

CURRICULUM VITAE and STUDIORUM
(including list of publications)

Prof. Dr. Barbara Milani

University of Trieste
Department of Chemical and Pharmaceutical Sciences

(update on September 2021)

Positions occupied:

10/2014 – present **Associate Professor of Inorganic Chemistry**
Permanent Position
Università di Trieste
Dipartimento di Scienze Chimiche e Farmaceutiche

4/1998 – 9/2014 **Assitant Professor of Inorganic Chemistry**
Permanent Position
Università di Trieste
Faculty of Science

Education:

11/1994 – 12/1997 **Post doc**
Università di Trieste
Dipartimento di Scienze Chimiche
Supervised by: Prof. Giovanni Mestroni

11/1991 – 10/1994 **Ph. D. Student**
Università di Trieste
Dipartimento di Scienze Chimiche
Tutor: Prof. Giovanni Mestroni
Ph. D. Thesis title: “Palladium complexes with bidentate nitrogen-donor chelating ligands: synthesis, characterization and catalytic activity”

5/1990 – 5/1991 **Industrial Fellowship**
Sponsored by Istituto Guido Donegani – ENICHEM Novara
Research topic: “Reductive carbonylation of nitroaromatic compounds”

12/1989 **“Laurea” in Chemistry**
Università di Trieste
Mark: 110/110 cum laude
Title of the graduation thesis: “Catalytic oxidation of thioether to sulfoxide by molecular oxygen, promoted by ruthenium(II) complexes”
Tutor: Prof. Giovanni Mestroni

Studies, Research and Teaching Activity out of Italy:

- 04/2019, 03/2017, 04/2014, 03/2012 **ERASMUS exchange teaching staff mobility at University Rovira i Virgili in Tarragon (Spain)**
1 week Teaching 8 h topic Metal carbonyls to student of Chemistry – Bachelor level
- 05/2014 **Visiting Professorship at Université Pierre et Marie Curie at Paris**
1 month Teaching “Catalysis for Polymerization” PhD Students
- 10/2010 **Visiting Professorship at Ecole Nationale Supérieure des Ingénieurs en Arts Chimiques et Technologiques – Institut National Polytechnique de Toulouse**
1 month Teaching “Catalysis for Polymerization” Students of Chemistry Master Level
- 6/2001, 9/2000 **Studies and Research Activity at University of Amsterdam**
Supervisor: Prof. Dr. Cornelis J. Elsevier
- 4-5/2002, 7-9/1993 **Studies and Research Activity at ETH in Zürich**
Supervisor: Prof. Giambattista Consiglio

Titles

- National Abilitation for Full Professor in Inorganic Chemistry (April 2017)
- National Abilitation for Associate Professor in Inorganic Chemistry (December 2013)
- National Abilitation for Associate Professor in Industrial Chemistry (December 2013)
- Accreditation for Advanced Research in Catalunya (March 2010)
- Ph. D. in Chemistry (October 1995)
- Abilitation for teaching Chemistry in the High School (February 1995)
- Laurea in Chemistry (December 1989)

Principal Investigator and scientist in charge of the following research grants***Local Research Grants***

- 2019-2021 **Participant to Research Fund of Trieste University – FRA2018**
“INorganic chemistry for the Sustainable DEvelopment”
- 2016-2018 **Participant to Research Fund of Trieste University – FRA2015**
“Small molecules: keys for sustainable development”
- 2014-2015 **Participant to Research Fund of Trieste University – FRA2013**
“Design and development of new coordination compounds having specific functionality”
- 2012-2013 **Participant to Research Fund of Trieste University – FRA2011**
“Application of ¹⁹F NMR spectroscopy for multidisciplinary studies”
- 2009-2010 **Scientist in charge of a University grant** for a Post doc fellowship
- 2009 **Recipient of a donation** of 10000 € by Fondazione Benefica Kathleen Foreman Casali specifically dedicated to buy a tinyclave reactor
- 2007-2008 **Scientist-in-charge for a Post doc position**
“Regio- and stereocontrolled polymerization reactions catalyzed by late transition metals”

National Research Grants:

