

Giorgio Molteni, born in 1963, has graduated in Chemistry at the University of Milan and received his Ph.D. in Chemical sciences at the same University. In 2002 he was appointed researcher at the University of Milan within the scientific area CHIM/06 (organic Chemistry).

From 2001 to 2003 he was appointed as a lecturer at the School of specialisation in organic synthesis in Milan. In the period 2006-2011 he was lecturer of the module "reaction mechanisms in organic Chemistry" (physical organic Chemistry) and, from 2014 to 2015, of the "laboratory of macromolecular Chemistry". Since 2012 he is coordinator of the course "applications in food science" and lecturer of the related Chemistry module. He is the author of the textbook on physical organic Chemistry "elementi di Chimica organica fisica" (2009) and the textbook on instrumental analysis of food entitled "introduzione all'analisi strumentale degli alimenti" (Aracne editrice, two editions, 2013 and 2018). He wrote the chapters entitled "cycloadditions and cyclisation reactions" which appeared in the "Science of synthesis" series, and "stereoselective catalytic systems immobilised onto magnetic nanoparticles" (Wiley).

Since 2003 he is a member of the National centre for pericyclic reactions. From 2009 to 2016 he was a member of the board of the Chemical library, University of Milan. In 2013 he was coordinator of a module within the School of doctorate in Chemical Sciences, University of Milan. He currently act as a reviewer for the following journals: *Angew. Chem.*, *J. Am. Chem. Soc.*, *J. Org. Chem.*, *Chem. Commun.*

Research

The research activity of Dr Molteni is documented by over 100 publications (of which 14 as single author) published on international journals. Dr Molteni's main interest lies on organic Chemistry. During the first years of his activity, Dr Molteni explored the synthetic aspects of heterocyclic Chemistry, mainly focussing on 1,3-dipolar cycloadditions, for the formation of pharmacologically relevant molecules including enantiopure tricyclic benzodiazepines and β -lactam-based molecules. Later, he developed a strong interest on mechanistic and theoretical aspects of 1,3-dipolar cycloadditions. Recently, the activity of Dr Molteni is related to the catalysis of cycloadditions by metal-oxide nanoparticles and the behaviour of 1,3-dipolar species in aqueous medium.

Teaching responsibilities

In the Academic year 2018/19 Dr Molteni is the coordinator of the course "applications in food science" and lecturer of the related Chemistry module.

Recent publications

- 1) G. Molteni, "Stable nitrile oxide dipolar cycloadditions in pure water", *Tetrahedron* **2011**, *67*, 7343.
- 2) G. Molteni, in "Water in Organic Synthesis", S. Kobayashi, Ed., Thieme Verlag, Stuttgart, **2012**, Cap. 5.1. ISBN 978-3-13-164341-4.
- 3) G. Molteni, "Three-Step Synthesis of Triazolobenzodiazepinones via Sonogashira/Huisgen Protocol", *Heterocycles*, **2013**, *87*, 1765.
- 4) G. Molteni, "Short synthesis of enantiopure thieno[2,3-*f*]triazolo[1,5-*a*][1,4]diazepines and thieno[2,3-*f*][1,4]diazepin-5-ones", *J. Heterocycl. Chem.* **2014**, *51*, E329.
- 5) A. M. Ferretti, A. Ponti, G. Molteni, "Silver(I) oxide nanoparticles as a catalyst in the azide-alkyne cycloaddition", *Tetrahedron Lett.*, **2015**, *56*, 5727-5730.
- 6) G. Molteni, "Dipolar cycloadditions of nitrones in aqueous medium", *Heterocycles*, **2016**, *92*, 2115-2140.
- 7) G. Molteni, A. Ponti, "Site- and Regioselectivity of Nitrile Oxide-Allene Cycloadditions: DFT-Based Semiquantitative Predictions", *J. Org. Chem.*, **2017**, *82*, 10710-10714.
- 8) A. Ponti, A. M. Ferretti, S. Mondini, G. Molteni "Nitrilimine cycloadditions catalysed by iron oxide nanoparticles", *J. Nanoparticle Res.*, **2018**, *20*:79.