

MAURIZIO BENAGLIA was born in Bergamo in 1966.

In 1991 he obtained his Laurea in chemistry, at the University of Milan, Italy, working on the stereoselective 1,3 dipolar cycloadditions of nitrones to chiral allyl ethers.

In 1994 he completed his doctoral studies on the stereoselective synthesis of beta-lactams through condensation of imines to titanium, tin and boron enolates of pyridylthioesters, under the supervision of prof. Mauro Cinquini, at the University of Milan.

In 1995, he was the recipient of a N.A.T.O./CNR postdoctoral fellowship and joined the group of prof. Jay. S. Siegel, at the Chemistry and Biochemistry Department of UCSD, University of California, San Diego where he worked for two years on the stereocontrolled synthesis of supramolecular structures, like double helicates, racks, and grids, useful intermediates for the construction of not trivial topological structures.

In 1997 he moved back to Milan, where he worked as postdoctoral fellow at the Department of Organic and Industrial Chemistry, University of Milan, developing the stereoselective synthesis of polymer supported small organic molecules.

In 2000 he became Assistant Professor at Department of Organic and Industrial Chemistry, University of Milano.

In 2006 he was promoted to Associate Professor at the University of Milano.

After obtaining the habilitation in 2013, he was promoted in 2015 to Full Professor in Organic Chemistry at the Department of Chemistry, University of Milano, Italy.

AWARDS AND PRIZES

In 2001 he won the “**Giacomo Ciamician**” Medal of the Italian Chemical Society.

He has been author of one 50 most cited papers in 2003-2006 years (awarded by Elsevier),

He has been author of one 50 most cited papers in 2006-2009 years (awarded by Elsevier),

He has been author of one of the 20 most cited papers in Organic Letters in 2006-2009 years (awarded by ACS, highlighted in Synfacts 2007).

He has been author of an ACS Editor Choice article (*Org. Process Res. Dev.* **2016**, *20*, 2-25).

He has been author of a paper highlighted in Synfacts 2018 (*Synthesis*. **2018**, DOI: 10.1055/s-0036-1591911).

In 2014 he has won **the award** “Innovation in research”, given by National Consortium of Italian University C.I.N.M.P.I.S.

- He has been **invited plenary speaker** at al 9th Meeting on Stereochemistry (Praga, 2001), 5th Spanish Italian Symposium on Organic Chemistry (Santiago de Compostela, Spain, 2004), “Organocatalysis Symposium” held by Ernst Schering Foundation (Berlin, Germany, 2007), German-Italian-Austrian-French Symposium (Goslar, Germany, 2011), Bilateral Symposium Italy-China, (Padova, Italy, 2014), International Translational Chemistry Conference (Caparica, Lisbon, Portugal, 2015), GIC (Gruppo Interdivisionale Catalisi) (Bressanone 2016), 20th ESOC (European Symposium on Organic Chemistry) (Cologne, Germany July 2017), The First International Conference on Symmetry (Barcellona, Spain, September 2017), FROST (Frontier Organic Synthesis

and Technologies) (Budapest, Hungary, September 2017).

He has been invited speaker in different International Schools, like the Summer School on Organic Synthesis “A. Corbella” e WISPOC (Winter School of Physical Organic Chemistry).

He has been invited participant to the European Network COST Action: ORCA-Organocatalysis CM0905 (2009-2014)

He has been the **Director** of the international school (2014-2017):

ISOS – International Summer School on Organic Synthesis “A. Corbella”, held every year in June at Gargnano (BS), Italy.

He is **Co-founder and Director** of the international school:

ISPROCHEM – International School of Process Chemistry

First edition in March 2017 at Gargnano (BS), Italy. Next edition is scheduled in April 2018.

He has been **Editor** of the Wiley book Recoverable and recyclable catalysts (2009).

He is member of the editorial board of “Molecules” (open access, MDPI journals) and **Guest editor** of two special Issues on Immobilized Catalysts and on Enabling Technologies – Flow chemistry

Since 2014, he is member of the Advisory Board of the start up DexLeChem (Berlin, Germany).