- 2016-2020 **Participant to one Research Unit of the Italian Project PRIN 20154X9ATP_005**
Project Title: Towards a Sustainable Chemistry: Design of Innovative Metal-Ligand Systems for Catalysis and Energy Applications.
Central Coordinator: Prof. Alberto Albinati Università di Milano
- 2016 **Participant to Progetti Competitivi**
Subproject title: Development of homogeneous catalysts for the CO₂/cyclic ether copolymerization
Central Coordinator: National Interuniversity Consortium for Chemical Reactivity and Catalysis (CIRCC)
- 2014 **Participant to Progetti Competitivi**
Subproject title: Catalysis for polymerization and polymeric materials
Central Coordinator: National Interuniversity Consortium for Chemical Reactivity and Catalysis (CIRCC)
- 2008-2010 **Principal Investigator of the Research Unit of the Italian Project PRIN 2007HMTJWP_002**
Project title: Catalysis for chemo- and stereocontrolled polymerization: powerful tool for the synthesis of new polymeric materials
Central Coordinator: Prof. Serafino Gladiali Università di Sassari
- 2006-2007 **Principal Investigator of the Research Unit of the Italian Project PRIN 2005035123**
Project title: Regio- and Stereocontrolled Polymerization and Post-polymerization Reactions Catalyzed by Late Transition Metal Complexes
Central Coordinator: Prof. Serafino Gladiali Università di Sassari
- 2004-2005 **Principal Investigator of the Research Unit of the Italian Project PRIN 2003033857**
Project title: Chiral nitrogen-donor ligands for asymmetric catalysis promoted by transition metals complexes. New tools for fine chemicals synthesis
Central Coordinator: Prof. Serafino Gladiali Università di Sassari

International Research Grants:

- 2016 **Recipient of a donation** of 25000 € by BENEFICIENTIA Stiftung Lichteststein
- 2013-2017 **Coordinator of the Working Group “CM1205/0002”**
Project title: “CO_x Reduction”
COST Action CM1205 - CARISMA
- 2007-2011 **Member of Working Group N. D40/WG3**
Project title: C-C and C-Hetero Bond Forming Reactions
COST Action D40 “Innovative Catalysis: New Processes and Selectivities”
- 2006-2007 **Principal Italian Investigator for the Bilateral Action Italy/Germany “Vigoni”**
Project title: Development of efficient catalysts based on palladium and nitrogen-donor ligands for stereocontrolled polymerization reactions
- 2002-2006 **Central Coordinator of a European Research Training Network**
Project title: Atom-economic synthesis using palladium, the chamaleon catalyst”
“PALLADIUM
5th Framework Program
Contract identifier: HPRN-CT-2002-00196
- 2000-2006 **Coordinator of the Working Group “D17/0002/00”**
Project title: New catalysts for copolymerization of olefins and polar monomers

COST Action D17

Industrial Research Grants2008-2010 **Scientist-in-charge of contract with Marlin enterprise**

Project title: Development of new polymeric materials for environmentally friendly antifouling paints

Collaborations**Collaborations with Italian Professors**

Dr. Barbara Milani is currently successfully collaborating with the following research groups of Italian Universities:

Dott.ssa Carla Carfagna	University of Bologna
Prof. Claudio Pellecchia	University of Salerno
Prof. Fabio Ragaini	University of Milano
Prof. Fulvia Felluga	University of Trieste
Prof. Paolo Fornasiero	University of Trieste

International Collaborations

Dr. Barbara Milani is currently successfully collaborating with the following research groups of European Universities:

Prof. Dr. Martin Albrecht	University of Bern (Switzerland)
Dr. Cyril Godard	University Roviria i Virgili of Tarragona (Spain)
Dr. Jerome Durand	ENSIACET Toulouse (France)
Prof. Dr. Cornelis J. Elsevier	University of Amsterdam (The Netherlands)
Prof. Dr. Pedro Gomez	Tecnico Lisboa (Portugal)
Prof. Dr. Anna Masdeu	University Roviria i Virgili of Tarragona (Spain)
Dr. Edwin Otten	University of Gröningen (The Netherlands)

Editorial activity

- 2007-2009 Member of Advisory Board of European Journal of Inorganic Chemistry
 2008-present Member of Advisory Board of Dalton Transaction
 2009- present Member of Advisory Board of International Symposium on Homogeneous Catalysis

Co-editor of:

