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Huisgen 3+2 dipolar cycloaddition, an efficient a straightforward way to azaheterocycles of potential practical applications

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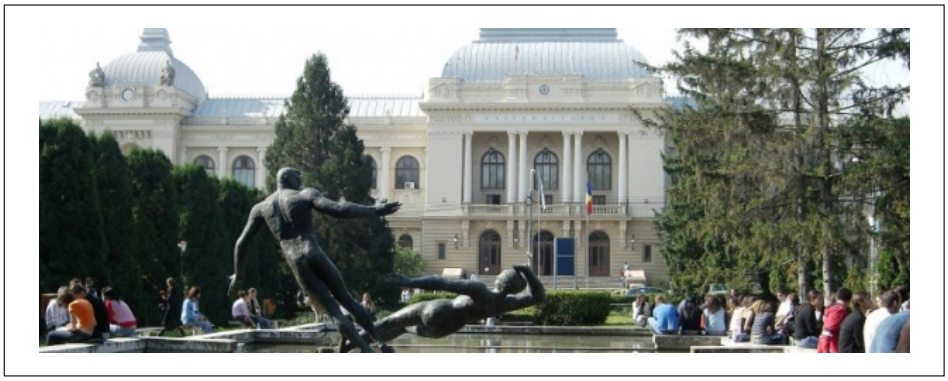
Abstract

Azaheterocyclic compounds, especially five and six member ring, are reported as highly valuable materials in medicine and pharmacy (drugs, as antiplasmodial and antimalarial, antitubercular, antibacterial, antifungal, anti-inflammatory, anti-HIV, anticancer, analgesic, antidepressant, anxiolytics, anti-Alzheimer's, antihypertensive, anticoagulants, diuretics, etc.), opto-electronics (fluorescent and electroluminescent materials, semiconductor devices, sensors and biosensors), agriculture (mainly herbicides and grow up factors), etc. This is why, obtaining of such derivatives continues to generate interest from large research teams from academia, industry, agriculture. As part of our on-going research in the field of azaheterocyclic derivatives, we present herein some core results obtained by our group within this field (in the last 10 years), focused on the obtaining of these compounds via Huisgen 3+2 dipolar cycloaddition of cycloimmonium ylides to variously dipolarophiles with double and triple bounds (symmetrically or non-symmetrically). Some briefly considerations about the applications of the obtained compounds in medicine and pharmacy, opto-electronics and agriculture will be presented.

Biography

Mangalagiu Ionel is a professor of organic and medicinal chemistry and Vice-Rector with research at "Alexandru Ioan Cuza" University of Iasi, Romania. Previously, prof. Mangalagiu served as Dean, Vice-Dean, Head of Organic Chemistry Department, etc. at Faculty of Chemistry. He has nearly 30 years of experience in the research, focused in the area of Heterocyclic Compounds. He has over 150 papers, 13 patents, 3 international chapter books, etc. He was Visiting Professor and/or invited speaker to prestigious foreign universities (Ludwig Maximilianus University Munchen, Technische Universität Braunschweig, University of Florence and Universite D'Angers), awarded with numerous prizes and honours: DAAD and NATO award, "Costin D. Nenitescu Medal" (Romanian Society of Chemistry), "Al.I.Cuza University Award in Research", Special Award of Croatian Association of Inventors, etc.,



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