He currently acts as referee for: Angewandte Chemie International Edition, Organic letters, Advanced Synthesis and Catalysis, Journal of American Society, Chemistry A European Journal, Chemical Communication, Journal of Organic Chemistry, Journal of Molecular Catalysis, Tetrahedron Letters, Journal of Catalysis, Organic and Biomolecular Chemistry, European Journal of Organic Chemistry, Tetrahedron, Tetrahedron Asymmetry, New Journal of Chemistry, Journal of Catalysis Communication, Advanced Functional Materials, Synlett, Synthesis, ChemSusChem and ChemCatChem. ACS Catalysis, J. Flow Chem.

METRICS:

He has presented several posters, oral communications, key note and invited lectures at national and international scientific congresses.

He is author of more than **195 publications** (54 papers in the last five years, 2013-2017) on scientific international journals, including four patents, ten review articles and nine book chapters

H Index : 43 (citations: 6226 font: Scopus); H Index : 41 (Average cit. per item 31,65; citations: 5730, font: Web of Science)

TEACHING ACTIVITY

- Course: Organic Chemistry I for the Bachelor degree of Industrial Chemistry
- Lab class of organic chemistry II for the Bachelor degree of Industrial Chemistry
- Course: Catalytic Methodologies in Organic Chemistry for the Master degree in Chemical Sciences and for Industrial Chemistry
- Course: New trends in the synthesis of chiral compounds of industrial interest for the Doctorate Course in Chemical Science and the Doctorate Course in Industrial Chemistry.

He has been tutor or supervisor of eight PhD thesis (and other three currently going), more than 80 thesis for bachelor and Master degrees in chemistry or industrial chemistry.

RESEARCH ACTIVITY:

Major efforts are dedicated to the development of **novel synthetic methodologies** and their application to the synthesis of chiral **products of pharmaceutical interest** and, in general, of

biologically active compounds. The design, discovery and study of chiral catalysts is a central topic of our group; a special attention is devoted to the development of easily available, practical and widely applicable **organocatalysts**. In some projects we take advantage of molecular recognition events to control (stereo)selectivity and we use computational tools to investigate the transition structure geometries and to clarify the reaction mechanisms.

Stereochemistry plays a key role in other projects as well, like the study of stereoselective reactions in water and other **alternative reaction medium**, the synthesis of chiral supramolecular assemblies and the development of **recyclable chiral organic catalysts** and their use in flow chemistry processes.

In continuation of our earlier work on immobilized catalysts the group is extending its activities into technological and engineering aspects. Therefore we focused on developing novel packed-bed and monolithic **catalytic reactors**, exploiting the unique features of such devices in stereoselective transformations in flow processes. We are studying organocatalyzed reactions in mini- and **microreactors under continuous-flow conditions**, but we have also started to use **3D-printing technologies** to build *ad hoc* designed microreactors, exploring different materials to realize new devices for continuous-flow transformations.

We are also involved in a project aimed to the development of biodegradable polymers with controlled macromolecular architecture as new **polyfunctional agents for 19F MR imaging**. The research is highly multidisciplinary at the interface of several fields including organic, polymer, biological, and materials chemistry.

