Resume

Laura Palombi

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Short Biography

Laura Palombi was born in Marino (Rome). After graduating from High school (“Maturità Classica”), she studied Chemistry at the University "La Sapienza" (Bachelor Thesis: “Photochemical and Enzimatic Reactivity of 2-(2-Furyl)-1,3-Dicarbonyl Compounds (1994) (110/110)). After one year of post-graduated education at the department of Physical Biochemistry of the "Istituto Superiore di Sanità" (Rome), she moved back to the University "La Sapienza" and started PhD studies in Chemical Sciences (PhD Thesis: "New methodologies for stereoselective and enantioselective oxidations" (1998)). In 1999 she obtained a 4 years researcher position at the University of L'Aquila (“Assegno di Ricerca”) where she started investigations in the field of the Organic Electrosynthesis. In 2004 she got a position as Assistant Professor in Organic Chemistry at the University of Salerno, where she has been focusing her research activity in the development of new methodologies for stereo- and enantioselective bond-forming reactions. Teaching activity at the University of Salerno includes courses on “Reaction Mechanisms in Organic Chemistry”, and “Advanced Synthetic Methodologies in Organic Chemistry-Mod B”, training laboratory classes of “Organic Chemistry I” and “Advanced Organic Synthesis” (“Laurea Triennale” and “Laurea Magistrale in Chimica”), as well as theses supervision (Bachelor and PhD students). Other professional experience related to the research activity includes fixed-term contracts (Biocine spa (1994) and Arta Abruzzo (2003)), consultancy works (Interlab (2016), FOS spa (2016), Fater spa (2017-2019)) and cooperation in the research activity for patent inventions. Since April 2020, she got a position as Associate Professor in Organic Chemistry at the Department of Physical and Chemical Sciences at the University of L’Aquila.

Scientific Profile in Few Words

Experimentalist in organic chemistry. Cultural background in stereoselective and electro-organic synthesis with multi-disciplinary skills (spectroelectrochemistry, modified electrodes, theoretical approach to the reaction mechanisms). Principal research interests: asymmetric synthesis of heterocyclic compounds by organo- and electro-catalysis, one-pot and sequential processes, tandem reactions and combined electro- and chemical processes. Study of the molecular properties in electrochemical environment. At the current date, co-author of 2 Patents, 3 invited book chapters with ISBN, 1 invited article for editorial series and 72 ISI indexed articles, including 21 articles as corresponding author (2 research papers as single author) and 15 articles as first author. Reviewer and Guest Editor for high ranked Scientific Journals.

Publications (2011-2022)

2022

- V. Morlacci, T. Caruso, M. Chiarini, A. Arcadi, M. Aschi, L. Palombi
Electrochemical-induced cascade reaction of 2-formyl benzo-nitrile with anilines: synthesis of N-aryl isoindolinones
Molecules, 2022, 27(23), 8199 DOI: 10.3390/molecules27238199
- V. Marsicano, G. Marraffa, M. Chiarini, L. Palombi, A. Arcadi
Divergent Sequential Reactions of b-(2-aminophenyl)-a,b-Ynones with Malonyl Chloride
European Journal of Organic Chemistry, 2022, *accepted. DOI: 10.1002/ejoc.202201187*
-L. Serusi, L. Palombi, G. Pierri, A. Di Mola, A. Massa
Asymmetric cascade Aza-Henry/lactamization reaction in the highly enantioselective organocatalytic synthesis of 3- (nitromethyl)isoindolin-1-ones from α-amido sulfones
Journal of Organic Chemistry, 2022, 87, *13*, 8420-8428 DOI: 10.1021/acs.joc.2c00518

2021

-L. Serusi, A. Massa, C. Tedesco, A. Capobianco, L. Palombi
The First highly Enantioselective Synthesis of 3-sulfinyl substituted Isoindolinones having adjacent Carbon and Sulfur Stereocenters
Journal of Organic Chemistry, 2021, 86, *15*, 10630–10639 DOI: 10.1021/acs.joc.1c01300
T. Caruso, L. Palombi, N. D'Alessio, M. Migliaccio
A method for quantifying the super absorbent polymer (SAP) content in absorbent sanitary products
WO 2021220070 A1 20211104 (2021), Fater SpA

2020

- G. Giorgianni, V. Nori, A. Baschieri, L. Palombi, A. Carlone
Organocatalyzed Michael Addition to Nitroalkenes via Masked Acetaldehyde
Catalysts 2020, *10*(11), 1296. *DOI: org/10.3390/catal10111296*
- T. Caruso, L. Palombi, N. D'Alessio, M. Migliaccio
Procedimento per quantificare il contenuto di polimeri super assorbenti in prodotti sanitari assorbenti
Pat.102020000009085 (2020), Fater SpA
-A. Di Mola, A. Macchia, L. Palombi, A. Massa
Methyl 2-(1-methyl-3-oxoisoindolin-1-yl)acetate
Molbank 2020, *2020*(2), M1131; DOI: 10.3390/M1131
-A. Macchia, V. D. Cuomo, A. Di Mola, G. Pierri, C. Tedesco, L. Palombi, A. Massa
On the necessity of one-pot tautomer trapping in asymmetric Michael reactions of arylideneisoxazol-5-ones
European Journal of Organic Chemistry, 2020, *15*, 2264-2270. *DOI: 10.1002/ejoc.202000286*

