

CURRICULUM VITAE

Dr.ssa Serena Gabrielli

PERSONAL INFORMATION:

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Date of Birth: September 19, 1981

Citizenship: Italian

EDUCATION: Serena Gabrielli was born in San Benedetto del Tronto, Italy, in 1981. She began her studies in Chemistry in 2000 at the University of Camerino-Italy, where she received her Laurea degree *cum laude* in 2007, with the dissertation thesis: "*Application of the Nitroaldol (Henry) Reaction for a Two Step Sequence in the Synthesis of Polyfunctionalized Dihydropyran Derivatives*" under the guidance of Professor Roberto Ballini. Then, after a short period in the Ballini's laboratory, in February 2008 she started the Ph.D. studies.

PRESENT POSITION: Serena Gabrielli is working at the University of Camerino, hold a Post Doctoral position, under the guidance of Professors Enrico Marcantoni & Roberto Ballini. The main topic of her research regards polymeric compounds, such as polyurethanes compounds used as binder for different applications, the study of vulcanized rubber and new approaches for its devulcanization and the development in organic synthesis of new environmental processes in according to Green Chemistry, especially, by heterogeneus catalysts and making the domino reaction, for the synthesis of fine chemicals.

FOREIGN LANGUAGES: English: PET certificate.

**COMPUTER HARD
AND SOFTWARE:**

Windows Vista, 2000, XP; Microsoft Office 2007, Outlook, Explorer, CS ChemOffice, Acrobat, Adobe Acrobat, Beilstein, SCI Finder, HyperChem, ACD, CorelDraw.

INSTRUMENTATION SKILL: GC; GC/MS; IR; NMR.

SCIENTIFIC PAPER:

1. "*Application of the Nitroaldol (Henry) Reaction for a Two Step Sequence in the Synthesis of Polyfunctionalized Dihydropyran Derivatives*" R. Ballini, S. Gabrielli, A. Palmieri; *Synlett* 2007, 15, 2430-2432 .
2. "*Improved preparation of alkyl 2-(3-indolyl)-3-nitroalkanoates under fully heterogeneous conditions: stereoselective synthesis of alkyl(E)-2-(3-indolyl)-2-alkenoates*" R. Ballini, S. Gabrielli, A. Palmieri, M. Petrini *Tetrahedron* 2008, 64, 5435-5441.
3. " *β -Nitroacrylates as key starting materials for the uncatalysed, one-pot synthesis of polyfunctionalized dihydroquinoxalinone derivatives, via an anti-Michael reaction*" R. Ballini, S. Gabrielli, A. Palmieri; *Synlett* 2009, 6, 965-967.
4. " *β -Nitroacrylates and silyl enol ethers as key starting materials for the synthesis of polyfunctionalized β -nitro esters and 1,2-oxazine-2-oxides*" R. Ballini, G. Bosica, S. Gabrielli, A. Palmieri; *Tetrahedron* 2009, 65, 2916-2920.
5. "*Diastereoselective, one-pot synthesis of polyfunctionalized bicyclo[3.3.1]octanes by an anionic domino process*" R. Ballini, L. Barboni, C. Femoni, S. Gabrielli, A. Palmieri; *Chem.-Eur. J.* 2009, 7867-7870.
6. "*Preparation of 2H-1,4-Benzoxazin-2-one Derivatives under Heterogeneous Conditions via Domino Process*" R. Ballini, A. Palmieri, M. AbdulKarim Talaq, S. Gabrielli; *Adv. Synth. Catal.*, 2009, 351, 2611-2614.
7. " *β -Nitroacrylates as an Emerging, Versatile Class of Functionalized Nitroalkenes for the Synthesis of a Variety of Chemicals*" R. Ballini, S. Gabrielli; A. Palmieri; *Current Org. Chem.*, 2010, 14, 65-83. (REVIEW).
8. "*Chemoselective S_N2' reaction of nitroalkanes to dialkyl 2-(bromomethyl)fumarates under cetyltrimethylammonium hydroxide (CTAOH) catalysis*" R. Ballini, S. Gabrielli, A. Palmieri; *Tetrahedron Letters*, 2010, 51, 1233-1235.
9. "*Michael Reaction of Nitroalkanes with β -Nitroacrylates under Solid Promoter: Advanced Regio- and Diastereoselective Synthesis of Nitro-Functionalized α,β -Unsaturated Esters*

