



Școala Doctorală de Chimie

TEMATICĂ ADMITERE DOCTORAT sesiunea septembrie 2017

Prof. univ. dr. habil. Cecilia ARSENE

1. Compuși organici volatili în troposfera urbană Iași. Metode, monitorizare, implicații atmosferice.

(Volatile organic compounds in Iasi urban troposphere. Methods, monitoring, atmospheric implications.)

Bibliografie/ Bibliography:

1. Seinfeld, J.H., Pandis, S.N., Atmospheric Chemistry and Physics, From Air Pollution to Climate Change, 3rd Edition, John Wiley, New York, 1998.
2. Barbara Finlayson-Pitts, James Pitts, Jr., Chemistry of the Upper and Lower Atmosphere, Theory, Experiments, and Applications, Academic Press, 1999.

Prof. univ. dr. Elena BÎCU

1. Sinteza și caracterizarea unor noi compuși ce conțin heterocicluri cu azot.

Bibliografie/ Bibliography:

1. Nenitescu D. Costin, "Chimie organica", vol. 2, Ed. Didactica si pedagogica Bucuresti, 1980.
2. Zugrăvescu, I., Petrovanu, M., "Cicloaditii 3+2 dipolare", Ed. Academiei, Bucuresti, 1987.
3. Zugrăvescu, I., Petrovanu, M., "N-Ylide Chemistry", McGraw Hill: New York, 1976.
4. Sandeep, C., Katharigatta N. V., and all, "Review on Chemistry of Natural and Synthetic Indolizines with their Chemical and Pharmacological Properties", J. Basic. Clin. Pharma 8, 49-60, 2017.
5. Tufariello J. J., 1,3-Dipolar Cycloaddition Chemistry, A. Padwa, Ed., Wiley: New York, 1984; vol. 2, p. 83.

Prof. univ. dr. Gabi DROCHIOIU

1. Contribuții la studiul apelor poluate din zona Neamț și a efectului acestora asupra organismelor vii.

Bibliografie/ Bibliography:

1. Drochioiu, G., Grădinaru, R. V., Rîsca, I. M., Mangalagiu, I., Toxicologie-Aplicații în protecția mediului, industrie, agricultură, biologie și criminalistică, Ed. Univ. Al. I. Cuza Iași, 2013.



2. Grădinaru, R., Drochioiu, G., Introducere în laboratorul de biochimie: de la teorie la experiment, Ed. UAIC Iași, 2011.
3. Drochioiu, G., Murariu, M., Mangalagiu, I., Plantele medicinale și metalele grele, Ed. Tehnopress, Iași, 2011.
4. Drochioiu, G., Eugen Macovschi's concept of biostructure and its current development. In Life and mind. In search of the physical basis. (S. Savva ed.) Trafford Publ., Canada, USA, Ireland & UK, 2006.
5. Drochioiu, G., Mangalagiu, I., Druta, I., Elemente de teorie și practică toxicologică (Elements of toxicological theory and praxis), Ed. Demiurg, Iași, 2001.

2. Sinteza de peptide cu implicații biomedicale.

Bibliografie/ Bibliography:

1. Drochioiu, G., Silver-induced conformational changes of polypeptides, in Encyclopedia of Metalloproteins, (Editors: Kretsinger, R. H., Uversky, V. N., Permyakov, E. A.), Springer Verlag, 2013.
2. Murariu, M., Drochioiu, G., Dragan, E. S., Sinteza de peptide și interacțiunea acestora cu metalele grele, Ed. Tehnopress, Iași, 2011.
3. Grădinaru, R., Drochioiu, G., Introducere în laboratorul de biochimie: de la teorie la experiment. Ed. UAIC Iași, 2011.
4. Drochioiu, G., Murariu, M., Mangalagiu, I., Plantele medicinale și metalele grele, Ed. Tehnopress, Iași, 2011.
5. Drochioiu, G., Mangalagiu, I., Drută, I., Elemente de teorie și practică toxicologică (Elements of toxicological theory and praxis), Ed. Demiurg, Iași, 2001.

Prof. univ. dr. Ionel MANGALAGIU

1. Noi compuși hibridi ce conțin azaheterocicluri de 5 și 6 atomi: sinteză, structură și aplicații.
2. Azaheterocicluri cu nuclee condensate, sinteză, structură, proprietăți.