- Helvetica Chimica Acta, 2006, 89 (8): special issue dedicated to Prof. Giambattista Consiglio
- Book of abstracts of International Symposium on Homogeneous Catalysis, ISHC-XVI (Florence, July 2008)
- Dalton Transactions themed issue on “Metal-catalysed polymerisation” issue 41, 2009
- Dalton Transaction themed issue on “Small Molecules activation” issue 45, 2016

Member of the organizing committee of:

- VIII National Conference on Supramolecular Chemistry (Trieste, September 2007)
- International Symposium on Homogeneous Catalysis, ISHC-XVI (Florence, July 2008)
- XXXVIII National Conference of the Inorganic Chemistry Division (Trieste, September 2010)
- 28^a International Conference on Organometallic Chemistry ICOMC (Florence, July 2018)
- Session Chair for the Topic “T12 – Homogeneous Catalysis” at the 44th International Conference on Coordination Chemistry – ICC2020 (Rimini, July 2021)

Responsible Activities inside the Department and at National level

2021-present	Member of the Board of the Inorganic Chemistry Division of the Italian Chemical Society
2017-2019	Coordinator of the PhD School Doctorate in Chemistry (joint PhD School between University of Trieste and Ca' Foscari University Venice)
2016-2019	Member of the Board (Collegio Docenti) of the PhD School in Chemistry
2013-2018	Member of the Advisory Board (Giunta) of the Department
2008-2018	ERASMUS coordinator for chemistry for the Department of Chemical and Pharmaceutical Sciences
2008-present	Responsible for the 500 MHz NMR Varian spectrometer installed at the Department of Chemical Sciences on March 2008.
2008-present	Representative of University of Trieste in the National Interuniversity Consortium for Chemical Reactivity and Catalysis (CIRCC).

Refereeing and evaluation activity

I have been/currently am the evaluator for: FIRB Projects and VQR for the Italian Ministry of University, ANR (France), ICREA (Spain), Petroleum Research Funds from American Chemical Society projects;

I have been/currently am the referee for scientific Journals: ACS Catalysis, Organometallics, Macromolecules, Inorganic Chemistry, ChemCatChem, Dalton Transactions, Inorganic Chimica Acta; applied Organometallic Chemistry.

PUBLICATIONS

H index = 28/27 (Scopus/WoS March 2021)

I.F. = impact factor; N.C. = number of citations Scopus/Web of Science

- 1) E. Alessio, **B. Milani**, G. Mestroni, M. Calligaris, P. Faleschini, W.M. Attia
Synthesis and characterization of new halogen -tetramethylene sulfoxide-ruthenium(II) and ruthenium(III) complexes; crystal structure of *cis*-dichlorotetrakis(tetramethylene sulfoxide) ruthenium(II) and hydrogen *trans*-bis(tetramethylene sulfoxide)tetrachlororuthenate(III)
Inorg. Chim. Acta, 1990, 117, 255.
I.F. = 1.578 N.C. = 52/50
- 2) R.S. Srivastava, **B. Milani**, E. Alessio, G. Mestroni
Novel Ru(III)-dimethyl sulfoxide catalysts for the selective oxidation of thioethers to sulfoxides with molecular oxygen
Inorg. Chim. Acta, 1992, 191, 15.
I.F. = 1.578 N.C. = 31/31
- 3) E. Alessio, **B. Milani**, M. Calligaris, N. Bresciani-Pahor
The synthesis of $\text{RuBr}_2(\text{DMSO})_3$ revisited: a mixture of $\text{Li}[\text{fac-RuCl}_n\text{Br}_{3-n}(\text{DMSO})_3]$ isomers ($n=0-3$) is the reaction product
Inorg. Chim. Acta, 1992, 194, 85.
I.F. = 1.578 N.C. = 20/20
- 4) S. Geremia, L. Randaccio, G. Mestroni, **B. Milani**
Bow-step and twist conformations and stacking interactions in palladium bipyridine and phenanthroline complexes
J. Chem. Soc., Dalton Trans., 1992, 2117.
I.F. = 2.908 N.C. = 46/43
- 5) **B. Milani**, E. Alessio, G. Mestroni, A. Sommazzi, F. Garbassi, E. Zangrando, N. Bresciani-Pahor, L. Randaccio
Synthesis and characterization of monochelated carboxylato palladium(II) complexes with nitrogen-donor chelating ligands. Crystal structures of diacetato(1,10-phenanthroline)palladium(II) and diacetato(2,9-dimethyl-1,10-phenanthroline)palladium(II)
J. Chem. Soc., Dalton Trans., 1994, 1903.
I.F. = 2.908 N.C. = 101/89
- 6) E. Alessio, M. Bolle, **B. Milani**, G. Mestroni, P. Faleschini, S. Geremia, M. Calligaris
Carbonyl derivatives of chloride-dimethyl sulfoxide-ruthenium(III) complexes: synthesis, crystal structure and reactivity of $[(\text{DMSO})_2\text{H}][\text{trans-RuCl}_4(\text{DMSO})(\text{CO})]$ and *mer*, *cis*- $\text{RuCl}_3(\text{DMSO})_2(\text{CO})$.
Inorg. Chem., 1995, 34, 4716.
I.F. = 3.389 N.C. = 46/42
- 7) E. Alessio, **B. Milani**, M. Bolle, G. Mestroni, P. Faleschini, F. Todone, S. Geremia, M. Calligaris
Carbonyl derivatives of chloride-dimethyl sulfoxide-ruthenium(II) complexes: synthesis, structural characterization and reactivity of $\text{Ru}(\text{CO})_x(\text{DMSO})_{4-x}\text{Cl}_2$ complexes ($x=1-3$).
Inorg. Chem., 1995, 34, 4722.
I.F. = 3.389 N.C. = 73/72