2019

-A. Velardo, V. Capaccio, T. Caruso, A. Di Mola, A. Massa, C. Tedesco, L. Caporaso, L. Falivene, L. Palombi
Desymmetrization of 2-cyano-N-tosylbenzylidenimine with thiols and organocatalytic heterocyclization by dynamic resolution: mechanism investigation
European Journal of Organic Chemistry. 2019, *46*, 7584-7589. *DOI: 10.1002/ejoc.201901499*
-A. Di Mola, A. Macchia, C. Tedesco, G.Pierri, L. Palombi, R. Filosa, A. Massa
Synthetic Strategies and Cascade Reactions of 2-Cyanobenzophenones for the Access to Diverse 3,3 Disubstituted Isoindolinones and 3-Aryl-3-Hydroxyisoindolinones
ChemistrySelect, 2019, *4*, 4820 –4826. DOI: 10.1002/slct.201901045
-F. Romano, A. Di Mola, L. Palombi, M. Tiffner, M. Waser, A. Massa
Synthesis and Organocatalytic Asymmetric Nitro-aldol Initiated Cascade Reactions of 2-Acylbenzonitriles Leading to 3,3-Disubstituted Isoindolinones
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2018

-V. Capaccio, K. Zielke, A. Eitzinger,. A. Massa, L. Palombi, K. Faust, M. Waser
Asymmetric phase-transfer catalysed β-addition of isoxazolidin-5-ones to MBH carbonates
Organic Chemistry Frontiers, 2018, 5, 3336-3340, DOI: 10.1039/c8qo01057a
-A. Di Mola, M. Di Martino, V. Capaccio, G. Pierri, L. Palombi, C. Tedesco, A. Massa
Synthesis of 2-Acetylbenzonitriles and Their Reactivity in Tandem Reactions with Carbon and Hetero Nucleophiles: Easy Access to 3,3-Disubstituted Isoindolinones
European Journal of Organic Chemistry, 2018, 1699–1708. DOI: 10.1002/ejoc.201800240

2017

-V. Capaccio, A. Capobianco, A. Stanzione, G. Pierri, C. Tedesco, A. Di Mola, A. Massa, L. Palombi
Organocatalytic Heterocyclization Driven by Dynamic Kinetic Resolution: Enantioselective Access to Multi-heteroatomic Cyclic Structures Mediated by Cinchona Alkaloid-based Catalysts
Advanced Synthesis & Catalysis, 2017, 359, 2874–2880. DOI: 10.1002/adsc.201700472
-F. Scorzelli, A. Di Mola, F. De Piano, C. Tedesco, L. Palombi, R. Filosa, M. Waser, A. Massa
A systematic study on the use of different organocatalytic activation modes for asymmetric conjugated addition reactions of isoindolinones
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2016

-A. Di Mola, F. Scorzelli, G. Monaco, L. Palombi and A. Massa
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-A. Capobianco, A. Di Mola, V. Intintoli, A. Massa, L. Roiser, M. Waser and L. Palombi
Asymmetric tandem hemiaminal-heterocyclization-aza-Mannich reaction of 2-formylbenzonitriles and amines using chiral phase transfer catalysis: an experimental and theoretical study
RSC Advances, 2016, 6, 31861-31870 DOI: 10.1039/C6RA05488A

2015

-A. Di Mola, M. Tiffner, F. Scorzelli, L. Palombi, R. Filosa, P. De Caprariis, M. Waser, A. Massa
Bifunctional phase-transfer catalysis in the asymmetric synthesis of biologically active isoindolinones
Beilstein Journal of Organic Chemistry. 2015, *11*, 2591–2599. DOI:10.3762/bjoc.11.279
-F. Scorzelli, A. Di Mola, L. Palombi, A. Massa
Isoindolinones as Michael donors under phase transfer catalysis: enantioselective synthesis of phthalimidines containing a tetra-substituted carbon stereocenter
Molecules, 2015, *20*, 8484-8498. DOI:10.3390/molecules20058484
-A. Capobianco, T. Caruso, L. Palombi
Electrochemically-induced N-alkylation of chiral 2-methyl(sulfinyl)benzimidazole
Synthetic Communications, 2015, 45(15), 1783-1791. DOI: 10.1080/00397911.2015.1044616
-F. Scorzelli, A. Di Mola, L. Palombi, G. Croce, A. Massa
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*Tetrahedron Lett*ers, 2015, 56(21), *2787-2790*. DOI: 10.1016/j.tetlet.2015.04.013
-F. Scorzelli, A. Di Mola, L. Palombi, R. Filosa A. Massa
3-Carboxylate Substituted Isoindolinones in K2CO3-Catalyzed Michael Reactions
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2014

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2013

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2012

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Current Organic Chemistry, 2012, *16, 2302-20* DOI: 10.2174/138527212803520254
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European Journal of Organic Chemistry, 2012, 5357-65 DOI: 10.1002/ejoc.201200678
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Electrochemically Initiated Tandem and Sequential Conjugate Addition Processes: One-Pot Synthesis of Diverse Functionalized Isoindolinones
Advanced Synthesis and Catalysis, 2012, 354, 1717 – 1724 DOI: 10.1002/adsc.201200065
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The first organocatalytic asymmetric synthesis of 3-substituted isoindolinones
RSC Advances, 2012, 2, 3592-3595 DOI: 10.1039/C2RA20231J

2011

-L. Palombi
A study on designing a paired electrolysis for electro-induced Michael addition using tetrafluoroborate-based ionic liquid as electrolysis medium and pre-catalyst in a divided cell
Electrochimica Acta, 2011, 56, 7442-7445 DOI: 10.1016/j.electacta.2011.07.006
-L. Palombi
The first electro-induced asymmetric Stevens rearrangement of (S)- and (R)-N-benzyl proline-derived ammonium salts
Catalysis Communications, 2011, *12*, 485-488 DOI: 10.1016/j.catcom.2010.10.027