

UNIVERSITÀ DEGLI STUDI DI MILANO

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Valerio Fasano

CURRICULUM VITAE

PERSONAL DATA

Cognome	FASANO
Nome	VALERIO
Data Di Nascita	17/02/1990

QUALIFICATIONS**DEGREE**

16 th Oct 2014	MSc in Chemistry (LM-54) - 110/110 con lode Università di Bologna (Italy) <i>Thesis Title</i> Photoredox Catalyzed Michael Additions <i>Supervisor</i> Prof. Marco Bandini
27 th Jul 2012	BSc in Chemistry (L-27) - 110/110 con lode Università di Catania (Italy) <i>Thesis Title</i> Riduzioni asimmetriche di un ferrocenil chetone racemico <i>Supervisor</i> Prof. Domenico Sciotto

DOCTORAL DEGREE OR EQUIVALENT QUALIFICATION EARNED IN ITALY OR ABROAD / MEDICAL SPECIALISATION DIPLOMA OR EQUIVALENT QUALIFICATION, FOR THE RELEVANT SECTORS, EARNED IN ITALY OR ABROAD

24 th Oct 2018	PhD in Chemistry University of Manchester (UK) <i>Thesis Title</i> Water/base tolerance in Frustrated Lewis Pair chemistry with boron, carbon and phosphorus Lewis acids <i>Supervisor</i> Prof. Michael J. Ingleson
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TEACHING ACTIVITIES AT ITALIAN OR FOREIGN UNIVERSITIES

2021-2022	Invited Visiting Professor at the University of Milan (Italy) to deliver the course "Recent Strategies in Organoboron Chemistry" for PhD students in Chemistry (10 hours, 2 CFU)
2020-2021 2019-2020	Lecturer at the University of Bristol (UK) for the course "Technology & automation equipment training" for PhD students in Technology Enhanced Chemical Synthesis (4 weeks, 30 CFU).
2020-2021	Tutoring of exercise sessions within the course "Organic Chemistry II" at the University of Bristol (UK), supervised by Dr. Karen Parrish (4 weeks).
19 th Sept 2016 – 9 th Jun 2017	Tutoring activity within the course "Laboratory of Chemistry – 3rd year" at the University of Manchester (UK), supervised by Dr. Peter Quayle.

ATTESTED TRAINING OR RESEARCH ACTIVITIES AT QUALIFIED ITALIAN OR FOREIGN INSTITUTIONS

1 st Jan 2022 – (31 st Oct 2022) <i>Research Activity Supervisor</i>	Visiting Research Fellow (honorary status) Department of Chemistry University of Bristol (UK) <i>Origin of the diastereoselectivity in reactions involving organoboronic esters</i> Prof. Varinder Aggarwal
1 st Dec 2018 – 31 st Dec 2021 <i>Research Activity Supervisor</i>	EPSRC Doctoral Prize Research Fellow (contract sponsored by the EPS Research Council) Department of Chemistry University of Bristol (UK) <i>Automating Complex Organic Synthesis to Aid Drug Discovery</i> Prof. Varinder Aggarwal
18 th Sep 2017 – 20 th Dec 2017 <i>Research Activity Supervisor</i>	Visiting Researcher (contract sponsored by the Royal Society of Chemistry) Department of Chemistry University of Toronto (Canada) <i>Electrophilic Phosphonium Cations as Catalysts in Frustrated Lewis Pair Chemistry</i> Prof. Douglas Stephan
23 rd Mar 2015 – 21 st Jul 2015 <i>Research Activity Supervisor</i>	Research Assistant (contract sponsored by the University of Manchester) Department of Chemistry University of Manchester (UK) <i>The reactivity of boron electrophiles</i> Prof. Michael Ingleson
1 st Feb 2022	National Scientific Habilitation to Associate Professorship in Organic Chemistry (ASN 2021-23, Bando D.D. 553/2021 Settore Concorsuale 03/C1 Chimica Organica, II Fascia)

