

## Paolo Melchiorre

Professor of Chemistry

Department of Industrial Chemistry 'Toso Montanari', University of Bologna, Italy

Paolo Melchiorre is Professor of Chemistry at the University of Bologna and a leading researcher in asymmetric catalysis, photocatalysis, and radical chemistry. His work has pioneered the use of excited-state intermediates as a platform for new catalytic activation modes and, more recently, the development of photoenzymes for stereocontrolled radical transformations. He is the recipient of three European Research Council grants (Starting, Consolidator, Advanced) and numerous international distinctions.

Date of birth: 29 May 1973 | Nationality: Italian

Researcher ID: K-9301-2014 | ORCID: 0000-0001-8722-4602

### Professional

- 10/2022–present      **Full Professor of Chemistry**, University of Bologna, Italy
- 09/2009–09/2022      **ICREA Research Professor** and Group Leader, *Institute of Chemical Research of Catalonia* (ICIQ), Tarragona, Spain
- 10/2007–08/2009      **Assistant Professor**, University of Bologna, Italy

### Research Experience

- 01/2003–09/2007      **Postdoctoral Fellow**, University of Bologna, Italy
- 04/2002–12/2002      **Research Fellow with Prof. Karl Anker Jørgensen**, University of Århus, Denmark
- 11/1999–12/2002      **Graduate Research Assistant with Professor P. G. Cozzi**, University of Bologna

### Major Awards and Distinctions

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

## Leadership, Editorial and Institutional Roles

April 2026 - present	Associate Editor, <i>Journal of the American Chemical Society</i> (JACS)
2019 - 2026	Associate Editor, <i>Chemical Science</i> (Royal Society of Chemistry)
2026 - present	Elected Member, Board of the Organic Chemistry Division, <i>Italian Chemical Society</i> (SCI)
2023 - 2025	Member, Scientific Permanent Operational Structure (SCI)
2022 - 2024	Delegate for Research of the Industrial Chemistry Department 'Toso Montanari', University of Bologna, Italy
2020	Member of the ICIQ Scientific Strategy Committee
2013 - present	Member of the <i>Advanced Synthesis and Catalysis</i> (Wiley) Academic Advisory Board
2013 - present	Member of the International Advisory Board of <i>ChemCatChem</i> (Wiley)
2016 - present	Member of the International Advisory Board of <i>ChemPhotoChem</i> (Wiley)
2020 - present	Fellow of the Royal Society of Chemistry (FRSC)
2010 - present	Member of the American Chemical Society (ACS) and Real Sociedad Española de Química
2004 - present	Member of <i>Società Chimica Italiana</i> (SCI)

## Supervision and Mentoring

2007 – 2026 Supervised and mentored 39 PhD students (30 completed, 9 current), more than 50 postdoctoral researchers (6 current), and 30 visiting scientists, including MSc students, visiting PhD students, and visiting professors.

*Career development of early-stage researchers.* Selected former group members have progressed to independent academic and industrial positions, as listed below (*name*, time, present position):

**Selected academic careers** – 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; 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; 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 College 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 Mazzarella (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 Vilim (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 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 Sanofi, Frankfurt, Germany; Davide Spinnato (PhD 2018-2022) to Johnson & Johnson, Schaffhausen, Switzerland.

## Teaching

Extensive teaching experience at both graduate and undergraduate levels. During his time at the Institute of Chemical Research of Catalonia (ICIQ), he taught the graduate course *Stereoselective and Asymmetric*

*Synthesis* (30 hours annually). At the University of Bologna, he teaches advanced courses in physical organic chemistry, photocatalysis, and asymmetric catalysis. In addition, he has delivered specialized lectures and advanced courses for PhD students at numerous international doctoral schools and training programs.

### Organization of Scientific Meetings

2026	President of the 59 <sup>th</sup> <i>Bürgenstock Conference</i> – Brunnen, Switzerland
2026	Chair, 14 <sup>th</sup> International Symposium on Organic Free Radicals (ISOFR-14), June 7-10 2026, Bologna, Italy
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)
2022	Chair, <i>Chemical Science symposium 2022: Sustainable synthesis and catalysis</i> , London (UK). November 2022: 150 delegates
2019-present	Co-organiser IASOC - Ischia Advanced School of Organic Chemistry, Ischia, Italy
2018	Organiser of the 1 <sup>st</sup> <i>European Meeting of Excellence in Chemistry (EMEC)</i> , 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

### Selected Industrial collaborations / Innovation / Patents

2023 - present	Scientific collaboration with David Baker and Gerrit Poelarends on designed photoenzymes for promoting asymmetric radical processes.
2022 - present	Scientific collaboration with Johnson & Johnson (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 Syngenta (Jealott's Hill – UK) on the design of photochemical radical cascade processes for the preparation of bio-relevant chiral molecules.
2018 - 2022	Scientific collaboration with Bayer AG Pharmaceuticals (Wuppertal – Germany) on the development of new photoredox methodologies for amide synthesis. Work arising from this collaboration was published in <i>Angew. Chem. Int. Ed.</i> <b>2020</b> , 59, 5248–5253.
2020	Co-founder of <i>Trellum Technologies Ltd</i> , an ICIQ spin-off focused on photochemical reactor technologies.

### 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

### Research Record and Impact

Paolo Melchiorre has authored more than 150 publications in leading international journals, including *Nature*, *Nature Chemistry*, *Nature Catalysis*, *Nature Protocols*, *PNAS*, *Journal of the American Chemical Society*, and *Angewandte Chemie*. His work has received more than 23,000 citations, with an h-index of 86 (Google Scholar, March 2026).

His research has attracted substantial competitive funding, including four European Research Council (ERC) grants (Starting, Consolidator, Advanced, and Proof of Concept). He has also supervised 15 Marie Skłodowska-Curie Individual Fellowships, reflecting the strong international appeal of his research program.

Melchiorre has delivered more than **350 invited and plenary lectures worldwide** at major international conferences and leading research institutions. Selected examples include invited lectures at the *Bürgenstock Conference*, *Gordon Research Conference on Organic Reactions and Processes*, European Symposium on Organic Chemistry (*ESOC*), and named lectures such as the Erdtman Lecture (Stockholm University) and the Xingda Lecture (Peking University).