- 8) **B. Milani***, E. Alessio, G. Mestroni, E. Zangrando, L. Randaccio, G. Consiglio
 New atropisomeric bidentate nitrogen-donor compounds as potential stereocontrollers in mild CO-styrene copolymerisation catalysed by palladium(II) salts.
 J. Chem. Soc., Dalton Trans., 1996, 1021.
 I.F. = 2.908 N.C. = 55/52
- 9) **B. Milani***, L. Vicentini, A. Sommazzi, F. Garbassi, E. Chiarparin, E. Zangrando, G. Mestroni
 Bis(chelated) palladium(II) complexes with a diphosphine and a dinitrogen ligand: very efficient catalyst precursors in the co- and terpolymerisation of CO and olefins.
 J. Chem. Soc., Dalton Trans., 1996, 3139.
 I.F. = 2.908 N.C. = 52/53
- 10) A. Sessanta o Santi, **B. Milani**, G. Mestroni, E. Zangrando, L. Randaccio
 Crystal structure of a palladium metallacyclic complex: a key-intermediate in the carbonylation of nitrobenzene to isocyanates and carbamates.
 J. Organomet. Chem., 1997, 545-546, 89.
 I.F. = 2.042 N.C. = 22/13
- 11) **B. Milani***, A. Anzilutti, L. Vicentini, A. Sessanta o Santi, E. Zangrando, S. Geremia, G. Mestroni
 Bichelated palladium(II) complexes with nitrogen-donor chelating ligands are efficient catalyst precursors for the CO/styrene copolymerization reaction.
 Organometallics, 1997, 16, 5064-5075.
 I.F. = 3.375 N.C. = 191/193
- 12) **B. Milani***, G. Mestroni
 Pd(II) Complexes with Bidentate Nitrogen-donor Chelating Ligands: Very Versatile and Active Catalyst Precursors for the CO/olefin Co- and Terpolymerization Reactions.
 Comments on Inorganic Chemistry, 1999, 20, 301.
 I.F. = 1.840 N.C. = 28/26
- 13) **B. Milani***, G. Corso, E. Zangrando, L. Randaccio, G. Mestroni
 Crystal structure and dynamic behavior of a new class of monocationic organometallic Pd(II) compounds with two molecules of bidentate ligands: [Pd(L-L)(N-N)(CH₂NO₂)] [PF₆] (L-L = N-N, dppp).
 Eur. J. Inorg. Chem, 1999, 2085.
 I.F. = 2.475 N.C. = 20/18
- 14) A. Macchioni*, G. Bellachioma, G. Cardaci, M. Travaglia, C. Zuccaccia, **B. Milani**, G. Corso, E. Zangrando, G. Mestroni, C. Carfagna, M. Formica
 Counterion effect on CO/styrene copolymerization catalyzed by cationic palladium(II) organometallic complexes: an interionic structural and dynamic investigation based on NMR spectroscopy.
 Organometallics, 1999, 18, 3061-3069.
 I.F. = 3.215 N.C. = 105/100
- 15) E. Iengo, **B. Milani**, E. Zangrando, S. Geremia, E. Alessio
 Novel ruthenium building blocks for the efficient modular construction of heterobimetallic molecular squares of porphyrins.

