Curriculum Vitae

Prof. Dr. Paolo Melchiorre (29/05/1973) - Italian
ICREA Research Professor & *ICIQ* Senior Group Leader
Institute of Chemical Research of Catalonia (*ICIQ*)
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Web site: http://www.iciq.org/research/research_group/prof-paolo-melchiorre/
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Researcher ID: *K-9301-2014* [link] – ORCID: 0000-0001-8722-4602

The following list summarises the most important steps of his 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 Centre for Catalysis	University of Århus (DK)	2002
• Postdoctoral Fellow in Chemistry	University of Bologna	2003-2006
• Assistant Professor	University of Bologna	2007-2009
• Research Professor & Group Leader	ICIQ – Tarragona (Spain)	Sept. 2009-present

Main Professional Experience

September 2009	PM moved to the *Institute of Chemical Research of Catalonia* (ICIQ) in Tarragona as an ICREA (Catalan Institution of Research and Advanced Studies) Professor and ICIQ Senior Group Leader.
October 2007	Assistant Professor (Ricercatore) at Bologna University – *Alma Mater Studiorum* Bologna (Italy) - Dept. of Organic Chemistry, Industrial Chemistry Faculty

Research Record

Paolo Melchiorre has authored more than 100 publications in international journals with a high impact factor (e.g. 2 × *Nature,* 2 × *Nature Chemistry,* 28 × *Angewandte Chemie*, 6 × *the Journal of American Chemical Society*, 1 × *PNAS*, 1 × *Nature Protocols*, 2 × *Chemical* Science, 8 × *Organic Letters*, 4 × *Chemistry European Journal* and 5 × *Chemical Communication*) and five book chapters.
His papers have attracted more than 7000 citations (source: *ISI-Web of Science as of February 14, 2017)*

h factor = 49

PM has delivered more than 120 invited lectures and seminars at the national and international level.

In 2008, he was the main author for three consecutive communications in *Angewandte Chemie (ACIE* **2008**, *47*, 8700-8702; 8703-8706; 8707-8710*)*, one of the leading international peer-reviewed journals covering all aspects of chemistry.

PM was also featured in the journal's "Author Profile section" (*ACIE* **2009**, *48*, 3389), dedicated to chemists who have recently published their tenth paper in *ACIE* since the year 2000.

He has served as referee for the following international journals: *Nature, Nature Chemistry, Nature Comm., Nature Protocols*, *Nature Chem. Biol., Angew. Chem. Int. Ed., J. Am. Chem. Soc.; Chem. Sci. etc.*
In 2009, PM received a certificate for being among the top three contributing referees for *ACIE* (29 referee reports in the year 2009; 32, 28, 24, and 24 reports for the years 2010, 2011, 2012, and 2013, respectively).

Research Interest

His current scientific interests lie on the discovery and mechanistic elucidation of new asymmetric organocatalytic and photochemical processes that address unsolved problems in synthetic methodology. The final aim is to develop environmentally friendly and innovative catalytic methods that will find widespread use in organic synthesis.

Memberships

Societá Chimica Italiana (from 2004)
American Chemical Society ACS (from 2010)
Real Sociedad Española de Química RSQE (from 2010)

AWARDS & DISTINCTIONS

- 2006 - Invitation to the 41st EUCHEM Conference on Stereochemistry, Bürgenstock, as part of the Junior Scientists Participation programme.
- 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 - ***Thieme*** Journal Prize
- 2009 - ICREA (Institució Catalana de Recerca i Estudis Avançats) Research Professor
- 2009 - ICIQ Senior Group Leader
- 2009 - Selected for the 1st EUCHEM Organic Division Young Investigator's Workshop, Liblice
- "*Young Talented Lecture*" in the 17th European Symposium on Organic Chemistry (ESOC 2011), Crete, Greece, July 2011
- 2011 - ***ERC Starting Grant*** to carry out the 5-year project "ORGA-NAUT: Exploring Chemical Reactivity with Organocatalysis"
- 2013 - Member of the *Advanced Synthesis and Catalysis* (Wiley) Academic Advisory Board
- 2013 - Member of the International Advisory Board of *ChemCatChem* (Wiley)
- 2013 - ***JSPS Fellowship*** under the FY2013 Program for Research in Japan
- 2014 - ***Erdtman Lecture 2014*** – Stockholm (Sweden)
- 2015 - ***Thieme Lecture –*** *DOMINOCAT SYMPOSIUM* – Aachen (Germany)
- 2015 - ***ERC Consolidator Grant*** to carry out the 5-year project "CATA-LUX" (2016-2021)
- 2016 - Member of the International Advisory Board of *ChemPhotoChem* (Wiley)
- 2016 - Prize for Scientific Excellence from the Royal Spanish Chemical Society (**RSEQ**)

Scientific Evaluations:

2009: *ICREA – Research Professorship*
following an international evaluation on the research profile, candidature presentation supported by Prof. K. A. Jørgensen (Aarhus University, DK) and Prof. D. Enders (Aachen University, DE) - one out of 22 positions from all disciplines.

2012: *Scientific National Habilitation* (Italian Ministerial Evaluation Panel, *ASN*)
through an international research commission, PM was awarded an habilitation as Full Professor.

2012: *3-years ICREA Scientific Evaluation*
following an international evaluation on the research activities for the period (Sept. 2009/Sept. 2012).
Granted outstanding status (maximum mark).

2014: *5-years ICIQ Scientific Evaluation*
following an evaluation from the ICIQ Scientific Advisory Board (information at http://www.iciq.org/about-us/organisational-chart/scientific-advisory-board/) on the research activities for the period (Sept. 2009/May 2014).
Granted excellent status

Paolo Melchiorre – List of Publications

92 Research Articles
10 Reviews/Highlight Articles
5 Book Chapters
1 Patent

Paolo Melchiorre *(author profile)*: *Angew. Chem. Int. Ed.* **2009**, *48,* 3389 [link]

Publications from ICIQ as an ICREA Research Professor

102. **Visible-Light Excitation of Iminium Ions Enables the Enantioselective β-Alkylation of Enals**
Mattia Silvi, Charlie Verrier, Yannick Rey, Luca Buzzetti, and Paolo Melchiorre
Nature Chem. **2017**, *in press*

101. **Light-Driven Enantioselective Organocatalytic β-Benzylation of Enals**
Luca Dell'Amico, Victor M. Fernández-Alvarez, Feliu Maseras, and Paolo Melchiorre
Angew. Chem. Int. Ed. **2017**, DOI: 10.1002/anie.201612159 (open access [Link])

100. **Light-triggered Enantioselective Organocatalytic Mannich-type Reaction**
Hamish B. Hepburn, Giandomenico Magagnano, and Paolo Melchiorre
Synthesis **2017**, *49*, 76-86 ([Link])
Special Issue celebrating the 70th Birthday of Prof. Dr. Dieter Enders (Invited paper)

99. **Asymmetric catalytic formation of quaternary carbons by iminium ion trapping of radicals**
John J. Murphy, David Bastida, Suva Paria, Maurizio Fagnoni, and Paolo Melchiorre
Nature **2016**, *532*, 218–222 ([Link])
Highlighted in *Chemical & Engineering News 2016*, 94(16), 9 and *Synfact* 2016, 12, 739

98. **Mechanism of the Stereoselective α-Alkylation of Aldehydes Driven by the Photochemical Activity of Enamines**
Ana Bahamonde, and Paolo Melchiorre
J. Am. Chem. Soc. **2016**, *138,* 8019-8030 (open access [Link])

97. **Enantioselective Vinylogous Organocascade Reactions**
Hamish B. Hepburn, Luca Dell'Amico, and Paolo Melchiorre
Chemical Record **2016**, *16,* 1787–1806 (*invited Personal Account*)

96. **Enantioselective Organocatalytic Diels–Alder Trapping of Photochemically Generated Hydroxy *o*-Quinodimethanes**
Luca Dell'Amico, Alberto Vega-Peñaloza, Sara Cuadros, and Paolo Melchiorre
Angew. Chem. Int. Ed. **2016**, *55,* 3313–3317 (open access [Link])