GRANTS

- Coordinator of the MSCA 2018 (Marie Skłodowska Curie Actions) ITN-EID (European Industrial Doctorate) project TECHNOTRAIN (784.5000 euro budget) (2018-2022)
 - Team member of the project FIRB Giovani - Futuro in Ricerca 2010 (codice RBFR10BF5V) “Multifunctional hybrid materials for the development of sustainable catalytic processes” (budget Unimi 326.500 euro).
 - Project financed by Lombardia Region - Bando PON_FESR 2014-2020 – Linea R&S Aggregazioni “Semilavorati nutraceutici e tecnologici fermentati per il miglioramento nutrizionale e sensoriale di prodotti da forno tradizionali e gluten-free” (budget 1.750.00 euro- UNIMI budget: 410.000 – 2017-2019), Unit Coordinator
 - Project financed by Cariplo Foundation “In vivo and in vitro imaging of pro-thrombotic events in brain ischemic injury: focus on mannose-binding lectin and beta2 glycoprotein I” (budget 250.000 – 2015-2017), Unit Coordinator
 - Principal Investigator of a Project financed by Cariplo Foundation “Multifunctional hybrid materials as novel chiral recyclable catalysts for one-pot, multi-step synthesis of structurally complex molecules” (budget 350.000 – 2011-2014),
 - Winner and principal investigator of a Project financed by Cariplo Foundation “Biodegradable polymers with controlled macromolecular architecture as new polyfunctional agents for 19F MR imaging” (budget: 410.000 euro- 2010-2013),
 - Grants from different companies (overall 330.000 euro in 2003-2013).
 - Grants from three different companies in 2013-2017 period: 155.000 euro overall
- Inventor of a patent sold by UNIMI to a German start-up company DeLexChem.

Coordinator of a proposed ITN network per un MSC-EID (European Industrial Doctorate), : (H2020-MSCA-ITN-2015, *STEREOTECH*, evaluated over the threshold (85/100 , threshold

70/100) but not financed; (H2020-MSCA-ITN-2017), *FAST TRACK*, evaluated over the threshold (89/100, threshold 70/100) but not financed.

For the full list of publications see GROUP WEBSITE: <http://users.unimi.it/Benagliagroup/>

Publications

Prof. MAURIZIO BENAGLIA

- 1) R. Annunziata, M. Cinquini, F. Cozzi, P. Giaroni, M. Benaglia.
Diastereo- and Enantioselective Synthesis of 1,2-Diols by Vanadium (II) Promoted Pinacol Cross Coupling
Tetrahedron, **1991**, 47, 5737.
- 2) R. Annunziata, M. Benaglia, M. Cinquini, F. Cozzi, P. Giaroni.
Synthesis of Optically Active 3-(1-Hydroxyalkyl)phthalides by Stereoselective Pinacol Cross Coupling.
J. Org. Chem., **1992**, 57,782.
- 3) M. Benaglia, M. Cinquini, L. Raimondi.
Catalytic Enantioselective Homogeneous Reactions Mediated by Transition Metal Lewis Acids.
Seminars in Organic Synthesis - XVIII Summer School "A. Corbella", **1993**, 155.
- 4) R. Annunziata, M. Benaglia, M. Cinquini, F. Cozzi, F. Ponzini.
Synthesis of β -Lactams of High Enantiomeric Purity by Chiral Ligand Accelerated Osmylation of Racemic 4-(2-Styryl)-azetid-2-ones.
Bioorg. Med. Chem. Lett., **1993**, 3, 2397.
- 5) R. Annunziata, M. Benaglia, M. Cinquini, L. Raimondi.
Electrostatic Effects in 1,3-Dipolar Cycloaddition Reactions to Chiral Allyl Ethers: a Rationale for the Experimentally Observed Diastereoselectivities.
Tetrahedron, **1993**, 49, 8629.
- 6) R. Annunziata, M. Benaglia, M. Cinquini, F. Cozzi, F. Ponzini.
Stereoselective Synthesis of Azetid-2-ones Precursors of Biologically Active *syn*-3-Amino-2-hydroxybutanoic Acids.
J. Org. Chem., **1993**, 58, 4746.
- 7) R. Annunziata, M. Benaglia, M. Cinquini, F. Cozzi, L. Raimondi.
Stereoselective Synthesis of β -Lactams by Condensation of Titanium Enolates of 2-Pyridylthioesters with Imines Bearing a Chiral Auxiliary.
Tetrahedron Lett., **1993**, 34, 6921.
- 8) R. Annunziata, M. Benaglia, M. Cinquini, F. Cozzi, F. Ponzini, L. Raimondi.
Synthesis of β -Lactams by Condensation of Titanium of 2-Pyridylthioesters with Imines. Influence of the Imine Structure on the *trans/cis* Stereoselectivity.
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- 9) R. Annunziata, M. Benaglia, M. Cinquini, F. Cozzi, L. Raimondi.
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- 10) R. Annunziata, M. Benaglia, M. Cinquini, F. Cozzi, L. Raimondi.
Stereoselective Synthesis of β -Lactams by Condensation of Titanium Enolates of 2-Pyridylthioesters with Imines Bearing a Chiral Auxiliary.
Tetrahedron, **1994**, 50, 9471.
- 11) R. Annunziata, M. Benaglia, M. Cinquini, F. Cozzi.
Enantioselective One-pot Synthesis of β -Lactams from Achiral 2-Pyridylthioesters and Aromatic Imines.

