Nicolò **Tampellini**

PhD Student · Organic Chemistry

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Education

Yale University
New Haven, CT, USA

PhD Student — *Sep 2021 - present*

- Advisor: Scott J. Miller

University of Bologna*
Bologna, IT

Bachelor of Science Degree - 110 with Honors / 110 — *Sep 2017 - Jul 2020*

- Thesis advisor: Prof. Paolo Righi

* - *1st University in Italy for Chemistry according to Times Higher Education World University Rankings*

Publications

Computational Investigation on the Origin of Atroposelectivity for the Cinchona Alkaloid Primary Amine-Catalyzed Vinylogous Desymmetrization of N-(2-t-Butylphenyl)maleimides - **Tampellini, N.***; Righi, P. and Bencivenni, G.* *J. Org. Chem.* **2021**, 86, 17, 11782–11793 - DOI

Mentoring and Research Experience

Teaching Fellow - Advanced Organic Chemistry (Graduate level)
New Haven, CT, USA

Yale University - Advisor: Prof. Scott J. Miller — *Sep-Dec 2022*

- Led discussion sections and assisted Prof. Miller in a physical organic chemistry graduate class on kinetics, thermodynamics, orbital symmetry and stereochemistry.

PhD research
New Haven, CT, USA

Yale University - Advisor: Prof. Scott J. Miller — *Jan 2022 - Present*

- Efforts towards an atroposelective base-catalyzed imidation for the construction of maleimides, phthalimides and quinazolinediones. Working with and mentoring an undergrad student, Jenny Tan (YC 2023).

Dissertation Internship
Bologna, IT

University of Bologna, Industrial Chemistry - Advisor: Prof. Paolo Righi — *Apr 2020 - Present*

- Thesis title - "Computational Insights into the Enantioselective Axial Desymmetrization of Maleimides"

Extracurricular Internship
Bologna, IT

University of Bologna, Industrial Chemistry - Advisor: Prof. Luca Bernardi — *Jul-Aug 2018 and Jul-Aug 2018*

- Synthesis of starting materials and early investigations for the atroposelective synthesis of polysubsitituted axially chiral quinolines. - DOI

Awards

2017 **National Finalist**, Italian Olympiads of Chemistry - Rome, IT

2016 **National Finalist**, Italian Olympiads of Chemistry - Frascati, IT

Memberships and Personal Projects

Mentee at LeadTheFuture
2020 - Present

- Among the few students selected to be mentees for LeadTheFuture, a leading mentorship non-profit organization for italian students in STEM, with acceptance rate below 20%. LeadTheFuture empowers top-performing students to achieve their goals and contribute to their communities by giving them one-on-one guidance from high-impact mentors coming from the world's leading STEM innovation hubs such as Silicon Valley and CERN. - LeadTheFuture Website

TSCoDe - Transition State Conformational Docker
2021 - present

- Open-source Python program for computational chemistry, developed to automate and systematize conformational embedding during transition state assembly of flexible molecules. The program allows to explore complex conformational space faster and in a more systematic way. - TSCoDe GitHub

BeTTeR - Beta Turn Tetramer Rotator
Jan 2023

- Python code and web app to generate 3D coordinates of specific pre-folded conformations of tetrameric peptide catalysts from SMILES or amino acid sequences - BeTTeR GitHub - BeTTeR web app

Certificates

Nov 2019 **TOEFL iBT**, ETS - Score 113/120, best tier in each subsection