95. **Brønsted acid-catalysed conjugate addition of photochemically generated α-amino radicals to alkenylpyridines**
Hamish B. Hepburn, and P. Melchiorre
Chem. Commun. **2016**, *52*, 3520–3523 (open access [Link])

94. **Light opens pathways for nickel catalysis**
John J. Murphy, and Paolo Melchiorre
Nature **2015**, *524,* 297-298 (News & Views [Link])

93. **Diastereodivergent organocatalysis for the asymmetric synthesis of chiral annulated furans**
Charlie Verrier, and Paolo Melchiorre
Chem. Sci. **2015**, *6*, 4242–4246 (open access [Link])

92. **Enantioselective Organocatalytic Alkylation of Aldehydes and Enals Driven by the Direct Photoexcitation of Enamines**
M. Silvi, E. Arceo, I. D. Jurberg, C. Cassani, and P. Melchiorre
J. Am. Chem. Soc. **2015**, *137*, 6120–6123 (open access [Link])

91. **Photo-organocatalytic Enantioselective Perfluoroalkylation of β-Ketoesters**
Łukasz Woźniak, John J. Murphy, and Paolo Melchiorre
J. Am. Chem. Soc. **2015***, 137*, 5678–5681 (open access [Link])

90. **Computational Study with DFT and Kinetic Models on the Mechanism of Photoinitiated Aromatic Perfluoroalkylations**
Victor M. Fernández-Alvarez, Manuel Nappi, Paolo Melchiorre, and Feliu Maseras
Org. Lett. **2015***, 17*, 2676−2679 ([Link])

89. **X-Ray Characterization of an EDA Complex which Drives the Photochemical Alkylation of Indoles**
Sandeep R. Kandukuri, Ana Bahamonde, Indranil Chatterjee, Igor D. Jurberg, Eduardo C. Escudero-Adán, and Paolo Melchiorre
Angew. Chem. Int. Ed. **2015***, 54,* 1485–1489. [Link]

88. **Photochemical direct perfluoroalkylation of phenols**
Giacomo Filippini, Manuel Nappi, and Paolo Melchiorre
Tetrahedron **2015***, 71*, 4535–4542 [Link]
Symposium in Print to honour the Tetrahedron Young Investigator Award to Prof. Yoshiaki Nakao

87. **Photo-Organocatalysis of Atom-Transfer Radical Additions to Alkenes**
Elena Arceo, Elisa Montroni, and Paolo Melchiorre
Angew. Chem. Int. Ed. **2014***, 53,* 12064–12068. [Link]
Selected as a **VIP Paper**

86. **Metal-free Photochemical Aromatic Perfluoroalkylation of α-Cyano Arylacetates**
Manuel Nappi, Giulia Bergonzini, and Paolo Melchiorre
Angew. Chem. Int. Ed. **2014***, 53,* 4921–4925. [Link]
Selected as a HOT Paper - Highlighted in SynForm 2014, *issue 2014/09* [Link]

85. **Enantioselective direct α-alkylation of cyclic ketones by means of photo-organocatalysis**
Elena Arceo, Ana Bahamonde, Giulia Bergonzini, and Paolo Melchiorre
Chem. Science **2014***, 5*, 2438-2442. [Link]
Highlighted in Synfact 2014, 535

84. **Asymmetric Vinylogous Diels–Alder Reactions Catalyzed by a Chiral Phosphoric Acid**
Xu Tian, Nora Hofmann, and Paolo Melchiorre
Angew. Chem. Int. Ed. **2014***, 53*, 2997-3000. [Link]
Highlighted in Synfact 2014, 433

83. **Synthesis of Cyclopropane Spirooxindoles by means of a Vinylogous Organocatalytic Cascade**
Rodrigo César da Silva, Indranil Chatterjee, Eduardo Escudero-Adán, Marcio Weber Paixão, and Paolo Melchiorre
Asian J. Org. Chem. **2014**, *3*, 466–469.
Special Issue: Organocatalysis (edited by Professor Keiji Maruoka)

82. **Photochemical activity of a key donor–acceptor complex can drive stereoselective catalytic α-alkylation of aldehydes**
Elena Arceo, Igor D. Jurberg, Ana Álvarez-Fernández, and Paolo Melchiorre
Nature Chem. **2013***, 5,* 750-756. [Link]
Highlighted in Synfact 2013, 1229

81. **Vinylogous Organocatalytic Triple Cascade Reaction: Forging SixStereocenters in Complex Spiro Oxindolic Cyclohexanes**
Indranil Chatterjee, David Bastida, and Paolo Melchiorre
Adv. Synth. Catal. **2013***, 355,* 3124–3130. [Link]

80. **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, Yankai Liu, and Paolo Melchiorre
Angew. Chem. Int. Ed. **2013***, 52*, 10780-10783. [link]

79. **A Mechanistic Rationale for the 9-Amino(9-deoxy)epi Cinchona Alkaloids Catalyzed Asymmetric Reactions via Iminium Ion Activation of Enones**
Antonio Moran, Alex Hamilton, Carles Bo, and Paolo Melchiorre
J. Am. Chem. Soc. **2013***, 135,* 9091-9098. [link]
Highlighted in Synfact 2013, 891

78. **Control of Remote Stereochemistry in the Synthesis of Spirocyclic Oxindoles by Means of Vinylogous Organocascade Catalysis**
Xu Tian and Paolo Melchiorre
Angew. Chem. Int. Ed. **2013***,* 52, 5360–5363 [link]

77. **When Asymmetric Aminocatalysis Meets the Vinylogy Principle**
Igor Jurberg, Indranil Chaterjee, René Tannert, and Paolo Melchiorre
Chem. Comm. **2013***, 49*, 4869-4883 [link] **(invited feature article)**

76. **Synthesis of 9-amino(9-deoxy)epi cinchona alkaloids, general chiral organocatalysts for the stereoselective functionalization of carbonyl compounds**
Carlo Cassani, Rafael Martín-Rapún, Elena Arceo, Fernando Bravo and Paolo Melchiorre
Nature Protocols **2013***, 8,* 325-344 [link]

75. **Asymmetric Vinylogous Aldol Reaction via H-Bond-Directing Dienamine Catalysis**
David Bastida, Yankai Liu, Xu Tian, Eduardo Escudero-Adán, and Paolo Melchiorre
Org. Lett. **2013***, 15,* 220–223 [link]

74. **Cinchona-based Primary Amine Catalysis in the Asymmetric Functionalisation of Carbonyls**
Paolo Melchiorre
Angew. Chem. Int. Ed. **2012***, 51*, 9748-9770 **(Review Article)** [link]

73. **Direct Catalytic Enantioselective Vinylogous Aldol Reaction of α-Branched Enals with Isatins**
Carlo Cassani, and Paolo Melchiorre
Org. Lett. **2012***, 14 (21),* 5590–5593 [link]

72. **Secondary amine-catalyzed asymmetric gamma-alkylation of alpha-branched enals via dienamine activation**
Mattia Silvi, Carlo Cassani, Antonio Moran, and Paolo Melchiorre
Helvetica Chim. Acta **2012***, 95,* 1985-2006 [link]
Special Issue celebrating the 75th Birthday of Prof. Dr. Dieter Seebach (Invited paper)

71. **Aminocatalytic Enantioselective 1,6-Additions of Alkyl Thiols to Cyclic Dienones: Vinylogous Iminium Ion Activation**
Xu Tian, Yankai Liu, and Paolo Melchiorre
Angew. Chem. Int. Ed. **2012***, 51*, 6439-6442 [link]
Highlighted in Synfact 2012, 905

70. **Extending the Aminocatalytic HOMO-Raising Activation Strategy: Where is the Limit?**
Elena Arceo, and Paolo Melchiorre
Angew. Chem. Int. Ed. **2012***, 51*, 5290-5292 **(Highlight Article)** [link]

69. **Dioxindole in Asymmetric Catalytic Synthesis: Routes to Enantioenriched 3-Substituted 3-Hydroxyoxindoles and the Preparation of Maremycin A**
Giulia Bergonzini and Paolo Melchiorre
Angew. Chem. Int. Ed. **2012***, 51,* 971-974 [link]
Highlighted in Synfact 2012, 329

