsterdam (Visiting) [01/05/2022 – 01/11/2022]

City: Amsterdam

Aim of the work: Photocatalytic Alkylation of C(sp³)-H Bonds Using Sulfonylhydrazones and Alkylation using Sulfonyl Hydrazones

Tutoring Activities

Sapienza University of Rome [01/10/2022 – now]

Organic Chemistry and General and Inorganic Chemistry (Applied Pharmaceutical Sciences)

Research Thesis

Sapienza University of Rome [01/10/2019 – 04/07/2020]

City: Rome

Thesis title: Asymmetric catalysis mediated by hydrogen-bond: ureidic derivative of quinidine supported on silica.

Professional Traineeship

Farmacia Genovesi [01/06/2019 – 01/12/2019]

City: Otricoli (TR)

Support during drugs dispensing and during the preparation of galenic formulations.

PUBLICATIONS

- Salvitti, C., de Petris, G., Troiani, A., Managò, M., Villani, C., Ciogli, A., ... & Pepi, F. (2022). Accelerated d-Fructose Acid-Catalyzed Reactions in Thin Films Formed by Charged Microdroplets Deposition. *Journal of the American Society for Mass Spectrometry*, 33(3), 565-572.
<https://doi.org/10.1021/jasms.1c00363>
- Portolani, C., Centonze, G., Luciani, S., Pellegrini, A., Righi, P., Mazzanti, A., ... & Bencivenni, G. (2022). Synthesis of Atropisomeric Hydrazides by One-Pot Sequential Enantio- and Diastereoselective Catalysis. *Angewandte Chemie*, 134(42), e202209895.
<https://doi.org/10.1002/ange.202209895>
- Pulcinella, A., Bonciolini, S., Lukas, F., Sorato, A., & Noel, T. (2022). Photocatalytic Alkylation of C (sp³)-H Bonds Using Sulfonylhydrazones. *Angewandte Chemie*.
<https://doi.org/10.1002/ange.202215374>

Master's degree thesis

[2020]

The aim of the following work is to prepare a supported organocatalyst for stereoselective reaction in heterogeneous phase. The study focused on N-[3,5-bis(trifluoromethyl)phenyl]-N'-[(9R)-6'-metossi-9cinconanil]thiourea derivative of 9-amino-9-deoxy-9-epi-quinidine. The catalyst, tied covalently on the silica matrix through a two-step synthetic process, acts selectively, using formation of hydrogen bonds, in the activation of coals leading to the formation of new C-C bonds. The

potential in terms of yield % and stereoselectivity of the catalyst were assessed on a model reaction: Michael's addition of 1,3-dicarbonyl systems with trans-nitrostyrene. The effects of solvent with the aim of optimizing its operating conditions. This will give you a recyclable and transferable catalyst in continuous flow reactions.

PARTICIPATION IN CONFERENCES AND CONGRESSES

- SCI2021 XXVII Congresso Nazionale Della Chimica Italiana (Online)
Poster
- HIMS 1st ANNUAL SYMPOSIUM (Amsterdam Science Park)

EDUCATION AND TRAINING

Master's Degree in Pharmaceuticals Chemistry and Technology

Sapienza University of Rome [01/10/2015 – 09/07/2020]

Final grade : 110/110

The aim of this degree is to provide specific knowledge and abilities in order to design, develop and control the medications and the preparation of medications according to the regulations of the pharmacopoeias in force.

Scientific High School Diploma

"G. Colasanti" Scientific High School

Address: Civita Castellana (VT)

LANGUAGE SKILLS

Mother tongue(s):

Italian

English

LISTENING: B1 READING: B1 UNDERSTANDING: B1

SPOKEN PRODUCTION: B1 SPOKEN INTERACTION: B1

DRIVING LICENCE

Driving Licence: **B**

COMMUNICATION AND INTERPERSONAL SKILLS

Communication Skills

- Good communication skills with colleagues and professors acquired during the course of study, in particular during the research period.
- Good public communication skills acquired during the professional traineeship

Job-related skills

The research period allowed me to acquire a high expertise with:

- Mass spectrometer and HPLC (Thermo Fisher LTQ Finnigan ESI-MS, LC Waters and JASCO chromatographic systems);
- LC-MS and HPLC Softwares (Xcalibur, Empower, Borwin);
- Processing and data management softwares (Origin 6/8, ChemDraw, MestReNova, Excel, Word, PowerPoint).
 - Familiar with photocatalysis, synthetic organic chemistry and flow chemistry.

Organisational / Managerial Skills

- Good organisational skills and marked sense of duty acquired during my professional experiences and during the sporting activity pursued during the entire period of study.
- Excellent team working and problem solving skills acquired during the thesis period.
- Other Skills

Grow up in sport he developed determination and tenacity to apply in everyday life.