- Tetrahedron Lett.*, **1995**, 36, 613.
- 12) R. Annunziata, M. Benaglia, M. Cinquini, F. Cozzi, A. Scolaro.
Stereoselective electrophilic hydroxylation at C-3 of 2-azetidinones.
Gazz. Chim. Ital., **1995**, 125, 65.
 - 13) R. Annunziata, M. Benaglia, M. Cinquini, F. Cozzi, L. Raimondi.
1,3-Dipolar Cycloaddition of Diazomethane to Chiral Baylis-Hillman Adducts: a Rationale for the Observed Diastereoselectivity.
J. Org. Chem., **1995**, 60, 4697.
 - 14) R. Annunziata, M. Benaglia, M. Cinquini, F. Cozzi, V. Molteni, L. Raimondi.
Optically Active Aminoalcohol Promoted Addition of 2-Pyridylthioester Boron Enolates to Imines: Enantioselective One-pot Synthesis of β -Lactams.
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 - 15) R. Annunziata, M. Benaglia, A. Chiovato, M. Cinquini, F. Cozzi.
Highly Stereoselective Synthesis of β -Lactams by Condensation of the Titanium Enolate of a Chiral 2-Pyridylthioester with Chiral Imines.
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 - 16) R. Annunziata, M. Benaglia, M. Cinquini, F. Cozzi, O. Martini, V. Molteni.
Stereoselective One-pot Synthesis of β -Lactams by Reaction of 2-Pyridylthioester with Imines in the Presence of AlBr₃ or EtAlCl₂.
Tetrahedron, **1996**, 52, 2583.
 - 17) C.R. Woods, M. Benaglia, J.S. Siegel, F. Cozzi.
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 - 18) R. Annunziata, M. Benaglia, M. Cinquini and L. Raimondi
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 - 22) R. Annunziata, M. Benaglia, M. Cinquini, F. Cozzi and L. Raimondi
Diastereoselective Synthesis of 1,2-Diphenyl-1,2-Diaminoethanes by Yb(OTf)₃ Accelerated Reductive Coupling of Imines.
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 - 23) M. Benaglia and L. Raimondi.
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 - 24) R. Annunziata, M. Benaglia, M. Cinquini, F. Cozzi and L. Raimondi
The Importance of Electrostatic Interactions in the Stereoselective 1,3-Dipolar Cycloadditions of Nitrones to Chiral Allyl Ethers: an Experimental and Force Field Approach.
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 - 25) M. Benaglia, R. Annunziata, M. Cinquini, F. Cozzi, and S. Ressel
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 - 26) R. Annunziata, M. Benaglia, M. Cinquini, F. Cozzi, F. Montanari, L. Raimondi
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- 28) R. Annunziata, M. Benaglia, M. Cinquini, F. Cozzi, L. Poletti, L. Raimondi and A. Perboni
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- 30) R. Annunziata, M. Benaglia, M. Cinquini, F. Cozzi
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Tetrahedron: Asymmetry **1999**, 10, 4841.
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- 32) M. Benaglia, M. Cinquini, F. Cozzi
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- 35) R. Annunziata, M. Benaglia, M. Cinquini, F. Cozzi, C.R. Woods, J.S. Siegel
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Eur. J. Org. Chem., **2001**, 1045-1048.
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- 38) M. Benaglia, L. Raimondi
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Eur. J. Org. Chem., **2001**, 1033-1043.
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- Synthesis in mesoreactors: Ru(porphyrin)CO-catalyzed aziridination of olefins under continuous flow conditions
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- 180) M. Orlandi, D. Brenna, R. Harms, S. Jost, M. Benaglia
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Org. Process Res. Dev. **2018**, *22*, 430-434 (web published july **2016**, *20*, DOI: 10.1021/acs.oprd.6b00205.
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Continuous-flow synthesis of primary amines: Metal-free reduction of aliphatic and aromatic nitro derivatives with trichlorosilane
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- 185) D. Brenna, M. Benaglia, R. Porta, S. D. Fernandes, A. J. Burke
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- 189) R. Porta, M. Benaglia, R. Annunziata, A. Puglisi, G. Celentano
Solid supported chiral *N*-picolylimidazolidinones: recyclable catalysts for the enantioselective, metal- and H₂-free reduction of imines in batch and in flow mode
Adv. Synth. Catal., **2017**, *359*, 2375-2382.
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Org. Biomol. Chem., **2017**, *15*, 5685-5688.
- 191) E. Massolo, L. Raimondi, M. Benaglia
Metal-free, Stereoselective in batch and in flow synthesis of pharmaceutically relevant chiral amines
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- 192) S. Rossi, M. Ziliani, R. Annunziata, M. Benaglia
Novel chiral bis-phosphoramides as organocatalysts for tetrachlorosilane-mediated reactions
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- 193) S. S. Abubakar, M. Benaglia, S. Rossi, R. Annunziata
Organocatalytic trifluoromethylthiolation of silylenol ethers: batch vs continuous flow reactions

