

# UMBERTO PIARULLI

## CURRICULUM VITAE

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### FORMAZIONE ED ESPERIENZE LAVORATIVE

#### POSIZIONI UNIVERSITARIE

- **Professore ordinario** - S.S.D. CHIM/06 – Chimica Organica (S.C. 03/C1) - Università degli Studi dell'Insubria dal 2016
- Professore associato - S.S.D. CHIM/06 – Chimica Organica (S.C. 03/C1) - Università degli Studi dell'Insubria dal 2004 al 2016
- Ricercatore universitario - S.S.D. CHIM/06 – Chimica Organica (S.C. 03/C1) - Università degli Studi dell'Insubria dal 1996 al 2004 (fino al 1 Settembre 1998 II Facoltà di Scienze della Università degli Studi di Milano).

#### TITOLI DI STUDIO

- PhD in Scienze presso l'Università di Losanna (CH) nel 1996. Equipollenza del Titolo di “Docteur es Sciences” con il titolo di Dottore di Ricerca in Scienze Chimiche riconosciuto dal MUR.
- Laurea in Chimica - Università degli Studi di Milano

#### INCARICHI ISTITUZIONALI

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- Direttore del Dipartimento di Scienza e Alta Tecnologia dal settembre 2017 al settembre 2023.
- Direttore vicario del Dipartimento di Scienza e Alta Tecnologia dal dal 2011 al 2017.
- Componente del Senato Accademico 2017 al 2023.
- Componente del Presidio di Qualità di Ateneo dal 2013 al 2019.
- Delegato del Rettore per la Ricerca dal 2014 al 2018.
- Consigliere di Amministrazione dell'Ateneo dal 2008 al 2012 in rappresentanza dei professori associati.
- Dal 2017 coordinatore dello Steering e poi l'Implementation Committee del progetto per l'ottenimento del riconoscimento HRS4R (Human Resources Strategy for Researchers) della Commissione Europea.
- Componente del Consiglio Direttivo di “Lake Como School of Advanced

Studies” dal 2016 e del Consorzio Interuniversitario in Reattività Chimica e Catalisi dal 2006 al 2014.

- Componente del Consiglio Scientifico della Fondazione Volta dal 2022.
- Componente del Collegio dei Docenti del Dottorato di Ricerca in Scienze Chimiche e Ambientali - *Curriculum* in Scienze Chimiche - Università degli Studi dell’Insubria - dal 2003.

#### INCARICHI COME VALUTATORE

- Valutatore di progetti nazionali e internazionali: European Research Council (ERC Starting Grant 2017), Agence Nationale de la Recherche (Francia, Programmi Jeunes chercheuses et jeunes chercheurs), MIUR (bando FIRB futuro in ricerca e PRIN), ANVUR (VQR 2004-2010).
- Componente di commissioni di concorso di valutazione comparativa e valutativa.
- Commissario per l’Abilitazione Scientifica Nazionale per il settore concorsuale di Chimica Organica (S.C. 03/C1) per la tornata 2021-2023.

#### ATTIVITA’ DIDATTICA

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##### DIDATTICA UNIVERSITARIA

Titolare dei seguenti insegnamenti presso i Corsi di Laurea in Chimica e Chimica Industriale, di Ingegneria per la Sicurezza del Lavoro e dell’Ambiente, e Laurea Magistrale in Chimica:

- dall’a.a. 2000-2001 docente dell’insegnamento di **Metodi Fisici in Chimica Organica**;
- dall’a.a. 2004-2005 fino all’AA 2013-2014 docente dell’insegnamento di Sintesi e Tecniche Speciali Organiche;
- dall’a.a. 2008-2009 fino all’AA 2010-2011 docente dell’insegnamento di Chimica Organica Superiore;
- nell’a.a. 2007-2008 e dall’a.a. 2013-2014 e fino all’a.a. 2020-2021 docente dell’insegnamento di Chimica Organica 1;
- dall’a.a. 2017-2018 docente dell’insegnamento di **Synthesis of Biologically Active Compounds (Part A)**;
- dall’a.a. 2021-2022 docente dell’insegnamento di **Advanced Synthesis in Organic Chemistry**;
- dall’a.a. 2011-2012 fino all’a.a. 2014-2015 docente del modulo di Chimica Organica nel corso di Ingegneria per la Sicurezza del Lavoro e dell’Ambiente.