68. **Dioxindole in asymmetric catalytic synthesis: direct access to 3-substituted 3-hydroxy-2-oxindoles *via* 1,4-additions to nitroalkenes**
Michele Retini, Giulia Bergonzini, and Paolo Melchiorre
Chem. Commun., **2012***, 48,* 3336-3338 [link]
Organocatalysis web themed issue

67. **Multicatalytic Asymmetric Synthesis of Complex Tetrahydrocarbazoles via a Diels–Alder/Benzoin Reaction Sequence**
Yankai Liu, Manuel Nappi, Eduardo C. Escudero-Adán, and Paolo Melchiorre
Org. Lett., **2012,** *14 (5),* 1310–1313 [link]

66. **A Bio-Inspired Route to α-Amino Acid Derivatives**
Elena Arceo and Paolo Melchiorre
ChemCatChem **2012**, *4*, 459–461 (**invited Highlight article**) [link]

65. **Diastereodivergent Asymmetric Sulfa-Michael Additions of α-Branched Enones using a Single Chiral Organic Catalyst**
Xu Tian, Carlo Cassani, Yankai Liu, Antonio Moran, Atsushi Urakawa, Patrizia Galzerano, Elena Arceo, and Paolo Melchiorre
J. Am. Chem. Soc. ***2011****, 133*, 17934–17941 [link]
Highlighted in *Science* 2011, 334, 570 & in ***Synfact* 2012,** 213

64. **Asymmetric Catalysis of Diels–Alder Reactions with in Situ Generated Heterocyclic *ortho*-Quinodimethanes**
Yankai Liu, Manuel Nappi, Elena Arceo, Silvia Vera, and Paolo Melchiorre
J. Am. Chem. Soc. ***2011****, 133*, 15212–15218 [link]

63. **Multiple approaches to enantiopure spirocyclic benzofuranones using organocatalytic cascade reactions**
Carlo Cassani, Xu Tian, Eduardo C. Escudero-Adán, and Paolo Melchiorre
Chem. Comm. **2011***, 47,* 233-235 [link]
Invited article for the Emerging Investigator Themed issue

63. **Asymmetric Michael Addition of Nitrobenzyl Pyridines to Enals via Iminium Catalysis**
S. Vera, Y. Liu, M. Marigo, E. C. Escudero-Adán, P. Melchiorre
Synlett **2011***,* 489-494 [link]
Special Cluster* Issue on *Proline and Proline-based Organocatalyst

61. **Cooperative Organocatalysis for the Asymmetric γ-Alkylation of α-Branched Enals**
G. Bergonzini, S. Vera, P. Melchiorre
Angew. Chem. Int. Ed. **2010***, 49,* 9685-9688 [link]
Highlighted in *Synfact* 2011, 101

60. **Direct asymmetric vinylogous Michael addition of cyclic enones to nitroalkenes via dienamine catalysis**
G. Bencivenni, P. Galzerano, A. Mazzanti, G. Bartoli, and P. Melchiorre
Proc. Natl. Acad. Sci. U.S.A. ***2010***, *107,* 20642-20647 [link]
Organocatalysis Special Issue - Highlighted in *Synfact* 2010, 1299 **and Selected as *Synfact of the Month***

59. **Reacciones Dominó Aminocatalíticas: una cascada de posibilidades**
S. Vera and P. Melchiorre
An. Quim. **2010***, 106*(4), 277-284

58. **Organocatalytic Asymmetric Conjugate Additions of Oxindoles and Benzofuranones to Cyclic Enones**
F. Pesciaioli, X. Tian, G. Bencivenni, G. Bartoli, P. Melchiorre
Synlett **2010***,* 1704-1708 [link]
Special Cluster* Issue on *Stereoselective Synthesis of Stereogenic Quaternary Carbons

57. **Chemoselectivity in Asymmetric Aminocatalysis**
M. Marigo, P. Melchiorre
ChemCatChem **2010**, *2*, 621-623 (**Invited Highlight**) [link]

56. **Cinchona Alkaloids in Synthesis & Catalysis. Ligands, Immobilization and Organocatalysis.** Edited by Choong Eui Song
P. Melchiorre
Angew. Chem. Int. Ed. **2010***, 49,* 3259-3260 (**Invited Book Review**)

55. **Asymmetric Catalytic Aziridination of Cyclic Enones**
F. De Vincentiis, G. Bencivenni, F. Pesciaioli, A. Mazzanti, G. Bartoli, P. Galzerano, P. Melchiorre
Chem. Asian J. **2010**, *5,* 1652-1656 [link]
Highlighted in *Synfact* 2010, 949

54. **Controlling Stereoselectivity in the Aminocatalytic Enantioselective Mannich Reaction of Aldehydes with In Situ Generated N-Carbamoyl Imines**
P. Galzerano, D. Agostino, G. Bencivenni, L. Sambri, G. Bartoli, P. Melchiorre
Chem. Eur. J. **2010**, *16,* 6069-6076 [link]

53. **Perchloric Acid and Its Salts: Very Powerful Catalysts in Organic Chemistry**
R. Dalpozzo, L. Sambri, G. Bartoli, P. Melchiorre
Chem. Rev. **2010,** *110*, 3501–3551 (**REVIEW**) [link]

52. **Asymmetric organocatalytic cascade reactions with α-substituted α,β-unsaturated aldehydes**
P. Galzerano, F. Pesciaioli, A. Mazzanti, G. Bartoli, P. Melchiorre
Angew. Chem. Int. Ed. **2009**, *48,* 7892-7894 [link]
Highlighted in *Synfact* 2009, 1278

Publications from Bologna University

51. **Targeting structural and stereochemical complexity by organocascade catalysis: construction of spirocyclic oxindoles having multiple stereocentres**
G. Bencivenni, L.-Y. Wu, A. Mazzanti, F. Pesciaioli, M.-P. Song, G. Bartoli, P. Melchiorre
Angew. Chem. Int. Ed. **2009**, *48,* 7200-7203 - **Selected as a HOT Paper** [link]
Highlighted in *Synfact* 2009, 1165**, and *Angew. Chem. Int. Ed.* 2010,** *49,* 846

50. **Organocascade reactions of enones catalyzed by a chiral primary amine**
L.-Y. Wu, G. Bencivenni, M. Mancinelli, A. Mazzanti, G. Bartoli, P. Melchiorre
Angew. Chem. Int. Ed. **2009**, *48,* 7196-7199 [link]
Highlighted in *Synfact* 2009, 1283

49. **Bifunctional catalysis by natural cinchona alkaloids: a mechanism explained**
C. S. Cucinotta, M. Kosa, P. Melchiorre, A. Cavalli, F. L. Gervasio
Chem. Eur. J. **2009**, *15,* 7913-7921 [link]
Special Issue: 100th Anniversary of SCI (Societá Chimica Italiana)

48. **Asymmetric Iminium Ion Catalysis with a Novel Bifunctional Primary Amine Thiourea: Controlling Adjacent Quaternary and Tertiary Stereocenters**
P. Galzerano, G. Bencivenni, F. Pesciaioli, A. Mazzanti, B. Giannichi, L. Sambri, G. Bartoli, and P. Melchiorre *Chem. Eur. J.* **2009**, *15,* 7846-7849 [link]
Special Issue: 100th Anniversary of SCI (Societá Chimica Italiana)

47. **Light in Aminocatalysis: the Asymmetric Intermolecular α-Alkylation of Aldehydes**
P. Melchiorre
Angew. Chem. Int. Ed. **2009**, *48*, 1360-1363 (**invited HIGHLIGHT article**) [link]

46. **Recent Development about the Use of Pyrocarbonates as Activator in Organic Synthesis**
R. Dalpozzo, G. Bartoli, M. Bosco, P. Melchiorre, L. Sambri
Curr. Org. Synth. **2009**, *6*, 79-101

45. **Proline Catalyzed Asymmetric Formal α-Alkylation of Aldehydes via Vinylogous Iminium Ion Intermediate Generated from Arylsulfonyl Indoles**
R. R. Shaikh, A. Mazzanti, M. Petrini,* G. Bartoli, and P. Melchiorre*
Angew. Chem. Int. Ed. **2008**, *47*, 8707-8710 [link]
Highlighted in *Angew. Chem. Int. Ed.* 2011, *50,* 12146-12147