Angew. Chem. Int. Ed., 2000, 39, 1096.
I.F. = 8.547 N.C. = 82/69

16) **B. Milani***, G. Corso, C. Carfagna, M. Formica, R. Seraglia, G. Mestroni
Highly efficient catalytic system for the CO/styrene copolymerization: towards the stabilization of the active species
Organometallics, 2000, 19, 3435-3441.
I.F. = 3.169 N.C. = 64/66

17) A. Sessanta o Santi, **B. Milani***, E. Zangrado, G. Mestroni
Synthesis and crystal structure of a palladium metallacyclic complex: a key intermediate in the carbonylation of azobenzene to N- phenyl urethane.
Eur. J. Inorg. Chem., 2000, 2351.
I.F. = 2.222 N.C. = 7/6

18) **B. Milani***, F. Paronetto, E. Zangrado
Ligand driven $\sigma, \pi - \eta^3$ structural rearrangements of organopalladium complexes: Their relevance to the CO/styrene copolymerisation reaction
J. Chem. Soc., Dalton Trans., 2000, 3055.
I.F. = 2.502 N.C. = 23/22

19) E. Iengo, R. Minatel, **B. Milani**, L. G. Marzilli, E. Alessio
Metal-mediated self-assembly of molecular squares of porphyrins rimmed with coordination compounds
Eur. J. Inorg. Chem., 2001, 609.
I.F. = 2.475 N.C. = 18/16

20) **B. Milani**, G. Mestroni, E. Zangrado
Structural aspects of palladium systems used as catalyst precursors in CO/olefins co- and terpolymerisation reactions.
Croat. Chim. Acta, 2001, 74, 851.
I.F. = 0.571 N.C. = 13/10

21) **B. Milani***, A. Marson, E. Zangrado, J.M. Ernstring, C. J. Elsevier, G. Mestroni
New monocationic methylpalladium(II) compounds with several bidentate nitrogen-donor ligands: synthesis, characterisation and reactivity with CO
Inorg. Chim. Acta, 2002, 327, 188-201.
Invited paper dedicated to Prof. Kees Vrieze
I.F. = 1.566 N.C. = 42/41

22) **B. Milani***, A. Scarel, G. Mestroni, S. Gladiali, R. Taras, C. Carfagna, L. Mosca
Very stable Pd(II)-(N-N) catalysts for the synthesis of high molecular weight CO/styrene polyketones
Organometallics, 2002, 21, 1323-1325.
I.F. = 3.215 N.C. = 46/47

23) A. Gsponer, **B. Milani**, G. Consiglio
The control of stereochemistry in the palladium-catalyzed alternating styrene/carbon monoxide copolymerization: effect of the chirality of the ligand and of the ligand-to-palladium ratio.

Helv. Chim. Acta, 2002, 85, 4074.
I.F. = 2.027 N.C. = 12/11

24) A. Bastero, A. Ruiz, **B. Milani***, E. Zangrando, C. Claver*
Influence of pyridine-imidazoline ligands on the reactivity of Palladium-methyl complexes with carbon monoxide.
Organometallics, 2002, 21, 5820-5829.
I.F. = 3.215 N.C. = 49/47

25) G. Consiglio, **B. Milani**
Stereochemical aspects of co-oligomerization and co-polymerization of alkenes with carbon monoxide.
in "Catalytic synthesis of alkene-carbon monoxide copolymers and cooligomers"
Ed. by Ayusman Sen, Kluwer Academic Press.
2003, Chapter 6; pg. 189.

