

Heteroelements and Heteroaromatics in organic synthesis



ECTS
3 crédits



Composante
UFR Chimie



Volume horaire
24h



Période de
l'année
Semestre 1

En bref

- > **Langue(s) d'enseignement:** Anglais
- > **Forme d'enseignement :** Lecture and exercise
- > **Ouvert aux étudiants en échange:** Non

Présentation

DESCRIPTION

At the end of this course the student should be able to use the organic chemistry associated with heteroelements for functional group interconversion, bond formation, as well the syntheses and reactivities of heteroaromatic compounds.

- * Heteroelement for C-C and C-Het bond formation

Phosphorus: Arbusov, preparation of phosphonium salts, Wittig, Wittig-Horner, Mitsunobu, Corey-Fuchs ... Sulfur: thioacetals, sulfonium and sulfoxonium ylides, beta anion, preparation and reactivity of sulfones, sulfoxides ... Silicon: synthesis and reactivity of silyl enol ethers, Peterson olefination, trialkylsilyl diazomethane ...

- * Heteroaromatic Chemistry

Heterocycles constitutes the vast majority of all known organic compounds, and are key components of pharmaceuticals, agrochemical, electro-active polymers, flavorings... They are also found in many biologically

significant natural products. This part of the module aims to provide an introduction to aromatic heterocycles by examining the properties, the reactivity patterns, and some important synthetic methods of the main monocyclic heteroaromatic compounds, including:

- Electron-rich aromatic heterocycles (pyrroles, furans, thiophenes, diazoles)
- Electron-deficient aromatic nitrogen heterocycles (pyridines, diazines)

On completion of this course you will be able to devise synthetic pathways to the above heteroaromatics from simple precursors, and suggest reagents and conditions for achieving their region-selective substitution.

HEURES D'ENSEIGNEMENT

Heteroelements and Heteroaromatics in organic synthesis	Cours Magistral	12h
Heteroelements and Heteroaromatics in organic synthesis	Travaux Dirigés	12h

PRÉ-REQUIS NÉCESSAIRES

Mastery of basic knowledge and concepts in organic chemistry

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