- Catal. Today* **2018**, *308*, 94-101.
- 194) S. Rossi, A. Puglisi, M. Benaglia
Additive Manufacturing Technologies: 3D printing in Organic Synthesis
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- 195) M. Pirola, M. Benaglia, M. E. Compostella, L. Raimondi, A. Puglisi
A continuous flow, two-steps, metal-free process for the synthesis of differently substituted chiral 1,2-diamino derivatives
Synthesis. **2018**, *50*, 1430-1438.
- 196) S. Rossi, A. Puglisi, L. Raimondi, M. Benaglia
Synthesis of alpha-trifluoromethylthio carbonyl compounds: a survey of the methods for the direct introduction of the SCF₃ group on to organic molecules
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Lectures and Oral communications:

- 3° Congresso Nazionale di Chimica Supramolecolare (Rimini, settembre 1997).
“Enantioselective Synthesis of Double Helicates “. (poster)
- 12th International Conference on Organic Synthesis (ICOS-12) (Venezia, luglio 1998).
“ New Polyethylene Glycol Derivatives and their Use in Soluble Supported Synthesis (oral communication)
- 1th International Conference on Chemistry of Antibiotics and Related Microbial Products (ICCA-1, formerly ICSA-6) (Bologna, settembre 1998)
“Soluble Polymer Supported Synthesis of β -Lactams ” (oral communication)
- 11th European Symposium on Organic Chemistry (ESOC-11) (Goteborg, luglio 1999).
“Use of Trichlorotitanium Enolates of β -Hydroxy-Pyridylthioester in a Highly Stereoselective Synthesis of β -Lactams “ (oral communication)
- COST Meeting (Vienna, maggio 2000)
“Soluble Polymer Supported Synthesis of Small Organic Molecules” (oral communication)
- 36th ESF/EUCHEM Conference on Stereochemistry – Burgenstock (Burgenstock, maggio 2001)
“Stereoselective Reactions Promoted by PEG-Supported Catalysts” (poster)
- 9th Meeting on Stereochemistry (Praga, giugno 2001)
“Stereoselective Reactions Promoted by Poly(ethylene glycol)-Supported Chiral Ligands and Catalysts”. (invited lecture)
- XXVII Convegno Nazionale della Divisione di Chimica Organica (Trieste, settembre 2001)
“ Sintesi di Piccole Molecole Organiche, Leganti e Catalizzatori Immobilizzati su Polimero Solubile”(**Invited plenary lecture for Ciamician medal** from Italian Chemical Society)
- COST Meeting (Vienna, aprile 2002)
“Poly(ethylene glycol)-Supported Catalysts: New Efficient Tools for Organic Synthesis” (oral communication)
- XXVII Corso Estivo “A. Corbella” – Seminari di Chimica Organica (Gargnano, giugno 2002)
- The Merck lectureship reunion (Cambridge, settembre 2002)
 - Synthesis in organic chemistry (Cambridge, luglio 2003)
- “New enantiomerically pure phenanthroline and bipyridine macrocycles” (poster)
- 5th Spanish Italian Symposium on Organic Chemistry (Santiago de Compostela, Spagna, settembre 2004).
“ New chiral heterocycles as ligands and organic catalysts for enantioselective reactions”. (invited lecture)
- 40th ESF/EUCHEM Conference on Stereochemistry – Burgenstock (Burgenstock, aprile 2005)
“Enantioselective Synthesis of Propargyl Amines Promoted by Chiral Bis-Imines Copper (I) Complexes”(flash presentation)
- Conference on Catalysis and Biocatalysis in Green Chemistry (Cambridge, dicembre 2005)
“Enantioselective Allylation of Aldehydes with Allyltrichlorosilane Promoted by New Chiral Organocatalysts.” (oral communication)
- Ciclo di lezioni presso GSK (GlaxoSmithKline) (Verona, febbraio 2006)