ORGANISATION, SUPERVISION AND COORDINATION OF NATIONAL AND INTERNATIONAL RESEARCH GROUPS, OR PARTICIPATION IN THEM

Since Apr 2021 <i>Role of the candidate within the project</i>	Participation in the <u>national</u> research project “Identification, sustainable synthesis and study of molecular drugs efficacy in brain tumors treatment” Funding Program “MIUR” Funding Agency “PRIN 2017” Coordinator: Prof. Daniele Passarella Università degli Studi di Milano <i>Elaboration of the scientific program; day-to-day training of PhD students; article writing and submission for publication, as demonstrated by the following article as a corresponding author:</i> A. Maiocchi, J. Barbieri, V. Fasano*, D. Passarella* Stereoselective Synthetic Strategies to (–)-Cannabidiol ChemistrySelect 2022, 7, e202202400 (DOI:10.1002/slct.202202400)
Dec 2018 – Dec 2021 <i>Role of the candidate within the project</i>	Participation in the <u>international</u> research project “Automating Complex Organic Synthesis to Aid Drug Discovery” Funding Program “EPSRC Doctoral Prize, EP/R513179/1” Funding Agency “Engineering and Physical Sciences Research Council” Coordinator: Prof. Varinder Aggarwal University of Bristol (UK) and Chemspeed Technologies AG (Switzerland) <i>Elaboration of the scientific program; day-to-day training of PhD students; article writing and submission for publication, as demonstrated by the following article as the first author:</i> V. Fasano, R. C. Mykura, J. M. Fordham, J. J. Rogers, B. Banecki, A. Noble, V. K. Aggarwal* Automated Stereocontrolled Assembly-Line Synthesis of Organic Molecules Nature Synthesis 2022, DOI:10.1038/s44160-022-00158-6
Sep 2017 – Dec 2017	Coordination of the <u>international</u> research project “Electrophilic CF ₃ -substituted Phosphonium cations as water-tolerant Lewis acids for use in FLPs”, Funding Program “RSC Mobility Grant, EP/R513179/1” Funding Agency “Royal Society of Chemistry” Coordinator: Valerio Fasano University of Manchester (Prof. Ingleson) and University of Toronto (Prof. Stephan)

<i>Role of the candidate within the project</i>	<p><i>Elaboration of the scientific program; day-to-day training of PhD students; article writing and submission for publication, as demonstrated by the following article as the first author with double affiliations (Manchester and Toronto):</i></p> <p>V. Fasano, J. LaFortune, J. M. Bayne, M. J. Ingleson*, D. W. Stephan*</p> <p>Air- and water-stable Lewis acids: synthesis and reactivity of P-trifluoromethyl electrophilic phosphonium cations.</p> <p>Chem. Comm. 2018, 54, 662</p>
<p>Feb 2014 – Jul 2014</p> <p><i>Role of the candidate within the project</i></p>	<p>Participation in the <u>international</u> research project “Photoredox-catalysed Michael addition”</p> <p>Funding Program “Erasmus Program”</p> <p>Funding Agency “European Commission”</p> <p>Coordinator: Prof. Mogda Monari</p> <p>Partner units: Università di Bologna (Prof. M. Bandini) and University of Lund (Prof. P. Somfai)</p> <p><i>Development of the experimental methods for the MSc thesis.</i></p>
<p>Sep 2013 – Dec 2013</p> <p><i>Role of the candidate within the project</i></p>	<p>Participation in the <u>national</u> research project “Incorporazione di un antitumorale in nanoparticelle core-shell silica-PEG”</p> <p>Funding Program: Sviluppo tesi</p> <p>Funding Agency: The University of Catania</p> <p>Coordinator: Prof. Salvatore Sortino</p> <p>Partner units: Università di Bologna (Prof. L. Prodi) and Università di Catania (Prof. D. Sciotto)</p> <p><i>Development of the experimental methods for the Diploma Thesis of the Scuola Superiore dell'Università Catania</i></p>