## INVITED PROFESSOR E INVITED FELLOW

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- “Innovatec Guest Chair – Combinatorial Chemistry and Solid Phase Synthesis” DAAD (Deutscher Akademischer Austauschdienst – Servizio tedesco per lo scambio accademico) presso l’Università di Regensburg (Germania), 2003.
- Visiting Researcher e NATO Fellow - Cold Spring Harbor Laboratory (New York, USA), 1996.

## PROGETTI E FINANZIAMENTI

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- FP6-2002-MOBILITY-2 Multisite Marie Curie Host Fellowships for Early Stage Research Project: FOLDAMERS: Design, synthesis, structural characterization and biological evaluation of new peptidomimetics with a defined secondary structure. Durata 2005 - 2009. (Contract MEST-CT-2004-515968).
- Fondazione CARIPLO bando Capitale Umano 2010: RED DRUG TRAIN Multidisciplinary approaches in research and development of innovative drugs: project for an international collaborative training network. Durata 2011 – 2015.
- PRIN 2010: Sintesi e applicazioni biomediche di peptidomimetici in campo oncologico. Durata 2012-2015 (prot. 2010NRREPL).
- MSCA-ITN-2014 Marie Skłodowska-Curie Innovative Training Network: MAGICBULLET: Peptide-drug conjugates for targeted delivery in tumor therapy. Durata 01/01/2015 – 31/12/2018. (Contract MSCA-ITN-2014-ETN-642004).
- PRIN 2016: “Tumor-targeting peptidomimetics: synthesis and bio-medical applications” Durata 2017-2020 (prot. 20157WW5EH\_008).
- MSCA-ITN-2019 Marie Skłodowska-Curie Innovative Training Network: Magicbullet-Reloaded: Small-Molecule Drug Conjugates for Targeted Delivery in Tumor Therapy. Durata 2019-2024 (Contract MSCA-ITN-2019-861316).

## CONFERENZE SU INVITO

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- “Combinatorial Approaches to New Enantioselective Reagents” conferenza su invito "Young Talented Organic Chemists" al "The 12th European Symposium on Organic Chemistry (ESOC 12)" [Groningen (Olanda) 13-18 Luglio 2001].

- “Combinations of Monodentate P-Ligands for Enantioselective Catalysis” conferenza su invito al congresso “(R)EVOLUTION IN CATALYSIS” [Warsaw, Poland, 7-10 maggio 2010].
- “Libraries of Monodentate Phosphorus Ligands for Rhodium-Catalyzed Asymmetric Reactions” keynote lecture alla “COGICO 9 - 9° Congresso del Gruppo Interdivisionale di Chimica Organometallica” [Firenze, 8-11 giugno 2010].
- “Libraries of Monodentate Phosphorus Ligands for Rhodium-Catalyzed Asymmetric Reactions” conferenza su invito al congresso “9th Spanish Italian Symposium on Organic Chemistry – SISOC-IX” [Tenerife, Spagna, 10-14 febbraio 2012].
- “Libraries of Monodentate Phosphorus Ligands for Rhodium-Catalyzed Asymmetric Reactions” conferenza su invito al congresso “4th EuCheMS Chemistry Congress” [Praga, Repubblica Ceca, 26-30 agosto 2012].
- “Synthesis and biomedical applications of tumor targeting integrin ligands and conjugates” conferenza su invito al congresso “Sigma-Aldrich Young Chemists Symposium – SAYCS 2013” [Riccione, Italia, 28 – 30 Ottobre 2013].
- “Supramolecular ligand-ligand and ligand-substrate interactions for highly selective transition metal catalysis” conferenza su invito al congresso “XXIII Conference GEQO” [Tarragona, Spagna, 17 – 19 Settembre 2014].
- “Synthesis and biological evaluation of integrin and dual integrin-VEGFR ligands for tumor targeting therapy” conferenza su invito al congresso “5th Int. CeBiTec Research Conference - Drug Conjugates for Directed Therapy” Center for Interdisciplinary Research (ZiF), [Bielefeld University, Germany, 20 – 23 Settembre, 2015].
- “Synthesis and Biomedical Applications of Tumor-Targeting Peptidomimetics” BolognaPeptides 2016 Conference [Bologna, Italy, 14 - 16 febbraio 2016].
- “RGD and isoDGR integrin ligands for tumor targeting” Conferenza su invito al congresso “Peptides and conjugates for tumor targeting, therapy and diagnosis – RiminiPeptides2018” [Rimini, Italy, 16 – 18 giugno 2018].

