

## Curriculum Vitae

### Prof. Dr. Paolo Melchiorre

Professor of Chemistry at the Industrial Chemistry Department 'Toso Montanari'  
University of Bologna (UNIBO), Italy

Date of birth: 29 May 1973 - Nationality: Italian



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Researcher unique identifiers: Researcher ID: K-9301-2014 [\[link\]](#); ORCID: 0000-0001-8722-4602 [\[link\]](#)

The following list summarises the most important steps of my educational and professional career:

|                                           |                               |           |
|-------------------------------------------|-------------------------------|-----------|
| • MSc in Chemistry                        | University of Bologna (Italy) | 1993-1999 |
| • PhD in Chemical Sciences                | University of Bologna         | 2000-2003 |
| • Research Period at Center for Catalysis | University of Århus (DK)      | 2002      |
| • Postdoctoral Fellow in Chemistry        | University of Bologna         | 2003-2006 |
| • Assistant Professor                     | University of Bologna         | 2007-2009 |
| • ICIQ Group Leader and ICREA Professor   | ICIQ, Tarragona (Spain)       | 2009-2022 |

### CURRENT POSITION

|                        |                       |                   |
|------------------------|-----------------------|-------------------|
| Professor of Chemistry | University of Bologna | from October 2022 |
|------------------------|-----------------------|-------------------|

### Research Field

Asymmetric catalysis, photochemistry, radical chemistry, and biocatalysis: development of enantioselective radical reactions, photochemical activation, photoenzymes, and sustainable synthesis using visible light.

### FELLOWSHIPS, AWARDS and DISTINCTIONS

- 2007 Recipient of the "G. Ciamician" Gold Medal of the Italian Chemical Society
- 2008 Recipient of the *Liebig Lectureship* awarded by the German Chemical Society
- 2009 ICREA (Institutió Catalana de Recerca i Estudis Avançats) Research Professor
- 2011 *Young Talented Lecture* in the 17<sup>th</sup> European Symposium on Organic Chemistry (ESOC 2011), Crete
- 2011 **ERC Starting Grant** to carry out the 5-year project "ORGA-NAUT: Exploring Chemical Reactivity with Organocatalysis"
- 2013 *JSPS Fellowship* under the FY2013 Program for Research in Japan
- 2014 *Erdtman Lecture 2014* – October 2014, Stockholm, Sweden (presented annually to an organic chemist, worldwide)
- 2016 **ERC Consolidator Grant** to carry out the 5-year project "CATA-LUX: Light-Driven Asymmetric Organocatalysis"
- 2016 Prize for Scientific Excellence from the Royal Spanish Chemical Society (RSEQ)
- 2019 "Giorgio Modena" Medal from the Italian Chemical Society
- 2019 **ERC Proof of Concept** to carry out the project "LIGHT-COAT" on photo-polymerisations
- 2020 Fellow of the Royal Society of Chemistry (FRSC)
- 2021 **Pedler Award** of the Royal Society of Chemistry (RSC) "for the development of asymmetric photocatalytic methodologies based on excited state intermediates"
- 2023 *Xingda Lecture*, Peking University, China (presented annually to an organic chemist, worldwide)
- 2024 **Premio Linco per la Chimica**, awarded by the *Accademia dei Lincei*, Rome, June 2024 (presented annually in the presence of the President of the Italian Republic)
- 2024 **ERC Advanced Grant** to carry out the 5-year project "PHOTOZYME: Enhancing the Potential of Enzymatic Catalysis with Light"
- 2025 Fellow of the *European Academy of Sciences - EurASc*, Chemistry Division
- 2026 **President of the 59<sup>th</sup> Bürgenstock Conference** – Brunnen, Switzerland (<https://bc26.scg.ch/>)
- 2026 Chair, 14<sup>th</sup> International Symposium on Organic Free Radicals (ISOFR-14), Bologna, Italy (<https://isofr14.it/>)

### SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

2007 – 2025 I have supervised and mentored a total of 36 PhD students (29 PhDs already granted, 9 presently working in my research team), more than 50 postdoctoral researchers (6 presently working in my research group), and 25 visiting scientists (including Master students, visiting PhD students, and visiting Professors on a 3-12-month tenure).