26) **B. Milani***, E. Stabon, E. Zangrando, A. Sommazzi, C. Zannoni, G. Mestroni
Polymerisation of polar olefins promoted by organometallic cobalt complexes: free radical or coordinative process?
Inorg. Chim. Acta, 2003, 349, 209.
I.F. = 1.578 N.C. = 9/6

27) **B. Milani***, A. Scarel, E. Zangrando, G. Mestroni, C. Carfagna, B. Binotti
Cationic palladium complexes with mono- and bidentate nitrogen-donor ligands: synthesis, characterization and reactivity in CO/styrene copolymerization reaction.
Inorg. Chim. Acta, 2003, 350, 592.
Invited paper dedicated to Prof. Pierre Braunstein.
I.F. = 1.578 N.C. = 18/16

28) E. Zangrando, M. Trani, E. Stabon, C. Carfagna, **B. Milani**, G. Mestroni
Synthesis and molecular structure of nickel(II) and cobalt(III) complexes with N-Aryl-diacetyl monoxime.
Eur. J. Inorg. Chem., 2003, 2683.
I.F. = 2.482 N.C. = 11/12

29) **B. Milani***, A. Scarel, J. Durand, G. Mestroni, R. Seraglia, C. Carfagna, B. Binotti
MALDI-TOF mass spectrometry in the study of CO/aromatic olefins terpolymers.
Macromolecules, 2003, 36, 6295-6297.
I.F. = 3.621 N.C. = 19/15

30) **B. Milani***, A. Marson, A. Scarel, G. Mestroni, J. M. Ernsting, C. J. Elsevier
Facile synthesis of new, stable, palladium-ethyl derivatives containing nitrogen-donor ligands.
Organometallics, 2004, 23, 1974-1977.
I.F. = 3.196 N.C. = 19/21

31) A. Scarel, **B. Milani***, E. Zangrando, M. Stener, S. Furlan, G. Fronzoni, G. Mestroni, S. Gladiali, C. Carfagna, L. Mosca
Palladium complexes with 3-alkyl-substituted-1,10-phenanthrolines: effect of the remote alkyl substituent on the CO/olefin copolymerization reactions.

Organometallics, 2004, 23, 5593-5605.
I.F. = 3.196 N.C. = 37/36

32) M. Calligaris, E. Zangrando, **B. Milani**, A. Marson
Stereochemical Investigation of Palladium(II) Complexes with Phenanthroline Ligands: a Molecular Mechanics Approach.
Eur. J. Inorg. Chem., 2005, 704-712.
I.F. = 2.597 N.C. = 7/6

33) A. Bastero*, A. Ruiz, C. Claver, A. Bella, **B. Milani***, B. Moreno, F. A. Jalon, B. R. Manzano
Control of polymer composition in Pd-catalyzed CO/olefin terpolymerization reaction.
Adv. Synth. & Cat., 2005, 347, 839-846.
I.F. = 4.632 N.C. = 12/9

34) A. Scarel, J. Durand, D. Franchi, E. Zangrando, G. Mestroni, S. Gladioli, C. Carfagna, B. Binotti, S. Bronco, T. Gragnoli, **B. Milani***
Trifluoroethanol: key solvent for palladium-catalyzed polymerization reactions.
J. Organomet. Chem., 2005, 690/8, 2106-2120.
I.F. = 2.025 N.C. = 35/33

35) D. Sirbu, G. Consiglio, **B. Milani**, P. G. A. Kumar, P. Pregosin, S. Gischig
Palladium complexes with meso-bioxazoline ligands for alternating styrene/CO copolymerisation: Counterion effect.
J. Organomet. Chem., 2005, 690, 2254-2262.
I.F. = 2.025 N.C. = 26/26

36) A. Scarel, J. Durand, D. Franchi, E. Zangrando, G. Mestroni, C. Carfagna, L. Mosca, R. Seraglia, G. Consiglio, **B. Milani***
Mono- and dinuclear bioxazoline-palladium complexes for the stereocontrolled synthesis of CO/styrene polyketones
Chem-Eur. J., 2005, 11, 6014-6023.
I.F. = 4.907 N.C. = 38/36

37) J. Durand, **B. Milani***
The role of nitrogen-donor ligands in the palladium-catalyzed polyketones synthesis
Coord. Chem. Rev., 2006, 250, 542-560.
I.F. = 8.815 N.C. = 113/104

38) A. Mezzetti, **B. Milani***
Giambattista Consiglio's passion for homogeneous catalysis, C-C bond formation, and stereochemistry
Helv. Chim. Acta, 2006, 89, 1475-1481.
I.F. = 1.550 N.C. = 0/0

39) J. Durand, E. Zangrando, M. Stener, G. Fronzoni, C. Carfagna, B. Binotti, P. C. J. Kamer, C. Müller, M. Caporali, P. W. N. M. van Leeuwen, D. Vogt, **B. Milani***
Long Lived Palladium Catalysts for CO/Vinyl Arene Polyketones Synthesis: A Solution to Deactivation Problems
Chem-Eur. J., 2006, 12, 7639-7651.