## PUBBLICAZIONI

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### DATI BIBLIOMETRICI

Articoli su riviste ISI o Scopus;  
 h-Index: 38,  
 Citazioni: 3690;

Le pubblicazioni vertono sulle seguenti tematiche principali:

- Complessazione di molecole organiche da parte di ioni metallici. Studio della formazione, della struttura e della reattività dei complessi.
- Riconoscimento molecolare di peptidi e peptidomimetici e sintesi in soluzione e su fase solida di derivati pseudopeptidici e produzione di librerie combinatoriali
- Metodologie sintetiche diastereo ed enantioselettive in soluzione e su supporto solido anche mediante l'impiego di complessi metallici chirali;
- Sintesi e analisi conformazionale di derivati peptidici e peptidomimetici in grado di riprodurre la struttura secondaria delle proteine e modulare le interazioni proteina-proteina;
- Sintesi e valutazione biologica di ligandi di proteine di membrana e loro valutazione quali vettori per farmaci antitumorali in un approccio di drug-targeting.

## PUBBLICAZIONI

- 1) "Stereoselective Aldol Reactions of  $\gamma$ -Thiobutyrolactone: the Benzaldehyde Anomaly." Gennari, C.; Oliva, A.; Molinari, F.; Piarulli, U. *Tetrahedron Lett.*, **1990**, *31*, 2453.
- 2) "Peptide Bond Formation Using an Enzyme Mimicking Approach." Gennari, C.; Molinari, F.; Piarulli, U. *Tetrahedron Lett.*, **1990**, *31*, 2929.
- 3) "Peptide Bond Formation Using an Enzyme Mimicking Approach." Gennari, C.; Molinari, F.; Piarulli, U.; Bartoletti, M. *Tetrahedron* **1990**, *46*, 7289.
- 4) "Asymmetric Synthesis by the use of Norephedrine-Derived 2-Methoxy-Oxazolidines. Part Four: the Synthesis of Enantiomerically Enriched Polyhydroxylated Building Blocks." Bernardi, A.; Piarulli, U.; Poli, G.; Scolastico, C.; Villa, R. *Bull. Soc. Chim. Fr.* **1990**, *127*, 751.
- 5) "Acceleration of Hemiacetal Cleavage through Hydrogen Bonding: a New Synthetic Catalyst with Balanced Conformational Flexibility and Preorganization." Gennari, C.; Molinari, F.; Bartoletti, M.; Piarulli, U.; Potenza, D. *J. Org. Chem.* **1991**, *56*, 3201.
- 6) "Transition Metal-Carbohydrate Chemistry. Part 2. Homoleptic Diacetoneglucose Complexes of Aluminium and Group 4 Metals." Williams, D. N.; Piarulli, U.; Floriani, C.; Chiesi-Villa, A.; Rizzoli, C. *J. Chem. Soc., Dalton Trans.* **1994**, 1243.
- 7) "The Four-electron Oxidation of *meso*-Octaethylporphyrinogen *via* a Metal-mediated Dealkylation Process: Formation of [RuL(PhCN)<sub>2</sub>] [H<sub>2</sub>L = 5,15-dihydro-5,5,10,15,20-hexaethylporphyrin]. Piarulli, U.; Floriani, C.; Chiesi-Villa, A.; Rizzoli, C. *J. Chem. Soc., Chem. Commun.* **1994**, 895.