**Contributions to careers of early-stage researchers.** Some of my past associates have gone on to independent academic careers. Examples follow (name, time, present position): *Armando Carlone* (PhD

2005-2008) Associate Professor at University of L'Aquila, Italy; *Yankai Liu* (Marie Curie Fellow 2011-13) Assistant Professor at Ocean University, Qingdao, China; *Igor D. Jurberg* (Postdoc 2012) Associate Professor at Campinas University, Brazil; *Indranil Chatterjee* (Postdoc 2012-2014) Professor at IIT Ropar, Punjab, India; *Xu Tian* (PhD 2010-2014) 'Thousand Talents Fellow' at Guangzhou Medical University, China; *Mattia Silvi* (PhD 2011-2015) Research Fellow at Nottingham University, UK; *Luca Dell'Amico* (Marie Curie Fellow 2015-2016) Associate Professor at the University of Padua, Italy; *Ana Bahamonde* (PhD 2014-2017) Associate Professor at University of California, Riverside, USA; *Sudipta Raha Roy* (Marie Curie Fellow 2018-2019) Professor at IIT Delhi, India; *Zhong-Yan Cao* (Marie Curie Fellow 2017-2018) Professor at Zhejiang University of Technology, Hangzhou, China; *Lukasz Wozniak* (PhD 2013-17) Associate Professor at Jagiellonian University, Krakow, Poland; *Giacomo Filippini* (PhD 2013-17) Associate Professor at University of Trieste, Italy; *Bartosz Bieszczad* (Postdoc 2017-19) Lecturer at the University of Dublin UCB; *Benjamin Laroche* (Postdoc 2019-20) Associate Professor at ESPCI Paris; *Giacomo Crisenza* (Marie Curie Fellow 2020-2021) Lecturer at the University of Manchester; UK, *Daniele Mazzearella* (PhD 2017-2020) Assistant Professor at the University of Roma Tor Vergata- Italy; *Will Hartley* (Marie Curie Fellow 2021-2023) Lecturer at the University of Tarragona, URV, Spain; *Sara Cuadros Huertas* (PhD 2015-2019) Assistant Professor at *Universidad de Alicante* - Spain.

*Selected industry-related careers* – *Giulia Bergonzini* (PhD 2009-2013) to Astra Zeneca, Goteborg, Sweden; *Carlo Cassani* (PhD 2009-2013) to Astra Zeneca, Goteborg, Sweden; *Elena Arceo Rebollo* (Postdoc 2011-2014) to Verisk Analytics Inc, Washington, USA; *Sandeep Reddy Kandukuri* (Postdoc 2013) to Syngenta, Goa, India; *Yannick Rey* (Postdoc 2015-2017) to Merck/Sigma-Aldrich, Switzerland; *John Murphy* (Postdoc 2015-2017) to Astra Zeneca, Goteborg; *Thomas Van Leeuwen* (Postdoc 2018) to Syncom, Groningen, the Netherlands; *Luca Perego* (Postdoc 2019) and *Pablo Bonilla* (PhD 2016-2020) to Johnson & Johnson, Schaffhausen, Switzerland; *Riccardo DiSanza* (Postdoc 2020-2021) to Signature Discovery, Nottingham, UK; *Jan Vilím* (Postdoc 2021-2022) to Loschmidt Laboratories/Enantis, Brno, Cz; *Bertrand Schweitzer-Chaput* (Postdoc 2015-2019) to Janssen, Beerse, Belgium; *Nurtalya Alandini* (PhD 2016-2020) to at Lundbeck, Copenhagen, Denmark; *Catherine Holden* (Marie Curie fellow 2018-2020) to Syngenta Crop Protection, Jealott's Hill, UK; *Eduardo de Pedro Beato* (PhD 2017-2021) to at Sanofi, Frankfurt, Germany.

## TEACHING ACTIVITIES

During my time at ICIQ, I taught 'Stereoselective and Asymmetric Synthesis' at the graduate level (30 hours a year). At the University of Bologna, I am teaching advanced organic chemistry, photocatalysis, and asymmetric catalysis at undergraduate and graduate levels

In addition, Professor Melchiorre has delivered advanced courses dedicated to PhD students in many International Schools.

## ORGANISATION OF SCIENTIFIC MEETINGS

|            |                                                                                                                                                                                                                                        |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2026       | President of the 59 <sup>th</sup> <i>Bürgerstock Conference</i> – Brunnen, Switzerland ( <a href="https://bc26.scg.ch/">https://bc26.scg.ch/</a> )                                                                                     |
| 2026       | Chair, 14 <sup>th</sup> International Symposium on Organic Free Radicals (ISOFR-14), Bologna, Italy (Italy, June 7-10, 2026 - <a href="https://isofr14.it/">https://isofr14.it/</a> )                                                  |
| 2025       | Co-chair of the 1 <sup>st</sup> <i>Japanese-Italian Symposium on Organic Chemistry</i> , Bari (Italy, October 12-15, 2025)                                                                                                             |
| 2023       | Co-organiser of the 3 <sup>rd</sup> <i>Japanese-Spanish Symposium on Modern Synthetic Methodology</i> , San Sebastian (Spain) (info at <a href="https://jssos.es/">https://jssos.es/</a> , I also organised the first edition in 2017) |
| 2022       | Chair of the <i>Chemical Science symposium 2022: Sustainable synthesis and catalysis</i> , London (UK). November 2022: 150 delegates (info <a href="#">here</a> )                                                                      |
| Since 2019 | Co-organiser of the IASOC - Ischia Advanced School of Organic Chemistry, Ischia, Italy                                                                                                                                                 |
| 2018       | Organiser of the 1 <sup>st</sup> <i>European Meeting of Excellence in Chemistry</i> (EMEC), Vienna (Austria). 3 Dec 2018: 30 delegates from the industrial and academic chemistry sectors                                              |
| 2015       | Organiser of the symposium " <i>Lights on Chemistry</i> ", ICIQ, Tarragona, October 2015: 160 delegates (info at <a href="http://lightsonchemistry.iciq.es/">http://lightsonchemistry.iciq.es/</a> )                                   |