- and 1,3-Butadiene-2-carboxylates”* A. Palmieri, S. Gabrielli, R. Ballini, *Adv. Synth. Catal.*, 2010, 352, 1485-1492.
10. “*Efficient Two-Step Sequence for the Synthesis of 2,5-Disubstituted Furan Derivatives from Functionalized Nitroalkanes: Successive Amberlyst A21- and Amberlyst 15-Catalyzed Processes*” A. Palmieri, S. Gabrielli, R. Ballini, *Chem. Commun.* 2010, 46, 6165-6167.
11. “*β-Nitroacrylates as a Precursors of Tetrasubstituted Furans in a One-Pot process and under Acidic Solvent-Free Comditions*” R. Ballini, S. Gabrielli, A. Palmieri; *Synlett*, 2010, 2468-2470.
12. “*A Two-Step Synthesis of Unsymmetrical 1,4-Disubstituted Carbazoles from Sulfonylindoles Under Heterogeneous Catalysis*” R. Ballini, S. Gabrielli, A. Palmieri and M. Petrini; *Adv. Synth. Catal.*, 2010, 352, 2459-2462.
13. “*The aliphatic nitrocompounds as versatile building blocks for cascade processes*” R. Ballini, S. Gabrielli, A. Palmieri; *Green Chemistry to Save the Environment*, Editors: Sanjay K. Sharma and Ackmez Mudhoo, 2010.
14. “*Alkoxyamine-cyanoborane adducts: efficient cyanoborane transfer agents*” J. M. Marquez, E. Martinez-Castro, S. Gabrielli, O. Lopez, I. Maya, M. Angulo, E. A. Ivarez and J. G. Fernandez-Bolanos; *Chem. Comm.*, 2011, 47, 5617-5619.
15. “*Nitroalkanes as key compounds for the synthesis of amino derivatives*” R. Ballini, S. Gabrielli, A. Palmieri, M. Petrini, *Curr. Org. Chem.* 2011, 15, 1482-1506.
16. “*Eco-friendly synthesis of β-nitro ketones from conjugated enones: an important improvement of the Miyakoshi procedure*” S. Gabrielli, A. Palmieri, A. Perosa, M. Selva and R. Ballini; *Green Chemistry*, 2011, 13, 2026-2028.
17. “*A new One-Pot Synthesis of Polysubstituted Indoles from Pyrroles and β-Nitroacrylates*” A. Palmieri, S. Gabrielli, D. Lanari, L. Vaccaro, R. Ballini; *Adv. Synth. Catal.*, 2011, 353, 1425-1428.

MEETING, CONFERENCE AND SYMPOSIUM:

- TUMA Convegno Interregionale della Società Chimica Italiana, 26-28 Semptember 2007, Camerino. “*Formazione One-Pot di β-nitroalcoli e composti β-nitrocarbonilici da alogenuri alifatici*” Roberto Ballini, Giovanna Bosica, Serena Gabrielli, Alessandro Palmieri.
- 7° Sayes , 22-24 October 2007, Riccione. Oral Comunication: “*Nuove ed efficiente sintesi ‘Two-Step’ di diidropirani sostituiti*”, Roberto Ballini, Serena Gabrielli, Alessandro Palmieri.

- **National Seminar on Green Chemistry and Natural Products**, 26-27 November 2007, University of Delhi, Indi. “*Nitroalkanes: key building blocks for one-pot processes*” Roberto Ballini, Giovanna Bosica, Serena Gabrielli, Alessandro Palmieri.
- **3º Convegno Nazionale Divisione Chimica Organica**, 26-30 luglio 2008, Taormina. Poster: “*One-Pot Synthesis of Bicyclo[3.3.1]nonanes from 1,3-dinitroalkanes*” Roberto Ballini, Luciano Barboni, Giovanna Bosica, Serena Gabrielli and Alessandro Palmieri.
- **10th School on Green Chemistry**, 12-18 October 2008, Venezia. Poster: “One-pot, Diastereoselective Synthesis of Polyfunctionalized Bicyclo[3.3.1]nonanes via an Anionic Domino Process from 1,3-Dinitroalkanes” Roberto Ballini, Luciano Barboni, Giovanna Bosica, Serena Gabrielli, Alessandro Palmieri
- **12th EuCheMS International Conference on Chemistry and the Environment**, 14-17 Giugno 2009, Stoccolma. “*Ecofriendly synthesis of nitroalkanes*” Roberto Ballini, Serena Gabrielli, Alessandro Palmieri.
- **XXXIV Summer School "A. CORBELLA"** - Seminars on Organic Chemistry, 22-26 June 2009, Gargnano (BS).
- **International school of Organometallic Chemistry 7th edition**, Camerino, 5-9 September 2009.
- “**3rd International conference for young chemists** “- Innovations and advancements in chemistry, 23-25 June 2010, Malaysia.
- **8th Symposium on Organic Chemistry (SISOC VIII)** held in Padova from the 3th till the 6th of July 2010. Poster: “*β-Nitroacrylates as useful building blocks for the synthesis of Valproic Acid and 2H-1,4-benzoxazine-2-one*” Roberto Ballini, Serena Gabrielli and Alessandro Palmieri.
- **XXXIII Convegno Nazionale della Divisione di Chimica Organica Società Chimica Italiana**, 12-16 Settembre 2010 Centro congressi palariviera, San Benedetto del Tronto (AP).