

Dr Mattia Silvi

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Research Experience and Education

- 2019 - *Research Fellow*. Research Group Leader at the University of Nottingham.
2016-2019 *Post-Doctoral Researcher*. University of Bristol, UK. Prof. Varinder K. Aggarwal FRS group.
2015 *PhD in Organic Chemistry cum laude*. ICIQ, Tarragona, Spain. Prof. Paolo Melchiorre group.
2014 *Visiting PhD Student*. University of Michigan, USA. Prof. John P. Wolfe group.
2011 *MSc in Organic Chemistry cum laude*. University of Rome, Italy. Prof. Marco Bella group.
2008 *BSc in Chemistry cum laude*. Sapienza University of Rome, Italy.

Fellowships and Awards

- 2021 *Nottingham Reward Scheme Award*. Award.
2020 *MIUR Italian University Professorship Habilitation ("Il Fascia")*. Professorship habilitation.
2020 *EPSRC New Investigator Award*. Research grant.
2019 *Nottingham Research Fellowship*. Independent research fellowship.
2017 *Marie Skłodowska-Curie Individual European Fellowship*. Post-doctoral research.
2014 *ICIQ-UM Global Engagement Program Fellowship*. Short-term research fellowship in USA.
2014 *Conference Travel Award*. Award, Karle-Vaughan Symposium 2014. Ann Arbor, MI, USA.

Conferences

- 2018 *Lecture Conference in Photochemistry*. Munich, Germany. Oral Presentation.
2017 *Tetrahedron Symposium*. Budapest, Hungary. Poster presentation.
2015 *European Symposium of Organic Chemistry*. Lisbon, Portugal. Poster presentation.
2014 *Ischia Advanced School of Organic Chemistry*. Ischia, Italy. Poster presentation.
2014 *Karle - Vaughan Symposium*. Ann Arbor (MI), USA. Poster presentation.
2013 *Corbella Summer School*. Gargnano, Italy. Poster presentation.

Invited Research Talks

- 2019 *University of Auckland*, New Zealand. Invited by Dr. Daniel Furkert.
2018 *University of L'Aquila*, Italy. Invited by Prof. Armando Carlone.
2018 *University of Geneva*, Switzerland. Invited by Prof. Clement Mazet.
2018 *University of Bristol*, United Kingdom. Invited by Prof. C. Galan and Dr. T. Oliver.
2018 *University of Trieste*, Italy. Invited by Prof. Maurizio Prato.
2018 *University of Padua*, Italy. Invited by Dr. Luca Dell'Amico.
2018 *Sapienza University of Rome*, Italy. Invited by Prof. Marco Bella.

Teaching Activities

- 2020-2021 *Organic Chemistry and Spectroscopy Tutorials*. University of Nottingham, courses for 2nd and 3rd year undergraduates
2017-2019 *Photoredox Catalysis*. Postgraduate Lecture Course (4 hrs. per year). University of Bristol (2017, 2018, 2019) and University of Rome (2017).
2017-2018 *Organic Chemistry Workshops for Undergraduates*. University of Bristol.

Publications

16. *Visible-Light-Driven Conjunctive Olefination*.
Dario Filippini and Mattia Silvi*
Nature Chemistry **2021**, DOI: 10.1038/s41557-021-00807-x.
15. *Visible-Light-Driven Strain-Increase Ring Contraction Allows the Synthesis of Cyclobutyl Boronic Esters*.
Raffael Davenport, Mattia Silvi, Adam Noble; Zied Hosni, Natalie Fey and Varinder K. Aggarwal.
Angewandte Chemie International Edition **2020**, 59, 6525-6529.