## INSTITUTIONAL RESPONSIBILITIES

|                |                                                                                                  |
|----------------|--------------------------------------------------------------------------------------------------|
| 2023 - present | Member of <i>Struttura Operativa Permanente (SOP) Scientifica</i> , Italian Chemical Society SCI |
| 2019 - present | Associate Editor for <i>Chemical Science</i> , the flagship Royal Society of Chemistry journal   |
| 2022 - 2024    | Delegate for Research of the Industrial Chemistry Department ' <i>Toso Montanari</i> ', UNIBO    |
| 2020           | Member of the ICIQ Scientific Strategy Committee                                                 |
| 2019 - present | Guest Editor for an upcoming (2022) special issue in Photocatalysis for <i>Chemical Reviews</i>  |
| 2013           | ICIQ Seminar Manager, in charge of the 2013 seminar program at ICIQ (info <a href="#">here</a> ) |
| 2009 - present | Jury member for 28 PhD theses at international universities                                      |

**REVIEWING ACTIVITIES**

- 2013 – now Member of the *Advanced Synthesis and Catalysis* (Wiley) Academic Advisory Board
- 2013 – now Member of the International Advisory Board of *ChemCatChem* (Wiley)
- 2016 – now Member of the International Advisory Board of *ChemPhotoChem* (Wiley)
- 2005 – now Served as referee for the following international journals, among others: *Nature*, *Nature Chemistry*, *Angew. Chem. Int. Ed.*, *J. Am. Chem. Soc.*; *Chem. Sci.* etc.
- 2018 – 2019 In 2018 and 2019, one of the top three contributing referees for ACIE (39 and 35 referee reports, respectively – personal communication from the Editorial Board).
- 2017 – now Occasional scientific consultant for Janssen, Syngenta, Bayer, and Merck.
- 2008 – now Evaluator of scientific proposals for different national scientific agencies, including: *ERCEA*; the Deutsche Forschungsgemeinschaft (*DFG*, Germany); the Swiss National Science Foundation (*SNF*, Switzerland); the National Science Foundation (*NSF*, USA); Agence Nationale de la Recherche (*ANR*, France); etc.
- 2015 – now Evaluator for career promotion: University of Manchester (UK); Institute of Transformative Bio-Molecules (ITbM), Nagoya; the National University of Singapore, among others.

**MEMBERSHIPS OF SCIENTIFIC SOCIETIES**

- 2004 Member of Società Chimica Italiana (SCI)
- 2010 Member of the American Chemical Society (ACS) and Real Sociedad Española de Química
- 2020 Member of the Royal Society of Chemistry (RSC)

**MAJOR COLLABORATIONS**

- 2020 - present Scientific collaboration with Johnson & Johnson Syngenta (Toledo – Spain, Dr Antonio Misale) on the design of photochemical radical processes for the late-stage modifications of biorelevant molecules.
- 2018 - 2022 Scientific collaboration with Bayer AG Pharmaceuticals (Wuppertal – Germany) on the development of new photoredox methodologies for amide synthesis. Part of the scientific results published in *Angew. Chem. Int. Ed.* **2020**, 59, 5248–5253 [[link](#)].

**LEADERSHIP in INDUSTRIAL INNOVATION or DESIGN**

Co-founder (2020) of *Trellum Technologies Ltd*, ICIQ spin-off in photochemical reactors. No longer involved after joining the University of Bologna.