- 8) "Carbohydrate Metal Complexes as Ligands for Alkali Cations." Piarulli, U.; Williams, D. N.; Floriani, C.; Gervasio, G.; Viterbo, D. *J. Chem. Soc., Chem. Commun.* **1994**, 1409.
- 9) "Transition Metal-Carbohydrate Chemistry. Part 4. Homoleptic Diacetoneglucose Complexes of Molybdenum and Tungsten: Chiral Ligands Associated to a M≡M Triple Bond." Piarulli, U.; Williams, D. N.; Floriani, C.; Gervasio, G.; Viterbo, D. *J. Organomet. Chem.* **1995**, *503*, 185.
- 10) "Oxo and Imido Molybdenum (VI) and Tungsten (VI) Functionalities Supported by Diacetoneglucose." Piarulli, U.; Williams, D. N.; Floriani, C.; Gervasio, G.; Viterbo, D. *J. Chem. Soc., Dalton Trans.* **1995**, 3329.
- 11) "Redox Chemistry Associated with the Complexation of Vanadium (V) and Tungsten (VI) by *meso*-Octaethylporphyrinogen: Formation and Cleavage of Cyclopropane Units Functioning as Shuttles of two Electrons." Piarulli, U.; Solari, E.; Floriani, C.; Chiesi-Villa, A.; Rizzoli, C. *J. Am. Chem. Soc.* **1996**, *118*, 3634.
- 12) "Assembling Sugars and Metals: Novel Architectures in Transition Metal Chemistry." Piarulli, U.; Floriani, C. In *Progress in Inorganic Chemistry*, K. Carlin Ed., Wiley, New York, vol. 45, p. 393.
- 13) "A New Method for the Solution and Solid Phase Synthesis of Chiral  $\beta$ -Sulfonopeptides Under Mild Conditions." Gude, M.; Piarulli, U.; Potenza, D.; Salom, B.; Gennari, C. *Tetrahedron Lett.* **1996**, *37*, 8589.
- 14) "Combinatorial Libraries - Studies in Molecular Recognition and the Quest for New Catalysts." Gennari, C.; Nestler, H. P.; Piarulli, U.; Salom, B. *Liebigs Annalen.* **1997**, 637.
- 15) "Metallohosts Derived from the Assembly of Sugars Around Transition Metals - The Complexation of Alkali Metal Cations." Piarulli, U.; Rogers, A. J.; Floriani, C.; Gervasio, G.; Viterbo, D. *Inorg. Chem.* **1997**, *36*, 6127.
- 16) "Stereocontrolled Synthesis of Polyketide Libraries - Boron-Mediated Aldol Reactions with Aldehydes on Solid Support." Gennari, C.; Ceccarelli, S.; Piarulli, U.; Aboutayab, K.; Donghi, M.; Paterson, I. *Tetrahedron* **1998**, *54*, 14999.
- 17) "Synthesis of Combinatorial Libraries of Vinylogous Sulfonamidopeptides (Vs-Peptides)." Gennari, C.; Longari, C.; Ressel, S.; Salom, B.; Piarulli, U.; Ceccarelli, S.; Mielgo, A. *Eur. J. Org. Chem.* **1998**, 2437.
- 18) "Diacetoneglucose Complexes of Manganese(II) and Iron(II) and Their Organometallic Derivatization." Piarulli, U.; Floriani, C.; Re, N.; Gervasio, G.; Viterbo, D. *Inorg. Chem.* **1998**, *37*, 5142.
- 19) "Hydrogen-Bonding Donor/Acceptor Scales in  $\beta$ -Sulfonamidopeptides." Gennari, C.; Gude, M.; Potenza, D.; Piarulli, U. *Chem. Eur. J.* **1998**, *4*, 1924.
- 20) "Computer-Assisted Design and Synthetic Applications of Chiral Enol Borinates - Novel, Highly Enantioselective Aldol Reagents." Gennari, C.; Ceccarelli, S.; Piarulli, U.; Aboutayab, K. *J. Braz. Chem. Soc.* **1998**, *9*, 319.

