

COSTEL MOLDOVEANU

Research Areas/Interest

- **Chemistry and health:** chemistry of the nitrogen heterocycles and medicinal chemistry;
- **Chemistry and nanosciences:** nitrogen and oxygen macrocycles, ionic liquids imidazole based;
- **Environmental chemistry:** eco-friendly reactions under ultrasound irradiation.

Chemistry and health: the synthesis of biologically active target compounds (anticancer, anti-tuberculosis, antimicrobial), growth factors in agriculture, new nanomaterials with imidazole skeleton;

Chemistry and nanosciences: the synthesis of ionic liquids, N-heterocyclic carbenes, new highly fluorescent materials, chemosensors;

Environmental chemistry: eco-friendly reactions under ultrasound irradiation; chemosensors.

Keywords: heterocycles, diazine, ylides, coronands, ultrasound, cycloaddition, anticancer, anti-tuberculosis, antimicrobial, growth factors, fluorescent materials, semiconductors, ionic liquids, eco-friendly chemistry.



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Organic chemistry

Heterocyclic Chemistry



Associate Professor
(from 2012)

PhD studies

„Alexandru Ioan Cuza”
from Iași University,
2006

Postdoc Scholarship
University of
Pennsylvania, 2009-
2010

Research Internships
Konstanz University,
Germany

Publications (selection)

Moldoveanu, C., Zbancioc, G., Mantu, D., Maftai, D., Mangalagiu, I., The cycloaddition of the benzimidazolium ylides with alkynes: new mechanistic insights, *PlosOne*, 11(5), e0156129, **2016**. DOI: 10.1371/journal.pone.0156129

Zbancioc, G., Mangalagiu, I., **Moldoveanu, C.**, Ultrasound assisted synthesis of imidazolium salts: an efficient way to ionic liquids, *Ultrasonics Sonochemistry*, 23(c), 376-384, **2015**. DOI: 10.1016/j.ulstsonch.2014.10.028

Odochian, L., **Moldoveanu, C.**, Maftai, D., TG-FTIR Study on Thermal Degradation Mechanism of PTFE under Nitrogen Atmosphere and in Air. Influence of the Grain Size, *Thermochimica Acta*, 598(c), 28-35, **2014**. DOI: 10.1016/j.tca.2014.10.023

Mantu, D., **Moldoveanu, C.**, Nicolescu, A., Deleanu, C., Mangalagiu, I.I.; A facile synthesis of pyridazinone derivatives under ultrasonic irradiation, *Ultrasonics Sonochemistry*, 16(4), 452-454, **2009**.

Spulber, M., Pinteala, M., Fifere, A., **Moldoveanu, C.**, Mangalagiu, I., Harabagiu, V., Simionescu, B.C., Water soluble complexes of methyl β -cyclodextrin and sulconazole nitrate, *Journal of Inclusion Phenomena and Macrocyclic Chemistry*, 62, 135-142, **2008**.

Mantu, D., Luca, M.C., **Moldoveanu, C.**, Zbancioc, Ghe., Mangalagiu I.I., Synthesis and antituberculosis activity of some new pyridazine derivatives. Part II, *Eur. J. Med. Chem*, 45, 5164-5168, **2010**. (ISSN: 0223-5234)

Mantu, D. Antoci, V. **Moldoveanu, C.** Zbancioc, G. Mangalagiu, I.I., Hybrid imidazole (benzimidazole) / pyridine (quinoline) derivatives with anticancer and antimycobacterial activity, *Journal Of Enzyme Inhibition And Medicinal Chemistry*, 31, 1-8, **2016**. DOI: 10.1080/14756366.2016.1190711