SPEAKING AT NATIONAL AND INTERNATIONAL CONFERENCES AND CONVENTIONS

<p>14th Sep 2021 – 23rd Sep 2021</p>	<p>Oral Communication at <i>XXVII Congresso Nazionale</i>, organised by the Società Chimica Italiana.</p> <p>Title of the talk: “How big is the pinacol boronic ester?”.</p> <p><u>Scholarship granted by Società Chimica Italiana</u></p>
<p>25th Ago 2021 – 27th Ago 2021</p>	<p>Oral Communication at the <i>International Young Investigator Symposium on Organic Synthesis</i> (ASSOS 2021), organised by the University of Athens (Greece).</p> <p>Title of the talk: “Divergent, stereospecific mono- and difluoromethylation of boronic esters”.</p>
<p>29th Jun 2021 – 1st Jul 2021</p>	<p>Oral Communication at the <i>Dalton 2021- Joint Interest Group meeting and DYME</i>, organised by the University of Warwick (UK).</p> <p>Title of the talk: “How big is the pinacol boronic ester?”</p>
<p>14th Jun 2021 – 17th Jun 2021</p>	<p>Oral Communication at <i>XLV A. Corbella International Summer School on Organic synthesis</i>, organised by the Università di Milano.</p> <p>Title of the talk: “Divergent, stereospecific fluoromethylation of boronic esters”.</p> <p><u>Best Oral Communication Award</u></p>
<p>12th May 2018</p>	<p>Oral Communication at <i>ABTA 2018</i>, organised by the University College London (UK).</p> <p>Title of the talk: “Borane-catalysed reductive aminations”.</p>
<p>3rd Apr 2018 – 5th Apr 2018</p>	<p>Poster Communication (P62) at <i>Dalton 2018</i>, organised by the University of Warwick (UK).</p> <p>Title of the poster: “Water-tolerant of B(C₆F₅)₃ and BPh₃ in reductive aminations”</p>
<p>10th Apr 2017 – 13th Apr 2017</p>	<p>Flash Communication at <i>ISACS 2017</i>, organised by the University of Manchester (UK).</p> <p>Title of the talk: “Challenges in main group chemistry: water tolerance of B(C₆F₅)₃ and BPh₃ in reductive aminations using hydrosilanes”</p>

NATIONAL AND INTERNATIONAL AWARDS AND ACCOLADES FOR RESEARCH ACTIVITY

- *Premio Junior Ricerca 2022 - chimica organica nei suoi aspetti metodologici*, by the Organic Chemistry Division of the *Società Chimica Italiana*
- *Doctoral Researcher Award 2018*, by the Association of British Turkish Academics at the University College London. This award promotes and rewards academic and scientific excellence among researchers pursuing doctoral degrees in the UK.
- *STEM for Britain 2019*, by the British Parliamentary & Scientific Committee. This event is a major scientific poster competition and exhibition whose aim is to give members of both Houses of Parliament an insight into the outstanding research work being undertaken in UK universities by early-career researchers.

QUALIFICATIONS “ASSEGNI DI RICERCA AI SENSI DELL'ART. 51, COMMA 6, DELLA LEGGE 27 DICEMBRE 1997, N. 449 E SUCCESSIVE MODIFICAZIONI O DI BORSE POSTDOTTORATO AI SENSI DELL'ART. 4 DELLA LEGGE 30 NOVEMBRE 1989, N. 398, OVVERO DI ANALOGHI CONTRATTI, ASSEGNI O BORSE IN ATENEI STRANIERI”

Qualifications “Analoghi contratti, assegni o borse in atenei stranieri”:

- University of Bristol (UK), 1st Dec 2018 – 31st Dec 2021: Post-Doctoral Research Fellow
- University of Toronto (Canada), 18th Sep 2017 – 20th Dec 2017: Visiting Researcher
- University of Manchester (UK), 23rd Mar 2015 – 21st Jul 2015: Researcher Assistant

SCIENTIFIC PUBLICATIONS

* = corresponding Author

‡ = equal contribution

25. V. Fasano[‡], R. C. Mykura[‡], J. M. Fordham, J. J. Rogers, B. Banecki, A. Noble, V. K. Aggarwal*

Automated Stereocontrolled Assembly-Line Synthesis of Organic Molecules

Nature Synthesis **2022**, DOI:10.1038/s44160-022-00158-6

IF₂₀₂₁ = 0 since launched in Jan 2022; Citation (Scopus) = 0.

24. A. Maiocchi, J. Barbieri, V. Fasano*, D. Passarella*

Stereoselective Synthetic Strategies to (–)-Cannabidiol

ChemistrySelect **2022**, 7, e202202400 (DOI:10.1002/slct.202202400)

IF₂₀₂₁ = 2.307; Citation (Scopus) = 0.