- 21) "Investigation of a New Family of Chiral Ligands for Enantioselective Catalysis *via* Parallel Synthesis and High-Throughput Screening." Gennari, C.; Ceccarelli, S.; Piarulli, U.; Montalbetti, C. A. G. N.; Jackson, R. F. W. *J. Org. Chem.* **1998**, *63*, 5312.
- 22) "Synthetic Studies on Sarcodictyins and Eleutherobin: Synthesis of Fully Functionalized Cyclization Precursors." Ceccarelli, S.; Piarulli, U.; Gennari, C. *Tetrahedron Lett.* **1999**, *40*, 153.
- 23) "Solid Phase Synthesis of Peptides Containing Reverse Turn Mimetic Bicyclic Lactams." Gennari, C.; Mielgo, A.; Potenza, D.; Scolastico, C.; Piarulli, U.; Manzoni, L. *Eur. J. Org. Chem.* **1999**, 379.
- 24) "Ureas: New Efficient Lewis Base Catalysts for the Allylation of Aldehydes." Chataigner, I.; Piarulli, U.; Gennari, C. *Tetrahedron Lett.* **1999**, *40*, 3633.
- 25) "A Trifunctional Steroid-Based Scaffold for Combinatorial Chemistry." Barry, J. F.; Davis, A. P.; Perez-Payan, M. N.; Elsegood, M. R. J.; Jackson, R. F. W.; Gude, M.; Piarulli, U.; Gennari, C. *Tetrahedron Lett.* **1999**, *40*, 2849.
- 26) "Discovery of a New Efficient Chiral Ligand for Copper Catalyzed Enantioselective Michael Additions by High-Throughput Screening of a Parallel Library." Chataigner, I.; Gennari, C.; Piarulli, U.; Ceccarelli S. *Angew. Chem. Int. Ed.* **2000**, *39*, 916.
- 27) "The Effect of Ligands and Additives on the Palladium Promoted Carbonylative Coupling of Vinyl Stannanes and Electron-Poor Enol Triflates." Ceccarelli, S.; Piarulli, U.; Gennari, C. *J. Org. Chem.* **2000**, *65*, 6254.
- 28) "Optimization of New Chiral Ligands for the Copper-Catalyzed Enantioselective Conjugate Addition of Et<sub>2</sub>Zn to Nitroolefins by High-Throughput Screening of a Parallel Library." Ongeri, S.; Piarulli, U.; Jackson, R. F. W.; Gennari, C. *Eur. J. Org. Chem.* **2001**, 803.
- 29) "Discovery of a New Efficient Chiral Ligand for Copper Catalyzed Enantioselective Michael Additions by High-Throughput Screening of a Parallel Library." Chataigner, I.; Gennari, C.; Ongeri, S.; Piarulli, U.; Ceccarelli S. *Chem. Eur. J.* **2001**, *7*, 2628.
- 30) "Enantioselective Binding of Dipeptides using Acyclic Receptors" Botana, E.; Ongeri, S.; Arienzo, R.; Demarcus, M.; Frey, J. G.; Piarulli, U.; Potenza, D.; Gennari, C.; Kilburn, J. D. *Chem. Commun.* **2001**, 1358.
- 31) "Synthetic Studies on the Sarcodictyins: Synthesis of Fully Functionalized Cyclization Precursors." Ceccarelli, S.; Piarulli, U.; Gennari, C. *Tetrahedron* **2001**, *57*, 8531.
- 32) "A Carbonylative Cross-Coupling Strategy to the Total Synthesis of the Sarcodictyins: Preliminary Studies and Synthesis of a Cyclization Precursor." Ceccarelli, S.; Piarulli, U.; Telser, J.; Gennari, C. *Tetrahedron Lett.* **2001**, *42*, 7421.
- 33) "Synthesis, Conformational Studies and Binding Properties of Acyclic Receptors for *N*-Protected Aminoacids and Dipeptides." Botana, E.; Ongeri, S.; Arienzo, R.; Demarcus, M.; Frey, J. G.; Piarulli, U.; Potenza, D.;