44. **Organocatalytic Asymmetric Aziridination of Enones**
F. Pesciaioli, F. De Vincentiis, P. Galzerano, G. Bencivenni, G. Bartoli, A. Mazzanti, and P. Melchiorre
Angew. Chem. Int. Ed. **2008**, *47*, 8703-8706 [link]
Highlighted in *Synfact* 2009, 100

43. **Aminocatalytic Enantioselective anti-Mannich Reaction of Aldehydes with in Situ Generated N-Cbz and N-Boc Imines**
C. Gianelli, L. Sambri, A. Carlone, G. Bartoli, and P. Melchiorre
Angew. Chem. Int. Ed. **2008**, *47*, 8700-8702 [link]
Highlighted in *Synfact* 2009, 92

42. **Asymmetric Aminocatalysis-Gold Rush in Organic Chemistry**
P. Melchiorre,* M. Marigo,* A. Carlone, G. Bartoli
Angew. Chem. Int. Ed. **2008**, *47*, 6138-6171 (**REVIEW**) [link]

41. **A Novel Organocatalytic Tool for the Iminium Activation of α,β-Unsaturated Ketones**
G. Bartoli, P. Melchiorre
Synlett **2008**, 1759-1771 (**Invited Personal Account**) [link]

40. **Multicomponent Domino Reaction Promoted by $Mg(ClO_4)_2$: Highly Efficient Access to Functionalized 1,4-Dihydropyridines**
G. Bartoli, M. Bosco, P. Galzerano, R. Giri, A. Mazzanti, P. Melchiorre, L. Sambri
Eur. J. Org. Chem. **2008,** 3970-3975

39. **Quaternary Stereogenic Carbons in Complex Molecules by an Asymmetric Organocatalytic Triple-Cascade Reaction**
O. Penon, A. Carlone, A. Mazzanti, M. Locatelli, L. Sambri, G. Bartoli, P. Melchiorre
Chem. Eur. J. **2008**, *14*, 4788-4791 [link]

38. **Magnesium perchlorate as efficient Lewis acid for the Knoevenagel condensation between β diketones and aldehydes**
G. Bartoli, M. Bosco, A. Carlone, R. Dalpozzo, P. Galzerano, P. Melchiorre, L. Sambri
Tetrahedron Lett. **2008,** *49*, 2555-2557

37. **Organocatalytic Asymmetric Sulfa-Michael Addition to α,β-Unsaturated Ketones**
P. Ricci, A. Carlone, G. Bartoli, M. Bosco, L. Sambri, P. Melchiorre
Adv. Synth. Catal. **2008**, *350*, 49-53 [link]

36. **Magnesium Perchlorate as Efficient Lewis Acid: A Simple and Convenient Route to 1,4 Dihydropyridines**
G. Bartoli, K. Babiuch, M. Bosco, A. Carlone, P. Galzerano, P. Melchiorre, L. Sambri
Synlett **2007**, 2897-2901

35. **Organocatalytic Asymmetric β-Hydroxylation of α,β-Unsaturated Ketones**
A. Carlone, G. Bartoli, M. Bosco, F. Pescaioli, P. Ricci, L. Sambri, P. Melchiorre,
Eur. J. Org. Chem. **2007,** 5492-5495 [link]
Highlighted in *Synfact* 2008, 98

34. **Organocatalytic Asymmetric α-Selenenylation of Aldehydes**
M. Tiecco, A. Carlone, S. Sternativo, F. Marini, G. Bartoli, P. Melchiorre,
Angew. Chem. Int. Ed. **2007**, *46*, 6882-6885 [link]

33. **Organocatalytic Asymmetric Hydrophosphination of α,β-Unsaturated Aldehydes**
A. Carlone, G. Bartoli, M. Bosco, L. Sambri, P. Melchiorre,
Angew. Chem. Int. Ed. **2007**, *46*, 4504-4506 [link]
Highlighted in *Synfact* 2007, 760

32. **Reaction of Dicarbonates with Carboxylic Acids Catalyzed by Weak Lewis Acids: General Method for the Synthesis of Anhydrides and Esters**
G. Bartoli, M. Bosco, A. Carlone, R. Dalpozzo, E. Marcantoni, P. Melchiorre, L. Sambri
Synthesis **2007**, 3489-3496

31. **Organocatalytic Asymmetric Friedel-Crafts Alkylation of Indoles with Simple α,β-Unsaturated Ketones**
G. Bartoli, M. Bosco, A. Carlone, F. Pesciaioli, L. Sambri, P. Melchiorre,
Org. Lett. **2007,** *9*, 1403-1405 [link]
Highlighted in *Synfact* 2007, 542

30. **Organocatalytic asymmetric hydrophosphination of nitroalkenes**
G. Bartoli, M. Bosco, A. Carlone, M. Locatelli, A. Mazzanti, L. Sambri, P. Melchiorre,
Chem. Commun. **2007**, 722-724 [link]
Highlighted in *Synfact* 2007, 316

Publications as a Postdoc

29. **Taking Up the Cudgels for Perchlorates: Uses and Applications in Organic Reactions under Mild Conditions**
G. Bartoli, M. Locatelli, P. Melchiorre, L. Sambri*
Eur. J. Org. Chem. **2007,** 2037-2049

28. **Alcohols and Di-*tert*-butyl Dicarbonate: How the Nature of the Lewis Acid Catalyst May Address the Reaction to the Synthesis of *tert*-Butyl Ethers**
G. Bartoli*, M. Bosco, A. Carlone, R. Dalpozzo, M. Locatelli, P. Melchiorre, L. Sambri
J. Org. Chem. **2006**, *71*, 9580-9588

27. **A Simple Method of Protection of Hydroxy Compounds as O-Boc Derivatives under Lewis Acid Catalysis**
G. Bartoli*, M. Bosco, A. Carlone, R. Dalpozzo, M. Locatelli, P. Melchiorre, P. Palazzi, L. Sambri
Synlett **2006**, 2104-2108

26. **Organocatalytic Asymmetric Conjugate Addition of 1,3-Dicarbonyl Compounds to Maleimides**
G. Bartoli*, M. Bosco, A. Carlone, A. Cavalli, M. Locatelli, A. Mazzanti, P. Ricci, L. Sambri, P. Melchiorre*
Angew. Chem. Int. Ed. **2006**, *45*, 4966-4970 - Selected as a HOT Paper [link]
Highlighted in *Synfact* 2006, 953

25. **A new Mild, General and Efficient Route to Aromatic Ethyl Carbonates in Solvent Free Conditions Promoted by Magnesium Perchlorate**
G. Bartoli, M. Bosco, A. Carlone, M. Locatelli, E. Marcantoni, P. Melchiorre, P. Palazzi, L. Sambri
Eur. J. Org. Chem. **2006**, 4429-4434

24. **tert-Butyl Ethers: Renaissance of an Alcohol Protecting Group. Facile Cleavage with Cerium(III) Chloride/Sodium Iodide**
G. Bartoli*, M. Bosco, A. Carlone, M. Locatelli, E. Marcantoni, P. Melchiorre, L. Sambri
Adv. Synth. Catal. **2006**, *348*, 905-910

23. **Solvent-Free Carbon-Oxygen Bond Formation Catalysed by $CeCl_3 \cdot 7H_2O$/NaI: Tetrahydropyranylation of Hydroxy Groups**
G. Bartoli*, R. Giovannini, A. Giuliani, E. Marcantoni, M. Massaccesi, P. Melchiorre, M. Paoletti, L. Sambri
Eur. J. Org. Chem. **2006,** 1476-1482

22. **Allylation of Aldehydes Promoted by the Cerium(III) Chloride Heptahydrate/Sodium Iodide System: the Dependence of Regio- and Stereocontrol on the Reaction Conditions**
G. Bartoli*, A. Giuliani, E. Marcantoni, M. Massaccesi, P. Melchiorre, L. Sambri
Adv. Synth. Catal. **2005**, *347*, 1673-168

21. **Organocatalytic Asymmetric α-Halogenation of 1,3-Dicarbonyl Compounds**
G. Bartoli,* M. Bosco, A. Carlone, M. Locatelli, P. Melchiorre,* L. Sambri
Angew. Chem. Int. Ed. **2005**, *44*, 6219-6222 [link]