14. Radical Addition to Strained σ -Bonds Enables the Stereocontrolled Synthesis of Cyclobutyl Boronic Esters
Mattia Silvi and Varinder K. Aggarwal
Journal of the American Chemical Society, **2019**, 141, 9511-9515.
13. Re-optimization of the Organocatalyzed Double Aldol Cascade Process to a Key Enal Intermediate and its Application to the Total Synthesis of Δ^{12} -Prostaglandin J_3
Andrejs Pelss, Narasimhulu Gandhamsetty, James Smith, Daniel Mailhol, Mattia Silvi, Andrew Watson, Sébastien Prévost, Nina Schützenmeister, Peter Moore and Varinder Aggarwal
Chemistry – A European Journal, **2018**, 24, 9542-9545. [Highlighted in Synfacts](#)
12. Enantiospecific Three-Component Alkylation of Furan and Indole
Mattia Silvi, Raffael Schrof, Adam Noble and Varinder K. Aggarwal
Chemistry – A European Journal, **2018**, 24, 4279-4282.
11. Enhancing the Potential of Enantioselective Organocatalysis with Light
Mattia Silvi and Paolo Melchiorre
Nature, **2018**, 554, 41-49.
10. Direct Stereoselective Installation of Alkyl Fragments at the β -Carbon of Enals via Excited Iminium Ion Catalysis
Charlie Verrier, Nurtalya Alandini, Cristofer Pezzetta, Mauro Moliterno, Luca Buzzetti, Hamish B. Hepburn, Alberto Vega-Peñalosa, Mattia Silvi and Paolo Melchiorre
ACS Catalysis, **2018**, 8, 1062-1066. [Highlighted in Synfacts](#)
9. Visible-Light Excitation of Iminium Ions Enables the Enantioselective Catalytic β -Alkylation of Enals
Mattia Silvi, Charlie Verrier, Yannick Rey, Luca Buzzetti and Paolo Melchiorre.
Nature Chemistry, **2017**, 9, 868-873. [Highlighted in Chemistry World and Chem \(Cell Press\)](#)
8. Merging Photoredox with 1,2-Metallate Rearrangements: The Photochemical Alkylation of Vinyl Boronate Complexes
Mattia Silvi, Christopher Sandford and Varinder K. Aggarwal.
Journal of the American Chemical Society, **2017**, 139, 5736-5739. [Highlighted in Angewandte Chemie International Edition](#)
7. Enantioselective Formal α -Methylation and α -Benzylation of Aldehydes by Means of Photo-Organocatalysis
Giacomo Filippini, Mattia Silvi and Paolo Melchiorre.
Angewandte Chemie International Edition, **2017**, 56, 4447-4451. [Highlighted in Synfacts](#)
6. Enamine-Mediated Catalysis ($n - \pi^*$)
John J. Murphy, Mattia Silvi and Paolo Melchiorre.
In *Lewis Base Catalysis in Organic Synthesis, Vol. 2.* - Wiley-VCH: Weinheim, **2016**; 857–902. [Book Highlighted in Angewandte Chemie International Edition](#)
5. Synthesis of Cyclic Guanidines via Silver-Catalyzed Intramolecular Alkene Hydroamination Reactions of *N*-Allylguanidines
Zachary J. Garlets, Mattia Silvi and John P. Wolfe.
Organic Letters, **2016**, 18, 2331–2334.
4. Enantioselective Organocatalytic Alkylation of Aldehydes and Enals Driven by the Direct Photoexcitation of Enamines
Mattia Silvi, Elena Arceo, Igor D. Jurberg, Carlo Cassani and Paolo Melchiorre.
Journal of the American Chemical Society, **2015**, 137, 6120-6123. [Highlighted in Synfacts](#)
3. Controlling the Molecular Topology of Vinylogous Iminium Ions by Logical Substrate Design: Highly Regio- and Stereoselective Aminocatalytic 1,6-Addition to Linear 2,4-Dienals
Mattia Silvi, Indranil Chatterjee, Yiankai Liu and Paolo Melchiorre.
Angewandte Chemie International Edition, **2013**, 52, 10780-10783.
2. Enantioselective Aza-Michael Addition of Imides by Using an Integrated Strategy Involving the Synthesis of a Family of Multifunctional Catalysts, and Rational Design of Experiment
Mattia Silvi, Polyssena Renzi, Deborah Rosato, Cristiana Margarita, Alessio Vecchioni, Ivan Bordacchini, Diego Morra, Riccardo Cari, Fabio Sciubba, Daniele Schietroma and Marco Bella.
Chemistry – A European Journal, **2013**, 19, 9973-9978.
1. Secondary Amine-Catalyzed Asymmetric γ -Alkylation of α -Branched Enals via Dienamine Activation
Mattia Silvi, Carlo Cassani, Antonio Moran and Paolo Melchiorre.
Helvetica Chimica Acta, **2012**, 95, 1985-2006.