

Luca Bernardi (*Bologna (Italy), 19/6/1976*)

PhD, Associate Professor

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CURRICULUM VITAE

February, 2022

Academics:

2014 (Sept)-present: Associate Professor at the Department of Industrial Chemistry "Toso Montanari", University of Bologna (Italy).

2011-2014: Assistant Professor (Ricercatore) at the Department of Industrial Chemistry "Toso Montanari", University of Bologna (Italy).

2011 (Nov)-2012 (Feb): Visiting researcher at the Stratingh Institute, University of Groningen (NL), working in the team directed by Prof. B. L. Feringa on the application of molecular motors to asymmetric catalysis, supported by a Marco Polo fellowship of the University of Bologna.

2004-2005 and **2007-2010:** Post-doc at the Department of Organic Chemistry "A. Mangini", University of Bologna (mentor: Prof. A. Ricci): new asymmetric Mannich reactions using phase-transfer catalysis and hydrogen bond based catalysts; biomimetic transformations.

2004 (Mar-Sept) and **2006:** Post-doc at the Center for Catalysis, University of Aarhus, supported by C.I.N.M.P.I.S. (2004) and as a Fellow of the Danish National Research Foundation (2006) (mentor: Prof. K. A. Jørgensen): new asymmetric reactions of β -keto esters and phosphonates using chiral Lewis acids and phase-transfer catalysis.

2004: Ph.D. degree in Chemical Sciences at the University of Bologna. Ph.D. thesis: "Nucleophilic Additions to Unsaturated C-N Bonds: New Methods and Applications to the Asymmetric Synthesis of Target Compounds", supervisor Prof. A. Ricci.

2002 (Mar-Sept): Research activity in the group of Prof. K. A. Jørgensen, at the Center for Catalysis, University of Aarhus (DK), in the frame of the "Marco Polo" project, University of Bologna. Chiral Lewis acid catalysis in an asymmetric Mannich reaction.

2001-2004 (Mar): Ph.D. studies in Chemistry, with research activity carried out at the Department of Organic Chemistry "A. Mangini", University of Bologna. Synthesis from chiral pool, organometallic chemistry, green chemistry.

2000: Laurea (M.Sc. Diploma) in Industrial Chemistry at the University of Bologna (110/110 cum laude). Thesis: "Synthesis of EP aminopolialcohols through the direct linearization of 2-isoxazoline-N-oxide systems", supervisor Prof. P. Righi

1998: B.Sc. Diploma in Chemistry (Distinction) at the University of Kent. Final project: "Synthesis and catalytic activity of zeolites", supervisor Prof. A. J. Creighton.

1997-1998: Undergraduate studies at the Department of Chemistry, University of Kent (UK), in the frame of the Socrates-Erasmus program.

1995-2000: Undergraduate studies at the University of Bologna, Faculty of Industrial Chemistry.

Research Activity:

-Development of new catalytic enantioselective reactions. Different types of organic catalysts (from phosphoric acids to Cinchona alkaloids and thioureas) are exploited to explore and develop new reactivity patterns. This is the major topic of research.

-Remote control of catalyst activity by external stimuli.

-“Blue chemistry”: Biopolymers from marine sources: manipulations and applications in catalysis and water remediation. Topic in collaboration with Dr. Nathalie Tanchoux, CNRS Montpellier, France.

-Consultancy and research activity with private companies.

Bibliometric data:

ISI-Web of Science, February 2022 (B-5132-2010): 88 articles published in international multidisciplinary (JACS, ACIE, ChemComm, CEJ) and organic (JOC, AdvSynthCatal, OBC, etc) chemistry peer-reviewed journals, in many of these as (one of the) corresponding author(s). Some of these articles were highlighted in Synfacts (9), JACS Select (1), and Organic Chemistry Portal (4). One of these articles was selected for the 2012 ChemComm Emerging Investigator Issue.

Overall citations: 4'824 (average citation per item 54.82). *h*-index: 39.

In addition, co-author of four published book chapters, co-editor (with Prof. A. Ricci) of the Wiley-VCH book “Methodologies in Amine Synthesis: Challenges and Applications”, and co-inventor in two international patent applications.

