

IONEL MANGALAGIU

Research Areas/Interest

Chemistry of Heterocyclic Compounds

with three area of expertise:

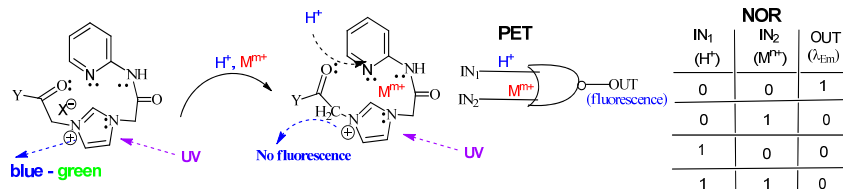
- **Chemistry and Health:** Nitrogen Heterocycles Chemistry and Medicinal Chemistry;
- **Chemistry and Nanoscience:** Nitrogen and/or Oxygen Macrocycles, Supramolecular Chemistry;
- **Chemistry and Sustainable Development:** Eco-friendly Reactions using Microwave and Ultrasounds Assisted Reactions.

Chemistry and Health: synthesis of new nitrogen heterocycles biologically active [potentials drugs (anticancer, anti-HIV, antituberculosis, antimicrobials), grow up factors for agriculture], new materials and nanobiomaterials, oligo- and poly-peptides etc..

Chemistry and Nanoscience: synthesis of oxa- and oxaza- coronands, nano-electronics and nano-devices (logic gates and molecular computers, new highly fluorescent materials, chemical captors (chemosensors).

Chemistry and Sustainable Development: „eco-friendly” microwave and ultrasounds assisted reactions; green chemistry.

Keywords: heterocycles, diazine, ylides, oxa- oxaza- coronands, microwave, ultrasounds, cycloadditions, fluorescent materials, nanobiomaterials, antituberculosis, antimicrobials, anticancer, anti-HIV, nano-electronics and nano-devices (logic gates, chemosensors), "green" chemistry.



Publications (selection)

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

Danac, R., Al Matarneh, C., Shova, S., Daniloaia, T., Balan, M., **Mangalagiu I.I.**, New indolizines with phenanthroline skeleton: synthesis, structure, antimycobacterial and anticancer properties, *Bioorgan. Med. Chem.*, 23, 2318–2327, **2015**.

Zbancioc, Ghe., Zbancioc, A.M., **Mangalagiu, I.I.**, Ultrasound and microwave assisted synthesis of dihydroxyacetophenone derivatives with or without 1,2-diazine skeleton, *Ultrason. Sonochem.*, 21, 802-811, **2014**.

Kuchkova, K., Aricu, A., Barba, A., Vlad, P., Shova, S., Secara, E., Ungur, N., Zbancioc, G., **Mangalagiu, I.**, An Efficient and Straightforward Method to New Organic Compounds: Homodrimane Sesquiterpenoids with Diazine Units, *Synlett*, 24, 697-700, **2013**.

Zbancioc, Ghe., Florea, O., Jones, P., **Mangalagiu, I.I.**, An efficient and selective way to new highly functionalized coronands or spiro derivatives using ultrasonic irradiation, *Ultrason. Sonochem.*, 19, 399-403, **2012**.

Mangalagiu I.I., Recent Achievements in the Chemistry of 1,2-Diazines, *Curr. Org. Chem.*, 15(5), 730-752, **2011**

Zbancioc, G, **Mangalagiu, I.**, Pyrrolopyridazine derivatives as blue organic luminophores: synthesis and properties. Part 2, *Tetrahedron*, 66, 278-282, **2010**. doi:10.1016/j.tet.2009.10.110



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Organic chemistry

Heterocycles chemistry

PhD Supervisor – since 2002.

Visiting Professor - Ludwig Maximilian University Munchen and Technische Universität Braunschweig

Invited Conferences - Université D'Angers and Technische Universität Braunschweig

Prizes and honours - "Costin D. Nenitescu Medal" (Romanian Society of Chemistry), "Al.I.Cuza University Award in Research", "Grand Prize Euroinvent" (Euroinvent, Romania), Special Award of Croatian Association of Inventors, etc.