20. **Direct Catalytic Synthesis of Enantiopure 5-Substituted Oxazolidinones From Racemic Terminal Epoxides**
G. Bartoli,* M. Bosco, A. Carlone, M. Locatelli, P. Melchiorre,* L. Sambri
Org. Lett. **2005,** *7*, 1983-1985 [link]

19. **Unusual and Unexpected Reactivity of *t*-Butyl Dicarbonate (Boc_2O) with Alcohols in the Presence of Magnesium Perchlorate. A New and General Route to *t*-Butyl Ethers**
G. Bartoli*, M. Bosco, M. Locatelli, E. Marcantoni, P. Melchiorre, L. Sambri
Org. Lett. **2005,** *7*, 427-430

18. **Highly Efficient Solvent-Free Condensation of Carboxylic Acids with Alcohols Catalysed by Zinc Perchlorate Hexahydrate, $Zn(ClO_4)_2 \cdot 6H_2O$**
G. Bartoli*, J. Boeglin, M. Bosco, M. Locatelli, M. Massaccesi, P. Melchiorre, L. Sambri
Adv. Synth. Catal. **2005**, *347*, 33-38.

17. **Asymmetric Catalytic Synthesis of Enantiopure *N*-Protected 1,2-Amino Alcohols**
G. Bartoli,* M. Bosco, A. Carlone, M. Locatelli, P. Melchiorre,* L. Sambri
Org. Lett. **2004,** *6*, 3973-3975 [link]
16. **A Lewis Acid-Mediated Protocol for the Protection of Aryl Amines as their Boc-Derivatives**
G. Bartoli*, M. Bosco, M. Locatelli, E. Marcantoni, M. Massaccesi, P. Melchiorre, L. Sambri
Synlett **2004**, 1794-1798

15. **Asymmetric Aminolysis of Aromatic Epoxides: A Facile Catalytic Enantioselective Synthesis of *anti*-β-Amino Alcohols**
G. Bartoli,* M. Bosco, A. Carlone, M. Locatelli, M. Massaccesi, P. Melchiorre,* L. Sambri
Org. Lett. **2004,** *6*, 2173-2176 [link]

14. **$Zn(ClO_4)_2 \cdot 6H_2O$ as a Powerful Catalyst for the Conversion of β-Ketoesters into β-Enamino Esters**
G. Bartoli*, M. Bosco, M. Locatelli, E. Marcantoni, P. Melchiorre, L. Sambri
Synlett **2004**, 239-242

13. **Highly Stereoselective Reduction of β-Keto Amides: The First General and Efficient Approach to *N*-mono and non-Substituted *anti*-α-Alkyl β-Hydroxy Amides**
G. Bartoli*, M. Bosco, E. Marcantoni, P. Melchiorre, S. Rinaldi, L. Sambri
Synlett **2004**, 73-76

Publications as a PhD Student

12. **Kinetic Resolution of Epoxides via C-C Bond Forming Reaction. Highly Enantioselective Addition of Indoles to *cis*, *trans*, and *meso* Aromatic Epoxides Catalysed by Cr(Salen) Complexes**
M. Bandini, P. G. Cozzi, P. Melchiorre, A. Umani-Ronchi
Angew. Chem. Int. Ed. **2004**, *43*, 84-87 [link]

11. **Direct Enantioselective Michael Addition of Aldehydes to Vinyl Ketones Catalyzed by Chiral Amines**
P. Melchiorre, K. A. Jørgensen
J. Org. Chem. **2003**, *68*, 4151-4157 [link]

10. **Catalytic enantioselective conjugated addition of indoles to simple α,β-unsaturated ketones**
M. Bandini, M. Fagioli, P. Melchiorre, A. Melloni, A. Umani-Ronchi
Tetrahedron Lett. **2003,** *44*, 5843-5846

9. **A Convenient Catalytic Procedure for the Addition of Trimethylsilyl Cyanide to Functionalized Ketones, Mediated by $InBr_3$ – Insight into the Reaction Mechanism**
M. Bandini, P. G. Cozzi, A. Garelli, P. Melchiorre, A. Umani-Ronchi
Eur. J. Org. Chem. **2002,** 3243-3249

8. **Indium(III) Bromide- Catalyzed the Regio- and Stereoselective Ring–Opening of Aromatic Epoxides with Indoles**
M. Bandini, P. G. Cozzi, P. Melchiorre, A. Umani-Ronchi
J. Org. Chem. **2002**, *67*, 5386-5389

7. **A Practical Indium Tribromide Catalysed Addition of Indoles to Nitroalkenes in Aqueous Media**
M. Bandini, P. Melchiorre, A. Melloni, A. Umani-Ronchi
Synthesis **2002**, 1110-1114

6. **Sequential One-pot $InBr_3$-Catalyzed 1,4- then 1,2- Nucleophilic Addition to Enones**
M. Bandini, P. G. Cozzi, M. Giacomini, P. Melchiorre, S. Selva, A. Umani-Ronchi
J. Org. Chem. **2002**, *67*, 3700-3704

5. **Chemo- and enantioselective catalytic addition of propargyl chloride to aldehydes promoted by [Cr(Salen)] complexes**
M. Bandini, P. G. Cozzi, P. Melchiorre, R. Tino, A. Umani-Ronchi
Tetrahedron: Asymmetry **2001,** *12*, 1063-1069

4. **Cr(Salen)-Catalyzed Addition of 1,3-Dichloropropane to Aromatic Aldehydes. A Simple Access to Active Vinyl Epoxides**
M. Bandini, P. G. Cozzi, P. Melchiorre, S. Morganti, A. Umani-Ronchi
Org. Lett. **2001**, *3*, 1153 -1155

3. **Indium tribromide: a highly effective catalyst for the addition of trimethylsilyl cyanide to α-hetero-substituted ketones**
M. Bandini, P. G. Cozzi, P. Melchiorre, A. Umani-Ronchi
Tetrahedron Lett. **2001,** *42*, 3041 – 3043

2. **Synthesis and Binding Activity of Endomorphin-1 Analogues Containing β-Amino Acids**
G. Cardillo, L. Gentilucci, P. Melchiorre, S. Spampinato
Bioorg. Med. Chem. Lett. **2000,** *10*, 2755 - 2758

1. **The First Catalytic Enantioselective Nozaki-Hiyama Reaction**
M. Bandini, P. G. Cozzi, P. Melchiorre, A. Umani-Ronchi
Angew. Chem. Int. Ed. **1999,** *38*, 3357-3359 - Selected as a **VIP Paper** [link]

BOOKS & CHAPTERS

1) G. Bartoli, P. Melchiorre
Chapter 2 "Michael Addition" in: ***Catalytic Asymmetric Friedel-Crafts Alkylations***,
Eds. A. Umani-Ronchi, M. Bandini, Wiley-VCH, 2009, pp 49-67.

2) P. Melchiorre,
Chapter **1.1.8** "Iminium Catalysis of Enals and Enones with Primary Amines"
in ***Asymmetric Organocatalysis - Science of Synthesis Reference Library,***
Editor: Benjamin List, Thieme, **2012**, pp 403-438

3) René Tannert, Antonio Moran, and Paolo Melchiorre,
"Three or More Components Reactions (Single Catalyst Systems)"
in ***Comprehensive Enantioselective Organocatalysis, Volume 3***
Editor: Peter Dalko, Wiley-VCH, **2013,** pp 1285-1332

4) E. Arceo, P. Melchiorre,
Chapter **8.03** "Reduction of C=N to CHNH by Hydride Delivery from C"
In ***Comprehensive Organic Synthesis 2nd Edition,***
Editors: Gary A. Molander and Paul Knochel (eds.) - Elsevier, **2014**, pp 151-197

5) John J. Murphy, Mattia Silvi, and Paolo Melchiorre,
Chapter **8.03** "Reduction of C=N to CHNH by Hydride Delivery from C"
In ***Lewis Base Catalysis in Organic Synthesis,***
Editors: E. Vedejs and S. Denmark - Wiley-VCH, **2016**, *in press*

PATENT

1) "PROCESS FOR PREPARING CINCHONA ALKALOID DERIVATIVES"
Patent application number EP12382291 (July 2012)
The patent describes an effective way to prepare new organocatalysts derived from cinchona alkaloids, which are now available at STREM Chemicals Inc.