List of publications: WoS (ID: B-5132-2010), or: <https://www.unibo.it/sitoweb/luca.bernardi2/publications>

Selected Invited lectures and short lectures:

- 2022:** Asymmetric Organocatalysis – After the Gold Rush, L’Aquila (Italy) (on line).
- 2021:** 57th meeting of the Serbian Chemical Society, Kragujevac (Republic of Serbia) (on line).
- 2019:** 10th Eurasian Meeting in Heterocyclic Chemistry, Milano Marittima (Italy)
- 2019:** University of Salerno (Italy)
- 2019:** University of Zaragoza (Spain).
- 2018:** SISOC XII, Ferrara (Italy).
- 2017:** Feringa Academic Alumni Symposium, Groningen (NL).
- 2016:** Universidad Autonoma de Madrid (Spain).
- 2016:** Actelion Pharmaceutical Ltd., Basel (CH).
- 2016:** University of Milano (Italy).
- 2015:** 2nd China-Italy Symposium in Organic Chemistry, Padova (Italy).
- 2014:** Fabbrica Italiana Sintetici, Montecchio Maggiore in Vicenza (Italy).
- 2014:** Ischia Advanced School of Organic Chemistry, Ischia (Napoli).
- 2012:** University of Stockholm (Sweden).
- 2012:** ORganocatalysis in Rome, COST promoted event, invited oral communication.
- 2012:** PhD school of the University of Urbino (Italy).
- 2012:** PhD school of the University of Camerino (Italy).
- 2011:** Dr. Reddy’s Chirotech Centre, Cambridge (UK).
- 2011:** EuCheMS Young Investigators Workshop (parallel event to ESOC 2011), Heraklion (Greece).
- 2010:** XXXIII Convegno Nazionale della Divisione di Chimica Organica, San Benedetto del Tronto.
- 2010:** RWTH Aachen (Germany).
- 2010:** VIII Italian-Spanish Organic Chemistry Symposium, Padova.
- 2009:** Royal College of Surgeons, Dublin (Ireland).

Prizes, Awards and Honors:

- 2012-2019**, and **2021-2031**: National habilitation to full professorship in organic chemistry.
- 2011**: JSP fellow at the 46th Bürgenstock conference.
- 2010**: Ciamician medal of the Organic Chemistry Division of the Italian Chemical Society (prize awarded to promising young (<35) researchers).
- 2009**: Thieme Journal Prize.
- 2009**: Tetrahedron most cited paper 2006-2009 award.
- 2004**: C.I.N.M.P.I.S. Award for the Ph.D. thesis.

Other information:

Reviewer Activity:

Regular (>5 times per years) referee for: Angew. Chem. Int. Ed. (top 5% Wiley reviewer in 2014-2015), Chem. Sci. (outstanding reviewer in 2019), ACS Catalysis.
Sporadic (1-5 times per year) referee for: Chem. Commun., Org. Lett., J. Org. Chem., Adv. Synth. Catal., Tetrahedron, Tetrahedron Lett., Org. Biomol. Chem., Chem. Soc. Rev., etc.
Reviewer of grant applications for: Agence Nationale Recherche France, MIUR (Italian Ministry of University and Education), National Science Center Poland.

-Member of the organizing committee of the 36th National Congress of the Organic Chemistry Division of the Italian Chemical Society (Bologna, **2015**).

-Member of the editorial board of the journal “*Catalysts*”

Research funding:

After 2011, funding for research has been provided by:
University of Bologna: RFO program based on publication rankings; three PhD and post-doc fellowships (co-funded).
Research agreements with private companies.
Erasmus Mundus SINCHEM program (two PhD fellowship, in co-tutelle with CNRS Montpellier).
MIUR (Ministry of University and Education): FFABR 2017, based on national publication ranking.
Local responsible of the Galileo “AEROCAT” project with the CNRS Montpellier (France), funded by Università Italo-Francese, 2010-2012, and 2022-2023.
National coordinator of the PRIN national project “Natural product assisted organic synthesis”, 2022-2025.

Teaching and supervising activity:

Undergraduate teaching: organic chemistry I and advanced organic chemistry laboratory courses for BSc and MSc students; organic materials basic course for BSc students; advanced organic chemistry course in stereochemistry, green chemistry and industrial chemistry for MSc students. Specific short courses for PhD students (including international PhD schools).
Supervisor of four past (two co-supervised with CNRS Montpellier) and one current PhD students, of two visiting PhD students, and three post-docs. Supervisor of >25 Master, and >20 Bachelor students.
Member of evaluation committees for PhD student candidates, in Italy (University of Milano, University of Camerino) and abroad (Universidad del Pais Vasco, Bilbao; ICIQ Tarragona; Universidad Autonoma de Madrid; University of Marseille, Universidad de Zaragoza).