I.F. = 5.015 N.C. = 48/42

40) J. Durand, A. Scarel, R. Seraglia, S. Gladiali, C. Carfagna, B. Binotti, **B. Milani***
Palladium Promoted CO/Ethylene/Styrene Terpolymerisation Reaction: Throwing the Light on the
Different Reactivity of the two Alkenes
Helv. Chim. Acta, 2006, 89, 1752-1771.

I.F. = 1.550 N.C. = 20/17

41) A. Schätz, A. Scarel, E. Zangrando, L. Mosca, C. Carfagna, A. Gissibl, **B. Milani***, O. Reiser*
High Stereocontrol and Efficiency in CO/Styrene Polyketone Synthesis Promoted by
Azabis(oxazoline)-Palladium Complexes
Organometallics, 2006, 25, 4065-4068.

I.F. = 3.632 N.C. = 28/26

42) S. D. Bergman, I. Goldberg, C. Carfagna, L. Mosca, M. Kol*, **B. Milani***
Palladium Complexes Containing Large Fused Aromatic N-N Ligands as Efficient Catalysts for the
CO/Styrene Copolymerization
Organometallics, 2006, 25, 6014-6018.

I.F. = 3.632 N.C. = 14/14

43) J. Durand, S. Gladiali, G. Erre, E. Zangrando, **B. Milani**
Palladium chemistry of 2-ferrocenyl-1,10-phenanthroline ligand
Organometallics, 2007, 26, 810-818.

I.F. = 3.833 N.C. = 29/29

44) A. Scarel, M. R. Axet, F. Amoroso, F. Ragaini, C. J. Elsevier, A. Holuigue, C. Carfagna, L.
Mosca, **B. Milani***
Subtle Balance of Steric and Electronic Effects for the Synthesis of Atactic Polyketones Catalyzed
by Pd Complexes with *meta*-Substituted Aryl-BIAN Ligands
Organometallics, 2008, 27, 1486-1494.

I.F. = 3.815 N.C. = 56/52

45) J. Durand, E. Zangrando, C. Carfagna, **B. Milani**
New atropisomeric N-N ligands for CO/vinyl arene copolymerization reaction
Dalton Trans., 2008, 2171-2182.

I.F. = 3.580 N.C. = 15/14

46) **B. Milani***, A. M. Masdeu- Bultò
Ligand Chirality in Palladium Catalysed Polyketones Synthesis
In "Organometallic Chirality"
Edited by G. Pályi, C. Zucchi and L. Caglioti
Mucchi Editore, 2008, Chapter 8, 161-203.

47) **B. Milani**, C. Crotti, E. Farnetti
Hydrogen transfer reduction of polyketones catalyzed by iridium complexes: a novel route towards
more biocompatible materials.
Dalton Trans., 2008, 4659-4663.

I.F. = 3.580 N.C. = 11/13

- 48) M. Rosa Axet, F. Amoroso, G. Bottari, A. D'Amora, E. Zangrando, F. Faraone, D. Drommi, M. Saporita, C. Carfagna, P. Natanti, R. Seraglia, **B. Milani***
Application of chiral amine-imine ligands in palladium-catalyzed polyketones synthesis: effect of ligand backbone on the polymer stereochemistry
Organometallics, 2009, 28, 4464-4474.
I.F. = 4.204 N.C. = 19/18
- 49) F. C. Rix, M. J. Rachita, M. I. Wagner, M. Brookhart*, **B. Milani**, J. C. Barborak
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European Patent, N. 93200331.2 (1993)

United States Patent, N. 5,310,871 (1994)

2) **B. Milani**, G. Mestroni, A. Sommazzi, F. Garbassi

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Italian Patent, N. MI95/A 000337 (1995)

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3) A. Sommazzi, F. Garbassi, G. Mestroni, **B. Milani**, L. Vicentini,

Procedimento migliorato per la preparazione di copolimeri a base di ossido di carbonio ed almeno un composto contenente un'insaturazione alchenilica

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Italian Patent, N. MI96/A 00743 (1996).