PhD thesis (defense April 2003)

"*Catalytic and Stereoselective Processes in Organic Synthesis*"

University of Bologna, Italy.

Research Funding

Research Projects (selected examples):

ERC Consolidator Grant*, grant agreement no. 681840*
CATA-LUX - Light-Driven Asymmetric Organocatalysis
Funding agency: ERC (European Research Council)
Period: from 1-Nov-2016 till 30-Oct-2021
Amount: 2.000.000€
Role: Principal Investigator

H2020-MSCA-ITN-2016, *grant agreement no. 722591*
PHOTOTRAIN
Funding agency: MSCA-ITN
Period: from 1-Nov-2016 till 30-Oct-2020
Amount: 430.000€

CTQ2016-75520-P (subprograma BQU)
PHOTO-ORGANO CAT - Making Biologically Relevant Chiral Molecules with Light
Funding agency: Proyectos de I+D+i 2016 - Ministerio de Educación y Ciencia (MICINN), España
Period: from 1-Jan-2017 till 31-Dec-2019
Amount: 210.000€
Role: Principal Investigator

ERC Starting Grant*, grant agreement no. 278541*
ORGA-NAUT - Exploring Chemical Reactivity with Organocatalysis
Funding agency: ERC (European Research Council)
Period: from 1-Nov-2011 till 30-Oct-2016
Amount: 1.500.000€
Role: Principal Investigator

CTQ2013-45938-P (subprograma BQU)
VINYLOGOUS ORGANO-CASCADE CATALYSIS
Funding agency: Proyectos de I+D+i 2013 - Ministerio de Educación y Ciencia (MICINN), España
Period: from 1-Jan-2014 till 31-Dec-2016
Amount: 169.000€
Role: Principal Investigator

CTQ2010-15513 (subprograma BQU)
Organo-Cas Cat
Funding agency: Proyectos de I+D+i 2010 - Ministerio de Educación y Ciencia (MICINN), España
Period: from 1-Jan-2011till 31-Dec-2013
Amount: 148.000€
Role: Principal Investigator

Research Contracts (selected examples):

Postdoctoral fellowships

Marie Curie H2020-MSCA-IF-2015 agreement no. 702405
PHOTO ORGANO-GOLD
Funding agency: REA (Research Executive Agency), EU
Period: from 1-May-2016 till 30-Apr-2018
Amount: 158.121€
Name of the Fellow: Dr. Zhong-Yan Cao

Marie Curie H2020-MSCA-IF-2014 agreement no. 658980
Organo-Gold Cat
Funding agency: REA (Research Executive Agency), EU
Period: from 1-Jun-2015 till 31-May-2017
Amount: 158.121€
Name of the Fellow: Dr. Charlie Verrier

Forschungsstipendien für promovierte Nachwuchswissenschaftler (Postdoc- Programm)
Nr.: 91509740
Control of Remote Stereochemistry in the Synthesis of Complex Molecules by Means of Vinylogous Organocascade Catalysis
Funding agency: DAAD German Academic Excange Service
Period: from 1-Aug-2013 till 31-Jul-2014
Name of the Fellow: Dr. Nora Hofmann

Marie Curie FP7-PEOPLE-2010-IIF agreement no. 273088
Organo-Cas Cat
Funding agency: REA (Research Executive Agency), EU
Period: from 25-Apr-2011 till 24-Apr-2013
Amount: 175.000€
Name of the Fellow: Dr. Yankai Liu

Juan de la Cierva. JCI-2011-10793
Developing new organocatalytic approaches to chemical synthesis using novel reactivity concepts
Funding agency: Ministerio de Educación y Ciencia, España
Period: from 3-Jan-2011 till 10-Nov-2013
Name of the Fellow: Dr. Antonio Moran

PhD fellowships

3 FPU Fellowships Formación de Profesorado Universitario (FPU-MED, Grant agreements AP2009-0950, AP2010-1963, and FPU13/02402)
3 FPI Fellowships Formación e Incorporación de Investigadores (**FPI**). *Funding agency:* Ministerio de Educación y Ciencia, España.

Invited Presentations at Meetings and Symposia

61. Photocatalysis in Organic Synthesis Meeting. Goteborg (Sweden). November 2017.
60. Le Giornate di Chimica Organica a Pavia – Pavia (Italy). October 2017
59. GECO 58 (Groupe d'etude deChimie Organique) – Dinard (France). August 2017
58. 36th Biannual Meeting of the Spanish Royal Chemical Society – Sitges (Spain). June 2017
57. 18th Netherlands' Catalysis and Chemistry Conference – Noordwijkerhout (Netherlands). March 2017
56. *Japanese-Spanish Symposium on Modern Synthetic Methodology* – Gijon (Spain). April 2017
55. Chemical Photocatalysis Seminar – Regensburg (Germany). March 2017
54. Photocatalysis-Afternoon-Symposium – Munster (Germany). January 2017
53. Athens International Catalysis Symposium - Athens (Greece). November 2016
52. 12th International Symposium on Organic Free Radicals, ISOFR 12 - Shanghai (China). October 2016
51. 6ª Jornadas Red CASI, Palma de Mallorca (Spain). October 2016
50. JCO 2016: Journées de Chimie Organique – Paris (France). September 2016
49. III US-Spain Symposium in Asymmetric Chemical Synthesis and Catalysis – Bilbao (Spain). May 2016
48. VI EWDSy: Sixth European Workshop in Drug Synthesis – Siena (Italy). May 2016
47. ANORCQ 13: Anglo-Norman Organic Chemistry Colloquium – Rouen (France). April 2016
46. DOMINOCAT 1 SYMPOSIUM – Aachen (Germany). September 2015
45. International Conference Synthesis and Catalysis – Evora (Portugal). September 2015
44. 39th Naito Conference "The chemistry of organocatalysts" - Sapporo (Japan). July 2015
43. pre-OMCOS mini-Symposium – ICIQ - Tarragona (Spain). June 2015
42. Bilateral Symposium Technion-ICIQ – Tarragona (Spain). February 2015
41. XIV Sigma-Aldrich Young Chemists Symposium (SAYCS 2014) – Riccione (Italy). October 2014
40. 2nd Young Mediterranean Research Workshop 2014 - Marseille (France). October 2012
39. 5ª Jornadas Red CASI, Palma de Mallorca (Spain). October 2014
38. Ramón Areces Scientific Symposium "Chemistry: answers for a better world" – Madrid. Oct 2014
37. 4th Brazil-Spain Workshop – San Sebastián (Spain). July 2014