- Kilburn, J. D.; Gennari, C. *Eur. J. Org. Chem.* **2001**, *4*, 4625.
- 34) "Cyclative Cleavage via Solid-Phase Supported Stabilized Sulfur Ylides: Synthesis of Macrocyclic Lactones." La Porta, E.; Piarulli, U.; Cardullo, F.; Paio, A.; Provera, S.; Seneci, P.; Gennari, C. *Tetrahedron Lett.* **2002**, *43*, 761
  - 35) "Synthesis and Screening of New Chiral Ligands for the Copper Catalysed Enantioselective Allylic Substitution." Ongerì, S.; Piarulli, U.; Roux, M.; Monti, C.; Gennari, C. *Helv. Chim. Acta*, **2002**, *85*, 3388.
  - 36) "A New Catalytic and Enantioselective Desymmetrization of Meso Cyclic Allylic Bisdiethylphosphates with Organozinc Reagents." Piarulli, U.; Daubos, P.; Claverie, C.; Roux, M.; Gennari, C. *Angew. Chem. Int. Ed.* **2003**, *42*, 234.
  - 37) "Combinatorial Libraries of Chiral Ligands for Enantioselective Catalysis." Gennari, C.; Piarulli, U. *Chem. Rev.* **2003**, *103*, 3071.
  - 38) "Copper Phosphoramidite-Catalyzed Enantioselective Desymmetrization of *meso*-Cyclic Allylic Bisdiethyl Phosphates." Piarulli, U.; Daubos, P.; Claverie, C.; Gennari, C.; Minnaard, A. J.; Feringa, B. L. *Org. Lett.* **2003**, *5*, 4493.
  - 39) "Copper Catalysed 1,4-Addition of Organozinc Reagents to  $\alpha,\beta$ -Unsaturated Carbonyl Compounds: A Mechanistic Investigation." Gallo, E.; Ragaini, F.; Bilello, L.; Cenini, S.; Gennari, C.; Piarulli, U. *J. Organomet. Chem.* **2004**, *689*, 2169.
  - 40) "A Modular Approach to a New Class of Monodentate Chiral Phosphorus Ligands, and their Application in Enantioselective Copper-Catalysed Conjugate Additions of Diethylzinc to Cyclohexenone." Monti, C.; Gennari, C.; Steele, R. M.; Piarulli, U. *Eur. J. Org. Chem.* **2004**, 3557.
  - 41) "Microwave-Assisted Solvent-free Synthesis of a Quinoline-3,4-Dicarboximide Library on Inorganic Solid Supports." Mortoni, A.; Martinelli, M.; Piarulli, U.; Regalia, N.; Gagliardi, S. *Tetrahedron Lett.* **2004**, *45*, 6623
  - 42) "Rh-Catalysed Asymmetric Hydrogenations with a Dynamic Library of Chiral Tropos Phosphorus-Ligands." Monti, C.; Gennari, C.; Piarulli, U. *Tetrahedron Lett.* **2004**, *45*, 6859.
  - 43) "Copper-catalysed Enantioselective Desymmetrisation of *meso* Cyclic Allylic Bis(diethyl phosphates) with Organozinc Reagents." Piarulli, U.; Daubos, P.; Claverie, C.; Monti, C.; Gennari, C.; *Eur. J. Org. Chem.* **2005**, 895.
  - 44) "Rh-catalysed asymmetric hydrogenation of prochiral olefins with a dynamic library of chiral tropos phosphorus ligands." Gennari, C.; Monti, C.; Piarulli, U.; de Vries, J. G.; de Vries, A. H. M.; Lefort, L. *Chem. Eur. J.* **2005**, *11*, 6698.
  - 45) "Enantioselective Conjugate Addition of Phenylboronic Acid to Enones Catalyzed by a Chiral Tropos/Atropos Rhodium Complex at the Coalescence Temperature" Monti, C.; Gennari, C.; Piarulli, U. *Chem. Commun.* **2005**, 5281.
  - 46) "Rh-Catalyzed Asymmetric Reactions with a Dynamic Library of Chiral