**GRANTED AND FILED PATENTS**

- 'Cinchona alkaloid derivatives, their process of preparation and their use as catalysts', EP2687527 (A1)
- 'Photoinitiator compounds' WO2020011922
- 'Carboxylic dithiocarbamic acid anhydride and compositions thereof', EP20382017.0

**SELECTED LECTURES FROM >300 SCIENTIFIC TALKS SINCE 2014**

**Plenary/invited Lectures** - selected examples:

- *Congress of the Chemical Society of Japan*, Nagoya (Japan), March 2014
- *39<sup>th</sup> Naito Conference* 'The chemistry of organocatalysts' - Sapporo (Japan), July 2015
- *JCO 2016*, Journées de Chimie Organique - Paris (France), September 2016
- *ISOFR 12*, 12<sup>th</sup> International Symposium on Organic Free Radicals - Shanghai (China), October 2016
- *Beilstein Organic Chemistry Symposium* on 'Tomorrow's Catalysis' - Potsdam (Germany), October 2017
- *Japanese National Symposium in Organocatalysis* - Sendai (Japan), November 2017
- *1st Alpine Winter Conference* on Medicinal and Synthetic Chemistry - St. Anton (Austria), January 2018
- *BOS 18*, Balticum Organicum Syntheticum 2018 - Tallinn (Estonia), July 2018
- *17th BMOS*, Brazilian Meeting in Organic Chemistry - Salvador (Brazil), October 2018
- *54<sup>th</sup> Bürgenstock Conference* 2019 - Brunnen (Switzerland), May 2019
- *ESOC*, European Symposium of Organic Chemistry - Vienna (Austria), July 2019
- *1<sup>st</sup> Symposium on Synthetic Chemistry and Catalysis* - NTU Singapore, January 2020
- *2<sup>nd</sup> EurJOC Virtual Symposium*, April 2020
- *3<sup>rd</sup> International Conference on Hydrogen Atom Transfer (iCHAT 2022)*, Rome, July 2022
- *53<sup>rd</sup> Symposium on Catalysis*, Prague, November 2022
- *2023 Gordon Research Conference* on Organic Reactions and Processes (USA), July 2023
- *6<sup>th</sup> Green Chemistry Euchems*, Sorrento (Italy), September 2023
- *Torkil Holm Symposium 2024*, Copenhagen (Denmark), January 2024
- *18<sup>th</sup> Belgian Organic Synthesis Symposium*, Liège, Belgium, July 2024

**Invited Research Talks** - selected examples:

- *Erdtman Lecture 2014 (named lecture)* - Stockholm (Sweden), October 2014
- *Syngenta Chemistry lecture 2017* - Stein (Switzerland), October 2017
- University of Cambridge (UK), October 2017
- Department Lecture at Princeton University (US), April 2018
- Mc Gill University, Montréal (Canada), December 2019
- *Xingda Lecture 2023 (named lecture)* – Peking University (virtual visit), April 2023
- *Bristol-Myers-Squibb Lecture*, University of Illinois, Urbana-Champaign, February 2024
- *15<sup>th</sup> European Conference on Organic Free Radicals – ECOFR XV*, Manchester, September 2024

**Research Record**

Paolo Melchiorre has authored more than 150 publications in international journals with a high impact factor: e.g. 3 × *Nature*; 48 × *Angewandte Chemie*; 4 × *Nature Chemistry*; 1 × *Nature Catalysis*; 1 × *Nature Protocols*; 1 × *PNAS*; 16 × *the Journal of American Chemical Society*. **h factor = 86** - His papers have attracted a total of **23100** citations (source: *Google Scholar as of October, 2025*) [\[link\]](#)

**Representative Publications**

1. G. E. M. Crisenza, A. Faraone, E. Gandolfo, D. Mazzarella, P. Melchiorre, Catalytic asymmetric C–C cross-couplings enabled by photoexcitation. *Nature Chem.* **2021**, *13*, 575; DOI: 10.1038/s41557-021-00683-5; <https://www.nature.com/articles/s41557-021-00683-5>
2. E. Le Saux, M. Zanini, P. Melchiorre, Photochemical organocatalytic benzylation of allylic C–H bonds. *J. Am. Chem. Soc.* **2022**, *144*, 1113–1118; DOI: 10.1021/jacs.1c11712; <https://pubs.acs.org/doi/10.1021/jacs.1c11712>
3. V. Tseliou, A. Faraone, L. Kqiku, J. Vilim, G. Simionato, P. Melchiorre, Enantioselective biocascade catalysis with a single multifunctional enzyme. *Angew. Chem. Int. Ed.* **2022**, e202212176, DOI: 10.1002/anie.202212176; <https://onlinelibrary.wiley.com/doi/abs/10.1002/anie.202212176>
4. W. Zhou, I. A. Dmitriev, and Paolo Melchiorre, Reductive Cross-Coupling of Olefins via a Radical Pathway, *J. Am. Chem. Soc.* **2023**, *145*, 25098–25102; DOI: 10.1021/jacs.3c11285; <https://pubs.acs.org/doi/full/10.1021/jacs.3c11285>
5. V. Tseliou, L. Kqiku, M. Berger, F. Schiel, H. Zhou, G. J. Poelarends, P. Melchiorre, Stereospecific radical coupling with a non-natural photodecarboxylase. *Nature* **2024**, *634*, 848–854; DOI:10.1038/s41586-024-08004-9; <https://www.nature.com/articles/s41586-024-08004-9>