36. 49th Bürgesntock Conference on Stereochemistry, Brunnen (***moderator***) – May 2014
35. Asymmetric Organocatalysis; Challenges and Innovations, Oxford (UK) - April 2014
34. Congress of the Chemical Society of Japan, Nagoya (Japan) - JSPS Fellowship – March 2014
33. ZING Asymmetric Synthesis Conference, Malaga (Spain). February 2014
32. ORCA meeting, Alicante (Spain). October 2013
31. ORCA training school, Alicante (Spain). October 2013
30. ICIQ-UniCat Summer School, Tarragona (Spain). July 2013
29. XXXVIII "A. CORBELLA" SUMMER SCHOOL, Gargnano (Italy). June 2013
28. II Workshop UFI-QOSYC, Bilbao (Spain). April 2013
27. 4ª Jornadas Red CASI, Palma de Mallorca (Spain). October 2012
26. IASOC 2012 – Ischia Advanced School of Organic Chemistry (Italy). September 2012
25. OXFORD – ICIQ BILATERAL MEETING, Oxford (UK). September 2012
24. "Catalysis in Organic Synthesis" (ICCOS-2012), Moscow (Russia). September 2012
23. 3Oth meeting of Slovak and Czech organic chemist, Smolenice (Slovakia). September 2012
22. IUPAC Conference on Green Chemistry (4th ICGC), Foz de Iguaçu (Brazil). August 2012
21. 24 Reunión Bienal del Grupo de Química Orgánica, San Sebastian (Spain). July 2012
20. 15th ICC 2012, Munich (Germany). July 2012
19. COST action, ORCA meeting, Marseille (France). March 2012
18. NEW PERSPECTIVES IN ASYMMETRIC SYNTHESIS 2nd edition **–** Valencia (Spain). Dec 2011
17. NANO-HOST School, University of Zaragoza (Spain). November 2011
16. INTECAT Meeting, Huelva (Spain). October 2011
15. ESOC 2011, Crete (Greece). July 2011
14. ESMEC 2011, Urbino (Italy). June 2011
13. CATAFLU.OR Meeting, Bologna (Italy). February 2011
12. XIV NOST – Organic Chemistry Conference, Goa (India). December 2010
11. INTECAT meeting, ICIQ, Tarragona (Spain). November 2010
10. ESF-COST High-Level Research Conference, Maratea (Italy). September 2010
9. Scuola GIC, Palermo (Italy). September 2010
8. ISOμ 2010, Max Planck Institute, Mülheim (Germany). July 2010
7. BOSS XII, Namur (Belgium). July 2010
6. 2° Microsymposium on Asymmetric Synthesis, Warsaw (Poland). September 2009
5. 1st EUCHEM Organic Division Young Investigator's Workshop, Liblice (Czech Republic). July 2009
4. XXXIV "A. CORBELLA" SUMMER SCHOOL, Gargnano (Italy). June 2009
3. VIII Laboratorio di Metodologie Sintetiche in Chimica Farmaceutica, Siena (Italy). February 2009
2. IASOC 2008 – Ischia Advanced School of Organic Chemistry (Italy). September 2008
1. SISOC 07: 7th Spanish-Italian Symposium – Oviedo (Spain). September 2008

Invited Lectures

65. Syngenta Chemistry lecture 2017 - Stein (Switzerland). October 2017
64. University of Strasbourg, Strasbourg (France). March 2017
63. University of Basel, Basel (Switzerland). March 2017
62. Nanyang Technological University, Singapore. February 2017
61. ICFO - The Institute of Photonic Sciences, Barcelona (Spain). May 2016
60. Leipzig University (Germany). December 2015
59. Manchester University (UK). December 2015
58. University Claude Bernard Lyon 1 – Lyon (France). June 2015
57. Ocean University – Qiangdao (China). May 2015
56. East China Normal University – Shanghai (China). May 2015

55. Hangzhou University – Hangzhou (China). May 2015
54. Central China Normal University – Wuhan (China). May 2015
53. Sichuan University, Wangjiang Campus – Chengdu (China). May 2015
52. Sichuan University, Huaxi Campus – Chengdu (China). May 2015
51. University of Vienna – Vienna (Austria). May 2015
50. Nottingham University – Nottingham (UK). April 2015
49. Universidad del País Vasco – San Sebastian (Spain). December 2014
48. Erdtman Lecture 2014 – Stockholm (Sweden). October 2014
47. Aarhus University, Denmark – July 2014
46. Universitá di Bologna, Italy – June 2014
45. Chimie ParisTech, Paris (France) - May 2014
44. Pierre and Marie Curie University, Paris (France) - May 2014
43. Dr Reddy's Laboratories Ltd, Oxford (UK) - April 2014
42. Nagoya University, Nagoya (Japan) - JSPS Fellowship – March 2014
41. Sumitomo Chemical Company, Osakashi (Japan) - JSPS Fellowship – March 2014
40. Osaka University**,** Osaka (Japan) - JSPS Fellowship – March 2014
39. Kyoto University, Faculty of Science, Kyoto (Japan) - JSPS Fellowship – March 2014
38. Kyoto University, Faculty of Engineering, Kyoto (Japan) - JSPS Fellowship – March 2014
37. Tokyo University of Science**,** Tokyo (Japan) - JSPS Fellowship – March 2014
36. Tokyo University of Agriculture, Tokyo (Japan) - JSPS Fellowship – March 2014
35. Gakushuin University, Tokyo (Japan) - JSPS Fellowship – March 2014
34. Tohoku University, Senday (Japan) - JSPS Fellowship – March 2014
33. Universität Marburg (Germany). January 2014
32. University of Graz, Graz (Austria). January 2014
31. University of Caen, Caen (France). November 2013
30. University of Geneva, Geneva (Switzerland). November 2013
29. Universidad de Sevilla (Spain). October 2013
28. Universitá La Sapienza, Roma (Italia). May 2013
27. Universität Münster (Germany). May 2013
26. EPFL, Lausanne (Switzerland). March 2013
25. University of Namur (FUNDP), Namur (Belgium). November 2012
24. Universidade Federal de São Carlos, (Brazil). August 2012
23. Ludwig Maximilians Universität (LMU), Munich (Germany). July 2012
22. Suzhou University, Suzhou (China). May 2012
21. Fudan University, Shanghai (China). May 2012
20. Shanghai Institute of Organic Chemistry (SIOC), Shanghai (China). May 2012
19. East China Normal University, Shanghai (China). May 2012
18. West China School of Pharmacy, Sichuan University, Chengdu (China). May 2012
17. Peking University, Beijing (China). May 2012
16. CSIC, Madrid (Spain). February 2012
15. Universidad Autónoma de Madrid (Spain). February 2012
14. Universitá Ca' Foscari, Venezia (Italy). November 2011
13. Universidad de Barcelona; Barcelona (Spain). October 2011
12. The Scripps Research Institute, La Jolla (US). August 2011
11. Instituto Universitario Química Organometálica "Enrique Moles"; Oviedo (Spain). May 2011
10. The Institute of Chemical Research of Catalonia (ICIQ), Tarragona (Spain). March 2009
8. Liebig lectureship: Universität Frankfurt an Main (Germany). November 2008
7. Liebig lectureship: Max Planck Institute, Mülheim (Germany). November 2008
6. Liebig lectureship: Universität Regensburg (Germany). November 2008

5. Liebig lectureship: Universität zu Köln (Germany). November 2008
4. Liebig lectureship: Universität Münster (Germany). November 2008
3. Liebig lectureship: Erlangen-Nürberg Universität (Germany). November 2008
2. Liebig lectureship: Techische Universität München (Germany). November 2008
1. OC-Colloquium – Aachen University (Germany). April 2008

Organization of Scientific Events

- Mini-symposium "Lights on Chemistry" – ICIQ, Tarragona, October 2015: 160 participants (info at http://lightsonchemistry.iciq.es/)

- *Japanese-Spanish Symposium on Modern Synthetic Methodology* – Gijon (Spain). April 2017: 150 participants (info at http://sjsmsm.iciq.es/)

Teaching Activities

2007-2009 - Faculty of Industrial Chemistry - University f Bologna (Italy)
Course on "Organic Materials". Credits given: 5

2013-2017 - University Rovira i Virgili (URV) - Tarragona (Spain)
"Stereoselective and Asymmetric Synthesis"; Master in Synthesis and Catalysis; Credits given: 3

May 2009 - Special Course on Asymmetric Organocatalysis – University of Barcelona (Spain) – 24 hours

Prof. Melchiorre has delivered short courses dedicated to PhD students in many International Schools. Some examples as follow:

ORCA training school, Alicante (Spain). October 2013
ICIQ-UniCat Summer School, Tarragona (Spain). July 2013
XXXVIII "A. CORBELLA" SUMMER SCHOOL, Gargnano (Italy). June 2013
IASOC 2012 – Ischia Advanced School of Organic Chemistry (Italy). September 2012
NANO-HOST School, University of Zaragoza (Spain). November 2011
ESMEC 2011, Urbino (Italy). June 2011
Scuola GIC, Palermo (Italy). September 2010
XXXIV "A: Corbella" Summer School – Gargnano (Italy), June 2009
VII Laboratorio di Metodologie Sintetiche in Chimica Farmaceutica – Siena (Italy), February 2009

The number of invitations Prof. Melchiorre has received during the last few years, in order to present the group's achievements (>80 invited lectures in the last 5 years), also indicates his capacity to train young researchers.