European Patent, N. 97104955.6-2102 (1997).

6) A. Sommazzi, **B. Milani**, A. Proto, G. Corso, G. Mestroni, F. Masi,

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7) G. Mestroni, C. Bianchini, A. Sommazzi, E. Zangrando, **B. Milani**, G. Mantovani, F. Masi, A. Meli, R. Santi

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8) A. Dall'Anese, M. Y. Souleymanou, C. Godard, **B. Milani**

Catalysts and process for olefins and polar vinyl monomers copolymerization and olefins homopolymerization

International Publication Number: WO 2021/164844 A1

International Application Number: PCT/EP2020/054037 (2020)

Patent status: published on August 26th, 2021.

CURATELE

1) E. Alessio, E. Iengo, B. Milani

Translation from English to Italian of the book "Inorganic Chemistry" 2nd Italian Edition by

Zanichelli on the base of 5th English Edition, Authors P. Atkins, T. Overton, J. Rourke, M. Weller, F. Armstrong.

INVITED LECTURES

38 Invited lectures at National and International Universities and at Companies, such as SHELL, BASF, DSM, SABIC.

19 Keynote and Invited Lectures at National, International Conferences and Schools.

POSTERS and ORAL PRESENTATIONS at CONFERENCES

Presentations (90) at National and International Conferences of which 12 oral communications.

TEACHING ACTIVITY

Since 2003 Prof. Milani regularly teaches to undergraduate students, both at Bachelor (Laboratory of Inorganic Chemistry for 3rd year students in Chemistry and Fundamental and General Chemistry for 1st year students of Geology) and Master students (Industrial Applications of Homogeneous Catalysis and Photocatalysis) in Chemistry.

Tutoring and cotutoring of thesis for graduation

Prof. Milani has been cosupervisor of students for graduation in Chemistry (10), and supervisor of students for graduation in Chemistry: bachelor level 17 students, master level 13 students.

Tutoring and cotutoring of Ph.D. thesis

- **Academic Year 2008/2009:**
Cotutor of a Ph.D. thesis
Ph.D. Student: Lidia Fanfoni
Thesis title: “Development of chiral nitrogen ligands for applications in homogeneous catalysis”
- **Academic Years 2002/2003, 2003/2004, 2004/2005:**
Tutor of a Ph.D. thesis
Ph.D. student: Alessandro Scarel
Thesis Title: “Stereocontrolled polymerisation reactions catalysed by palladium complexes with nitrogen-donor ligands”
- **Academic Years 2010/2011, 2011/2012, 2012/2013:**
Tutor of a Ph.D. thesis
Ph.D. student: Angelo Meduri
Thesis Title: “Development of palladium catalysts with nitrogen-donor ligands for controlled polymerization reactions”
The thesis has been awarded with the National prize for the best PhD Thesis of year 2013 from the Inorganic Chemistry Division of the Italian Chemical Society
- **Academic Years 2012/2013, 2013/2014, 2014/2015:**
Tutor of a Ph.D. thesis of XXVIII Cycle
Ph.D. student: Vera Rosar
Thesis Title: “The importance of ligand structural diversity in palladium catalysed polymerization”
- **Academic Years 2016/2017, 2017/2018, 2018/2019:**
Tutor of a Ph.D. thesis of XXXII Cycle
Ph.D. student: Anna Dall’Anese
Thesis Title: “Pd-catalyzed copolymerizations: from ligand architecture to macromolecule microstructure”
The thesis has been awarded with the National prize for the best PhD Thesis of year 2020 from the Inorganic Chemistry Division of the Italian Chemical Society

Currently she is supervisor of the PhD student Chiara Alberoni.

She is/was Member of jury for several Ph D thesis discussions both in Italian and Foreign Universities.

She has been member of Commissions for comparative evaluations of RTD-A, RTD-B and internal PA positions.