“Catalisi Supportata”

- Conferenza COFEM (Giornate di Chimica Fisica Organica e Meccanicistica (Catania, 2006)

“Bipyridine and terpyridines-based systems for the synthesis of supramolecular devices”

(Plenary lecture)

- “Organocatalysis Symposium” held by Ernst Schering Foundation (Berlin, Germany, 2007).

(Plenary lecture)

- Conferences in Nichem (2008), Bayer (Frankfurt, 2008), Zambon (2007 e 2008), Roche (Basel, 2009), “Reazioni stereoselettive promosse da catalizzatori organici e organometallici”

(invited lectures)

- Conference at CNR Bologna (2009) Recyclable catalysts **(invited lecture)**
- Conference at IUPAC congress (Torino, 2007) Stereoselective reactions in water
- ICSSE International symposium on Environmental Chemistry (Stockolm, 2009) “Lewis bases promoted stereoselective reduction of ketoimines” (Short presentation)

- 45th ESF/EUCHEM Conference on Stereochemistry – Burgenstock (Burgenstock, may 2010)

“Stereoselective direct aldol-type reaction catalyzed by chiral biheteroaromatic diphosphine oxides” (flash presentation)

- EuChemS 2010 – (Nurberg, Germany, 2010)

“Organocatalytic direct aldol-type reaction catalyzed by chiral diphosphine oxides”

(oral presentation)

- COST meeting (Action ORCA, Organocatalysis) (Berlin, Germany, 2011) (oral presentation)
- WISPOC (European Winter School in Physical Organic Chemistry) (Bressanone, 2011): “Recoverable and recyclable catalysts” (lecture)

- Austrian-German-French-Italian-Hungarian meeting (Goslar, Germany, 2011)

“Novel chiral Lewis bases in organocatalytic reactions” **(Plenary lecture)**

- Conference at Congresso Nazionale della Società Chimica Italiana (Lecce, 2011)
“Water Soluble Functionalized Polymers as New ¹⁹F MRI agents “ (oral presentation)

- COST meeting (Action ORCA, Organocatalysis) (Marseille, France, 2012) (oral presentation)

- 47th ESF/EUCHEM Conference on Stereochemistry – Burgenstock (Burgenstock, may 2012)

“Stereoselective reactions promoted by supported chiral organic catalysts” (poster)

- ICCOS (International Congress of Catalysis in Organic Synthesis), Moscow, Russia, 2012
“Polymethylhydrosiloxane-supported chiral organic catalysts”