Supervised Ph. D. Theses

Dr. David Bastida
Defense: 15-Dec-2015
Title of the Thesis: "Novel Enantioselective Aminocatalytic Processes by means of Vinylogous Reactivity and Photoredox Catalysis"
University: Universidad Rovira i Virgili - Tarragona
Punctuation: Cum Laude

Dr. Mattia Silvi
Defense: 15-Oct-2015
Title of the Thesis: "New Directions in Aminocatalysis: Vinylogy and Photochemistry"
University: Universidad Rovira i Virgili - Tarragona
Punctuation: Cum Laude
Present position: postdoctoral associate at the University of Bristol (UK) – Prof. V. Aggarwal

Dr. Manuel Nappi
Defense: 17-Oct-2014
Title of the Thesis: "Novel Organocatalytic and Photochemical Processes"
University: Universidad Rovira i Virgili - Tarragona
Punctuation: Cum Laude
Present position: postdoctoral associate at the University of Cambridge (UK) – Prof. M. Gaunt

Dr. Xu Tian
Defense: 10-Apr-2014
Title of the Thesis: "New Asymmetric Organocatalytic Processes promoted by *Cinchona*-based Primary Amines"
University: Universidad Rovira i Virgili - Tarragona
Punctuation: Cum Laude
Present position: Assistant Professor at Central South University (CSU) – Changsha (China)

Dr. Carlo Cassani
Defense: 16-Dec-2013
Title of the Thesis: "Aminocatalytic Functionalization of Carbonyl Compounds: a Powerful Strategy for Enantioselective Reaction Development"
University: Universidad Rovira i Virgili - Tarragona
Punctuation: Cum Laude
Present position: postdoctoral associate at the University of Goteborg (Sweden)

Dr. Giulia Bergonzini
Defense: 24-Oct-2013
Title of the Thesis: "Assessing the versatility of organocatalysis as a strategy for enabling novel asymmetric transformations"
University: Universidad Rovira i Virgili - Tarragona
Punctuation: Cum Laude
Present position: postdoctoral associate at the University of Goteborg (Sweden)

Dr. Armando Carlone
Defense: March-2008
Title of the Thesis: "Enantioselective Aminocatalysis: New Reactions and New Directions"
University of Bologna (Italy)
Present position: Research Scientist at Dr. Reddy's Laboratories Ltd (Cambridge, UK)

Current PhD Students

Ana Bahamonde Jimenez (expected 2016)
Giacomo Filippini (expected 2016)
Łukasz Piotr Woźniak (expected 2016)
Luca Buzzetti (expected 2017)
Sara Cuadros (expected 2018)
Giandomenico Magagnano (expected 2018)
Daniele Mazzarella (expected 2020)
Pablo Bonilla (expected 2020)

Supervised Post-doc's and visiting students

Present Postdoctoral fellows:

Dr. Yannick Rey, PhD from ETH, Zürich, Switzerland (Prof. Dr. Ryan Gilmour)

Dr. Alexis Prieto, PhD from University of Lyon, France

Dr. Bertrand Schweitzer-Chaput, PhD from Max-Planck Institut für Kohlenforschung, Mülheim, Germany (Dr. Martin Klussmann)

Dr. Hamish Hepburn, PhD from University of University of Edinburgh, UK (Prof. Dr. Hon Wai Lam)

Dr. Charlie Verrier, PhD from GRENOBLE CEDEX, France (Prof. Dr. Jean-François Poisson)

Dr. Alberto Vega, PhD from University of New Mexico, Mexico (Prof. Dr. Eusebio Juaristi)

Dr. Tamal Ghosh, PhD from Regensburg University, Germany (Prof. Burkhard König)

Dr. Sudipta Raha Roy, postdoc at Technion, Israel (Prof. Ilan Marek)

Past Postdoctoral fellows:

Dr. John Joseph Murphy, PhD from University of Ireland Maynooth, Ireland (Prof. Dr. J. C. Stephens)
Present position: Postdoc at MPI, Mulheim (Germany) with Professor Alois Fustner

Dr. Luca Dell'Amico, PhD from University of Parma, Italy (Prof. Dr. Franca Zanardi)
Present position: Principle Investigator (Ricercatore) at the University of Padova, Italy.

Dr. Suva Paria, PhD from University of Regensburg, Germany (Prof. Dr. Oliver Reiser)
Present position: Postdoc at the University of Kyoto, Japan – Prof. Keiji Maruoka group.

Dr. Sandeep Reddy Kandukuri, PhD from Münster University, Germany (Martin Oestreich)
Present position: Senior Research Scientist in Syngenta, Goa, India.

Dr. Elena Arceo Rebollo, postdoc at UC Berkeley, USA (Robert Bergman)
Present position: R&D Chemist at TCI America Inc. Portland, Oregon, USA

Dr. Nora Hofmann, Postdoc from June 2013 till July 2014 (DAAD German Academic Exchange Service scholarship)

Dr. Indranil Chatterjee – Postdoc from March 2012 till February 2014
Present position: postdoc at TU Berlin University – M. Oestreich Group (Germany).

Dr. Yankai Liu – Marie Curie Fellow from April 2010 till November 2012
Present position: Assistant Professor at Ocean University – Qiangdao, China.

Dr. Igor D. Jurberg – Postdoc from January 2012 till December 2012
Present position: Assistant Professor at the University of Campinas, Brazil.

Dr. Silvia Vera – Postdoc from March 2010 till February 2011
Present position: Associate Researcher at the University of Basque Country, San Sebastian.

Dr. Renè Tannert – Postdoc from February 2012 till January 2013
Present position: Researcher at the German Aerospace Center (DLR), Cologne (Germany).

Erasmus Students:

Miss Denise Cibu
Erasmus student placement under Lifelong learning Programme
LMU Munich (Germany)
Academic year 2012/2013; period of research at ICIQ: from 1/6/13 till 31/8/13

Mr. Quenten Deraedt
Université Notre-Dame de la Paix FUNDP B NAMUR 01 (Belgium)
Erasmus stage 2009/2010: period of research at ICIQ: from 25/1/2010 till 24/4/2010
Subject area 442 ERA 13.3 chemistry

Mr. Alexandre Rossignon
Université Notre-Dame de la Paix FUNDP B NAMUR 01 (Belgium)
Erasmus stage 2012/2013: period of research at ICIQ: from 25/2/2013 till 27/5/2013
Subject area 442 ERA 13.3 chemistry

Visiting PhD students:

Dr. Michele Retini
Università degli Studi di Urbino 'Carlo Bo' – Urbino (Italy)
Fellowship 'Marco Polo' (Italy) for research period abroad
Period of research at ICIQ: from 1/4/11 till 31/10/11

Dr. Elisa Montroni
Alma Mater Studiorum-Università degli di Bologna- Dipertimento di Chimica 'Giacomo Ciamician'
Fellowship 'Marco Polo' (Italy) for research period abroad
Period of research at ICIQ: from 1/2/13 till 31/07/13

Mr. Rodrigo Cesar da Silva
Federal University of Sao Carlos - UFS Car (Brazil)
Fellowship 'FAPESP (0907281-0), (Brazil) for research period abroad
Period of research at ICIQ: from 4/2/13 till 31/10/13

PM as a Member of Ph. D. Committees

2011 Esther Alza Barrios (ICIQ-Universitat Rovira i Virgili) - supervisor Prof. M. Pericas

2012 Andrea Nekane Roig Alba (Universidad de Barcelona) - supervisor Prof. A. Moyano

2013 Rafael Cano Monserrat (Universidad de Alicante, Spain) - supervisor Prof. F. Alonso

2013 Valentina Corvaglia (Università Di Trieste, Italy) - supervisor Prof. D. Bonifazi

2013 Ángel Martínez Castañeda (Universidad de Oviedo, Spain) - supervisor Dr. H. Solla

2013 Miriam Diaz de los Bernardos (ICIQ-Universitat Rovira i Virgili) - supervisor Prof. S. Castillon/Prof. P. W. N. M van Leeuwen

2013 Ana María Cespo Peña (Universidad de Sevilla, Spain) - supervisor Prof. R. Fernández/Prof. J. M. Lassaletta

2014 Lars Krogager Ransborg (Aarhus University, Denmark) - supervisor Prof. Karl A. Jørgensen