Bibliografie/ Bibliography:

1. Mantu, D.; Antoci, V.; Moldoveanu, C.; Zbancioc, Ghe.; **Mangalagiu, I.I.** Hybrid imidazole (benzimidazole) / pyridine (quinoline) derivatives and evaluation of their anticancer and antimycobacterial activity, *J. Enzym. Inh. Med. Ch.*, **31(2)**, 96-103, 2016. Publisher: Taylor & Francis, Informa Ltd, ISSN: 1475-6366 (print), 1475-6374 (electronic). <http://dx.doi.org/10.1080/14756366.2016.1190711>
2. Zbancioc, Ghe.; Moldoveanu, C.; Humelnicu, I.; Vasilache, V.; **Mangalagiu, I.I.** Pyridine / Quinoline Derivatives Bearing a Imidazole / Benzimidazole Moiety: a LC-MS Approach of Structure Determination, *Rev. Chim.-Bucharest*, **67(8)**, 1516-1519, 2016. Publisher: SYSCOM 18 SRL, CODEN: RCBUAU ISSN: 0034-7752. ROMANIA
3. 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. Publisher: Elsevier B.V., CODEN: ULSOER ISSN: 1350-4177. doi:10.1016/j.ultsonch.2013.09.012.



4. Balan, A.M.; Miron, A.; Tuchilus, C.; Rotinberg, P. Mihai, C.T.; ***Mangalagiu, I.I.*** Zbancioc, Ghe. **Syntheses, Antimicrobial and Antitumoral Activity of Some Novel Dihydroxyacetophenone Derivatives**, *Med. Chem.*, **10**, 476-483, **2014**. Publisher: Bentham Science Publishers ISSN: 1573-4064 (Print) DOI: 10.2174/15734064113096660070
5. Antoci, V.; Mantu, D.; Cozna, D.G.; Ursu, C.; ***Mangalagiu, I.I.*** **Design, synthesis and in vitro cytotoxicities of new tetra- and penta- cyclic azasteroids against human tumor cell lines**, *Med. Hyp.*, **82**, 11-15, **2014**. doi: 10.1016/j.mehy.2013.10.024 PERGAMON-ELSEVIER SCIENCE LTD, ENGLAND. ISSN: 0968-0896
6. Tucaliuc, R.; Cotea, V.; Niculaua, M.; Tuchilus, C.; Mantu, D.; ***Mangalagiu, I.I.*** **New Pyridazine–Fluorine Derivatives: Synthesis, Chemistry and Biological Activity. Part II**, *Eur. J. Med. Chem.*, **67**, 367-372, **2013**. ELSEVIER FRANCE-EDITIONS SCIENTIFIQUES MEDICALES ELSEVIER, FRANCE , ISSN: 0223-5234. doi:10.1016/j.ejmech.2013.04.069
7. Maftai, D.; Zbancioc, Ghe.; Humelnicu, I.; ***Mangalagiu, I.I.*** **Nonradiative singlet excited states in benzoyl-pyrrolopyridazines. Insights from Time Dependent DFT and steady-state electronic spectroscopy**, *J. Phys. Chem. A*, **117**, 3165-3175, **2013**. ACS Publications, DOI: 10.1021/jp311396m
8. Mantu, D.; Antoci, V.; ***Mangalagiu I.I.*** **Design, synthesis and antituberculosis activity of some new pyridazine derivatives: bis-pyridazine. Part IV**, *Infectious Disorders-Drug Targets*, **13 (5)**, 344-351, **2013**. Publisher: Bentham Science Publishers , ISSN: 2212-3989 (Online) ISSN: 1871-5265 (Print). DOI: 10.2174/1871526514666140217144707
9. Bejan, V.; Mantu, D.; ***Mangalagiu, I.I.*** **Ultrasound and microwave assisted synthesis of isoindolo-1,2-diazine: a comparative study**, *Ultrason. Sonochem.*, **19**, 999-1002, **2012**. Publisher: Elsevier B.V., CODEN: ULSOER ISSN: 1350-4177. doi: 10.1016/j.ultsonch.2012.02.012
10. 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**. Publisher: Elsevier B.V., CODEN: ULSOER ISSN: 1350-4177. doi: 10.1016/j.ultsonch.2011.08.001
11. ***Mangalagiu I.I.*** **Recent Achievements in the Chemistry of 1,2-Diazines**, *Curr. Org. Chem.*, **15(5)**, 730-752, **2011**. Bentham Science Publishers, ISSN: 1385-2728 www.bentham.org
12. 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**. ELSEVIER FRANCE-EDITIONS SCIENTIFIQUES MEDICALES ELSEVIER, FRANCE , ISSN: 0223-5234. DOI information: 10.1016/j.ejmech.2010.08.029
13. Zbancioc, Ghe.; Huhn, T.; Groth, U.; Deleanu, C.; ***Mangalagiu, I.I.*** **Pyrrolo-diazine Derivatives as Blue Organic Luminophores: Synthesis and Properties. Part 3**, *Tetrahedron*, **66**, 4298-4306, **2010**. PERGAMON-ELSEVIER SCIENCE LTD, ENGLAND, ISSN: 0040-4020. CAN 153:177019 AN 2010:619062 CAPLUS. doi:10.1016/j.tet.2010.04.050
14. Zbancioc, Ghe.; ***Mangalagiu, I.I.*** **Pyrrolopyridazine Derivatives as Blue Organic Luminophores: Synthesis and Properties. Part 2**, *Tetrahedron*, **66**, 278-282, **2010**. PERGAMON-ELSEVIER SCIENCE LTD, ENGLAND, ISSN: 0040-4020, CAN 152:194226 AN 2009:1528089 CAPLUS. DOI: 10.1016/j.tet.2009.10.110.
15. Zbancioc, A.M.; Zbancioc, Ghe; Tanase, C. Miron, A.; Ursu, C.; ***Mangalagiu I.I.*** **Design, synthesis and in vitro anticancer activity of a new class of dual DNA intercalators**, *Lett. Drug. Des. Discov.*, **7**, 644-649, **2010**. Bentham Science Publishers, ISSN: 1570-1808. www.bentham.org
16. Luca, M.C, Tura, V; ***Mangalagiu I.I.*** **Considerations concerning design and mechanism of action of a new class of dual DNA intercalators**, *Med. Hyp.*, **75**, 627-629, **2010**. ELSEVIER, ISSN: 0306-9877. doi:10.1016/j.mehy.2010.07.051