23. L. Lewis-Borrell, M. Sneha, I. P. Clark, V. Fasano, A. Noble, V. K. Aggarwal*, A. J. Orr-Ewing*

Direct observation of reactive intermediates by time-resolved spectroscopy unravels the mechanism of a radical-induced 1,2-metallate rearrangement.

J. Am. Chem. Soc. **2021**, 143, 17191

IF₂₀₂₁ = 16.383; Citation (Scopus) = 2.

22. D. P. Hari, R. Madhavachary, V. Fasano, J. Haire, V. K. Aggarwal*

Highly Diastereoselective Strain-Increase Allylboration: Rapid Access to Alkylidenecyclopropanes.

J. Am. Chem. Soc. **2021**, 143, 7462

IF₂₀₂₁ = 16.383; Citation (Scopus) = 8.

21. V. Fasano, V. K. Aggarwal*

Origin of stereocontrol in the Matteson reaction: Importance of attractive electrostatic interactions.

Tetrahedron **2021**, 78, 131810

IF₂₀₂₁ = 2.388; Citation (Scopus) = 0.

20. V. Fasano, A. W. McFord, C. P. Butts, B. S. L. Collins, N. Fey, R. W. Alder, V. K. Aggarwal*

How big is the pinacol boronic ester as substituent?

Angew. Chem. Int. Ed. **2020**, 59, 22403

Selected as Hot paper

IF₂₀₂₁ = 16.823; Citation (Scopus) = 21.

19. S. H. Bennett, A. Fawcett, E. H. Denton, T. Biberger, V. Fasano, N. Winter, V. K. Aggarwal*
Difunctionalization of C–C σ Bonds Enabled by the Reaction of Bicyclo[1.1.0]butyl Boronate Complexes with Electrophiles: Reaction Development, Scope, and Stereochemical Origins.
J. Am. Chem. Soc. **2020**, *142*, 16766
IF₂₀₂₁ = 16.383; Citation (Scopus) = 16.
18. C. Jing, S. Mallah, E. Kriemen, S. H. Bennett, V. Fasano, A. L. L. Lennox, I. Hers, V. K. Aggarwal*
Synthesis, Stability and Biological Studies of Fluorinated Analogues of Thromboxane A₂.
ACS Cent. Sci. **2020**, *6*, 995
IF₂₀₂₁ = 18.728; Citation (Scopus) = 6.
17. V. Fasano[‡], N. Winter[‡], A. Noble, V. K. Aggarwal*
Divergent, stereospecific mono- and difluoromethylation of boronic esters.
Angew. Chem. Int. Ed. **2020**, *59*, 8502
Selected as Hot paper
IF₂₀₂₁ = 16.823; Citation (Scopus) = 23.
16. D. P. Hari; J. C. Abell, V. Fasano, V. K. Aggarwal*
Ring Expansion Induced 1,2-Metallate Rearrangements: Highly Diastereoselective Synthesis of Cyclobutyl Boronic Esters.
J. Am. Chem. Soc. **2020**, *142*, 5515
IF₂₀₂₁ = 16.383; Citation (Scopus) = 18.
15. D. Kaiser, A. Noble, V. Fasano, V. K. Aggarwal*
1,2-Boron Shifts of β -Boryl Radicals Generated from Bis-boronic Esters Using Photoredox Catalysis.
J. Am. Chem. Soc. **2019**, *141*, 14104
IF₂₀₂₁ = 16.383; Citation (Scopus) = 35.
14. J. E. Radcliffe, V. Fasano, R. W. Adams, P. You, M. J. Ingleson*
Reductive α -borylation of α,β -unsaturated esters using NHC–BH₃ activated by I₂ as a metal-free route to α -boryl esters.
Chem. Sci. **2019**, *10*, 1434
IF₂₀₂₁ = 9.969; Citation (Scopus) = 16.
13. V. Fasano, J. Cid, R. J. Procter, M. J. Ingleson*
Selective boryl–anion migration in a vinyl sp²–sp³ diborane induced by soft borane Lewis acids.
Angew. Chem. Int. Ed. **2018**, *57*, 13293
IF₂₀₂₁ = 16.823; Citation (Scopus) = 12.
12. V. Fasano, M. J. Ingleson*
Recent advances in water-tolerance in Frustrated Lewis Pairs chemistry.
Synthesis **2018**, *50*, 1783
IF₂₀₂₁ = 2.969; Citation (Scopus) = 21.
11. M. J. Bayne[‡], V. Fasano[‡], M. K. Szkop[‡], M. J. Ingleson*, D. W. Stephan*
Phosphorous(V) Lewis acids: water/base tolerant P₃–trimethylated trications.
Chem. Comm. **2018**, *54*, 12467
IF₂₀₂₁ = 6.065; Citation (Scopus) = 11.
10. R. J. Kahan, D. L. Crossley, J. Cid, J. E. Radcliffe, A. W. Woodward, V. Fasano, S. Endres, G. F. S. Whitehead, M. J. Ingleson*
Generation of a series of B_n-fused oligonaphthalenes (n = 1 to 3) from a B₁-polycyclic aromatic hydrocarbon.
Chem. Comm. **2018**, *54*, 9490
IF₂₀₂₁ = 6.065; Citation (Scopus) = 8.
9. V. Fasano, J. LaFortune, J. M. Bayne, M. J. Ingleson*, D. W. Stephan*
Air- and water-stable Lewis acids: synthesis and reactivity of P-trifluoromethyl electrophilic phosphonium cations.
Chem. Comm. **2018**, *54*, 662
IF₂₀₂₁ = 6.065; Citation (Scopus) = 27.