- Tropos Phosphorus Ligands.” Gennari, C.; Monti, C.; Piarulli, U. *Pure Appl. Chem.* **2006**, *78*, 303.
- 47) “A Practical Approach to the Resolution of Racemic *N*-Benzyl  $\alpha$ -Amino Acids by Liquid-Liquid Extraction, Using a Lipophilic Chiral Cobalt(III) Salen Complex.” Reeve, T. B.; Cros, J.-P.; Gennari, C.; Piarulli, U.; de Vries, J. G. *Angew. Chem. Int. Ed.* **2006**, *45*, 2449.
  - 48) “Enantioselective cyanosilylation of aldehydes catalysed by a diastereomeric mixture of atropisomeric thioureas.” Steele, R. M.; Monti, C.; Gennari, C.; Piarulli, U.; Andreoli, F.; Vanthuyne, N.; Roussel C. *Tetrahedron: Asymmetry* **2006**, *17*, 999.
  - 49) “2-(2-Hydroxyaryl)cinnamic amides: a new class of axially chiral molecules.” Marelli, C.; Monti, C.; Galli, S.; Masciocchi, N.; Piarulli, U. *Tetrahedron* **2006**, *62*, 8943.
  - 50) “Rh-Catalyzed Enantioselective Conjugate Addition of Arylboronic Acids with a Dynamic Library of Chiral Tropos Phosphorus Ligands.” Monti, C.; Gennari, C.; Piarulli, U. *Chem. Eur. J.* **2007**, *13*, 1547.
  - 51) “Enantioselective Rh-Catalyzed Addition of Arylboronic Acids to *N*-Tosylarylimines.” Marelli, C.; Monti, C.; Gennari, C.; Piarulli, U. *Synlett* **2007**, 2213.
  - 52) “Efficient Resolution of Racemic *N*-Benzyl  $\beta^3$ -Amino Acids by Iterative Liquid-Liquid Extraction with a Chiral (Salen)Cobalt(III) Complex as Enantioselective Selector.” Dzygiel, P.; Monti, C.; Piarulli, U.; Gennari, C. *Org. Biomol. Chem.* **2007**, *5*, 3464.
  - 53) “Highly enantioselective Rh-catalyzed hydrogenations with heterocombinations of pentafluorobenzyl- and methoxybenzyl-derived binaphthyl phosphites.” Lynikaite, B.; Cvengroš, J.; Piarulli, U.; Gennari, C. *Tetrahedron Lett.* **2008**, *49*, 755.
  - 54) “Synthesis and Conformational Studies of Peptidomimetics Containing a New Bifunctional Diketopiperazine Scaffold Acting as a  $\square$ -Hairpin Inducer.” Ressurreição, A. S. M.; Bordessa, A.; Civera, M.; Belvisi, L.; Gennari, C.; Piarulli, U. *J. Org. Chem.* **2008**, *73*, 652.
  - 55) “Resolution of Racemic *N*-Benzyl  $\alpha$ -Amino Acids by Liquid-Liquid Extraction: a Practical Method Using a Lipophilic Chiral Cobalt(III) Salen Complex and Mechanistic Studies.” Dzygiel, P.; Reeve, T. B.; Piarulli, U.; Krupicka, M.; Tvaroska, I.; Gennari, C. *Eur. J. Org. Chem.* **2008**, 1253.
  - 56) “Combinations of Acidic and Basic Monodentate Binaphtholic Phosphites as Supramolecular Bidentate Ligands for Enantioselective Rh-Catalyzed Hydrogenations.” Pignataro, L.; Lynikaite, B.; Cvengros, J.; Marchini, M.; Piarulli, U.; Gennari, C. *Eur. J. Org. Chem.* **2009**, 2539.
  - 57) “Chiral (salen)Co(III)(*N*-benzyl-L-serine) derived phosphites: monodentate *P*-ligands for enantioselective catalytic applications.” Carboni, S.; Pignataro, L.; Gennari, C.; Piarulli, U. *Tetrahedron: Asymmetry* **2009**, *20*, 1185.
  - 58) “Combination of a binaphthol-derived phosphite and a  $C_1$ -symmetric

- phosphinamine generates heteroleptic catalysts in Rh- and Pd-mediated reactions.” Pignataro, L.; Lynikaite, B.; Colombo, R.; Carboni, S.; Krupicka, M.; Piarulli, U.; Gennari, C. *Chem. Commun.* **2009**, 3539.
- 59) “Cyclic RGD-Peptidomimetics Containing Bifunctional Diketopiperazine Scaffolds as New Potent Integrin Ligands.” Ressurreição, A. S. M.; Vidu, A.; Civera, M.; Belvisi, L.; Potenza, D.; Manzoni, L.; Ongeri, S.; Gennari, C.; Piarulli, U. *Chem. Eur. J.* **2009**, *15*, 12184.
  - 60) “Synthesis of (*S*)- and (*R*)-5-oxo-piperazine-2-carboxylic acid and its application to peptidomimetics.” Guitot, K.; Carboni, S.; Reiser, O.; Piarulli U. *J. Org. Chem.* **2009**, *74*, 8433.
  - 61) “Foldamers of bifunctional diketopiperazines displaying a  $\beta$ -bend ribbon structure.” Delatouche, R.; Durini, M.; Civera, M.; Belvisi, L.; Piarulli, U. *Tetrahedron Lett.* **2010**, *51*, 4278.
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