

Direzione Innovazione e Internazionalizzazione

> ID VP010\_CHIM

# Visiting Professor Program Academic Year 2023/2024

**TEACHING COMMITMENT: 12 hours** 

COURSE TITLE Carbanions

TEACHING PERIOD 2nd term

**SCIENTIFIC AREA** Organic Synthesis

LANGUAGE USED TO TEACH English

# **COURSE SUMMARY**

Recent applications of organometallic chemistry towards Synthetic Organic Chemistry. The chemistry of Li, Mg, B, Al, Cu and Zn will be underlined, and special emphasis will be given to configurationally stable, functionalized organometallic derivatives, specific reactivities and uses in synthesis.

Recent achievements on "Stereoselective Synthesis" will also be given as a comprehensive treatment of chemical transformations in which new stereocenters are created, i.e., all enantio- and those diastereodifferentiating reactions that allow the absolute and relative configuration of new stereogenic units to be controlled. A special emphasis will be given to the diastereoselective and enantioselective creation of carbon-carbon bonds.

#### **LEARNING OBJECTIVES**

Offering to PhD Students in Chemical and Material Sciences the most recent advancements in Organic Synthesis through the use of carbanion-like reagents.

Stimulating the critical analysis for designing synthetic routes.

In depth understanding of stereochemical aspects of nucleophilic-electrophilic transformations.

#### **TUTORSHIP ACTIVITIES**

N/A

LAB ACTIVITIES

**OTHER ACTIVITIES BESIDES THE COURSE** 

Overview of the research activity carried out by the Visiting Professor.

# **ADDITIONAL COURSE**

**COURSE TITLE** New Trends in Organic Chemistry

**TEACHING PERIOD** 1st term

SCIENTIFIC AREA Organic Chemistry

LANGUAGE USED TO TEACH

English

#### **COURSE SUMMARY**

Recent applications of organometallic chemistry towards Synthetic Organic Chemistry.

The chemistry of Li, Mg, B, Al, Cu and Zn will be discussed

Special emphasis will be given to configurationally stable, functionalized organometallic derivatives, specific reactivities and uses in synthesis.

#### **LEARNING OBJECTIVES**

Knowing the most recent synthetic techniques levered on the use of organometallics.

Stereochemical aspects of transformations.

## **TUTORSHIP ACTIVITIES**

N/D

# LAB ACTIVITIES

N/D

## **OTHER ACTIVITIES BESIDES THE COURSE**

Overview of the Visiting Professor's reserach activity.

## **VISITING PROFESSOR PROFILE**

Internationally-reputed Organic Chemist with proved experience in the development of synthetic methodology levered on the use of organometallics and carbanion-like reagents. Authorship of top publications in the area and expertise in mentoring PhD students and postdoctoral researchers.

**CONTACT REFERENT** Vittorio Pace vittorio.pace@unito.it