

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 Conference Awards

- 2019 Nottingham Research Fellowship. Independent research.
- 2017 Marie Skłodowska-Curie Individual European Fellowship. Post-doctoral research.
- 2014 ICIQ-UM Global Engagement Program Fellowship. 3 months research stay in USA.
- 2014 Poster Session Travel Award. Award, Karle-Vaughan Symposium 2014. Ann Arbor, MI, USA.
- 2013 Best Problem Session Award. Corbella Summer School, 2013, Gargnano, Italy.

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.
- 2012 ICIQ Summer School. Tarragona, Spain.

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

- 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

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-Peñaloza, [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.