8. J. E. Radcliffe, J. J. Dunsford, J. Cid, V. Fasano, M. J. Ingleson*
N-Heterocycle-Ligated Borocation as Highly Tunable Carbon Lewis Acids.
Organometallics **2017**, 36, 4952
IF₂₀₂₁ = 3.837; Citation (Scopus) = 20.

7. V. Fasano, L. D. Curless, J. E. Radcliffe, M. J. Ingleson*
Frustrated Lewis Pair Mediated 1,2-Hydrocarbation of Alkynes.
Angew. Chem. Int. Ed. **2017**, 56, 9202
IF₂₀₂₁ = 16.823; Citation (Scopus) = 17.

6. V. Fasano, J. E. Radcliffe, M. J. Ingleson*
Mechanistic insights into the B(C₆F₅)₃-initiated aldehyde-aniline-alkyne reaction to form substituted quinolines.
Organometallics **2017**, 36, 1623
IF₂₀₂₁ = 3.837; Citation (Scopus) = 23.

5. V. Fasano, M. J. Ingleson*
Expanding Water/Base Tolerant FLP Chemistry to Alkylamines Enables Broad Scope Reductive Aminations.
Chem. Eur. J. **2017**, 23, 2217
Selected as Hot paper
IF₂₀₂₁ = 5.020; Citation (Scopus) = 49.

4. V. Fasano, J. E. Radcliffe, L. D. Curless, M. J. Ingleson*
N-Methyl-benzothiazolium Salts as Carbon Lewis Acids for Si-H σ -Bond Activation and Catalytic (De)hydrosilylation.
Chem. Eur. J. **2017**, 23, 187
Selected as Hot paper
IF₂₀₂₁ = 5.020; Citation (Scopus) = 25.

3. V. Fasano, J. E. Radcliffe, M. J. Ingleson*
B(C₆F₅)₃-Catalyzed Reductive Amination using Hydrosilanes.
ACS Catal. **2016**, 6, 1793
IF₂₀₂₁ = 13.700; Citation (Scopus) = 81.

2. J. R. Lawson, V. Fasano, J. Cid, I. Vitorica-Yrezabal, M. J. Ingleson*
The carboboration of Me₃Si-substituted alkynes and allenes with boranes and borocations.
Dalton Trans. **2016**, 45, 6060
IF₂₀₂₁ = 4.390; Citation (Scopus) = 19.

1. A. J. Warner, J. R. Lawson, V. Fasano, M. J. Ingleson*
Formation of C(sp²)-Boronate Esters by Borylative Cyclization of Alkynes Using BCl₃.
Angew. Chem. Int. Ed. **2015**, 54, 11245
IF₂₀₂₁ = 16.823; Citation (Scopus) = 76.

Scopus Author ID: 57159342800
Total Publications: 25
Total Impact Factor (2021): 256.39
Average Impact Factor (2021) per Article: 10.26
Total Citations: 534
Average Citations per Article: 21.4
H-index: 16

Data

29/08/2022

Luogo

Milan (Italy)