- COST meeting (Action ORCA, Organocatalysis) (Rome, Italy, 2012) **(invited lecture)**

- Conference at University of Bologna (2013) New chiral catalysts and novel synthetic methodologies **(invited lecture for PhD school)**

- COST meeting (Action ORCA, Organocatalysis) (Amsterdam, Holland, 2013) **(invited lecture)**

- Conference at University of Piemonte Orientale (Novara, 2013) New chiral catalysts and novel synthetic methodologies (**invited lecture for PhD school**)

- International Conference on Flow Chemistry (Munich 2013)

“Supported Chiral imidazolidinones for Diels Alder reactions in flow”

- Conference at Congresso Nazionale della Società Chimica Italiana (Sassari, 2013)

“Supported chiral catalysts in flow chemistry “ (oral presentation)

- University of Evora, Portugal “Stereoselective organocatalytic reactions in batch and under continuous-flow conditions” (2014) **(Invited lecture)**

- COST meeting (Action ORCA, Organocatalysis) (Palermo, Italy, 2014) **(invited lecture)**

“Stereoselective catalytic synthesis of chiral trifluoromethyl aryl and alkyl amines”

- XX Consorzio Interuniversitario Nazionale “Metodologie e processi innovativi di sintesi” – C.I.N.M.P.I.S. (Bari, settembre 2014)

“Chiral catalytic reactors for stereoselective transformations under continuous flow conditions”

(invited plenary lecture per il premio “Innovazione alla ricerca” (2014).

- University of Regensburg, Germany “Organocatalysis in batch and under continuous-flow conditions” (May, 2015) **(Invited lecture)**

- Bilateral Symposium Italy-China, University of Padova, Italy (Padova, Italy, April 2014)
“Stereoselective synthesis in batch and in flow” **(invited lecture)**

- Conference at DexLeChem company, Germany “New trends in organocatalytic transformations”

(March, 2015) (**Invited lecture**)

- University of Paris 6, France “Catalytic reactions in batch and under continuous-flow conditions” (February, 2015) (**Invited lecture** for Phd School)

- International Translational Chemistry Conference (Caparica, Lisbon, Portugal, December 2015) “Stereoselective organocatalytic reactions under continuous-flow conditions” (**keynote lecture**)

- University of Evora, Portugal “Organocatalysis and flow chemistry” (Evora, Portugal, February 2016) (**Invited lecture**)

- ICIQ Tarragona, Spain “Enabling technologies-assisted organocatalysis: continuous flow stereoselective reactions in (micro)-mesoreactors and catalytic reactors ” (Tarragona, Spain, May 2016) (**Invited lecture**)

- GIC (Gruppo Interdivisionale Catalisi), “Batch and flow chemistry: new opportunities in stereoselective organocatalysis“ Bressanone, September 2016 (**Invited lecture**)

- FIRB meeting “Catalytic stereoselective reactions in micro- and mesoreactors” Palermo, Nov. 2016.

- International Conference on Green Chemistry “Organocatalysis and flow chemistry” (La Rochelle, France, May 2017) (**keynote lecture**)

- ESOC (European Symposium on Organic Chemistry) “Enabling technologies-assisted stereoselective organic synthesis” (Cologne, Germany July 2017) (**Invited lecture**)

- The First International Conference on Symmetry “Batch and flow asymmetric catalysis for the synthesis of chiral active pharmaceutical compounds” (Barcellona, Spain, September 2017) (**Invited lecture**)

- FROST (Frontier Organic Synthesis and Technologies) “Catalytic and 3D-printed reactors: stereoselective in-flow synthesis of chiral active pharmaceutical compounds” (Budapest, Hungary, September 2017) (**Plenary lecture**)

- Green and Sustainable Conference on Green Chemistry – Elsevier “Flow chemistry, organocatalysis and 3D-printing: valuable tools in the synthesis of chiral compounds” (Berlin, Germany, May 2018) (oral communication)

PBS International Conference - “Catalysis in batch and flow” – (Barcellona, Spain, December 2018) (**keynote lecture**)