17. Butnariu, R.; **Mangalagiu, I.I.** **New Pyridazine Derivatives: Synthesis, Chemistry and Biological Activity**, *Bioorg. Med. Chem.*, **17**, 2823-2829, **2009**. PERGAMON-ELSEVIER SCIENCE LTD, ENGLAND. ISSN: 0968-0896 DOI: 10.1016/j.bmc.2009.02.028
18. Balan A.M.; Florea O.; Moldoveanu, C.; Zbancioc Ghe; Iurea, D.; **Mangalagiu I.I.** **Diazinium Salts with Dihydroxyacetophenone Skeleton: Syntheses and Antimicrobial Activity**, *Eur. J. Med. Chem.*, **44**, 2275-2279, **2009**. ELSEVIER FRANCE-EDITIONS SCIENTIFIQUES MEDICALES ELSEVIER, FRANCE, ISSN: 0223-5234 . DOI: 10.1016/j.ejmech.2008.06.017
19. Bejan V.; Moldoveanu, C.; **Mangalagiu I.I.** **Ultrasounds assisted reactions of steroid analogues of anticipated biological activities**, *Ultrason. Sonochem.*, **16**, 312-315, **2009**. Publisher: Elsevier B.V., CODEN: ULSOER ISSN: 1350-4177. Journal written in English. AN 2009:39295 CAPLUS doi:10.1016/j.ultsonch.2008.10.012

Prof. univ. dr. habil. Romeo-Iulian OLARIU

1. Studiul consumului chimic al unor compuși organici volatili în condiții de atmosferă simulată. Abordări teoretice și practice. (Study of chemical consumption of some volatile organic compounds under simulated atmosphere conditions. Theoretical and practical approaches.)

Bibliografie/ Bibliography:

1. Atmospheric Chemistry and Physics, Seinfeld, J.H. and S.N. Pandis, From Air Pollution to Climate Change, 3rd Edition, John Wiley, New York, 1998.
2. Modeling of Atmospheric Chemistry, Guy P. Brasseur and Daniel J. Jacob Cambridge University Press, 2017.
3. Atmospheric Reaction Chemistry, Akimoto, Hajime, Springer Atmospheric Sciences, 2016
4. Chemistry of the Upper and Lower Atmosphere, Theory, Experiments, and Applications, Barbara Finlayson-Pitts James Pitts, Jr., Academic Press, 1999

2. Aplicarea tehnicilor spectrale optice și electronice la identificarea și cuantificarea unor elemente rare și refractare din mediu. (Applying optical and electronic spectral techniques to the identification and quantification of rare and refractory elements in the environment.)

Bibliografie/ Bibliography:

1. High-Resolution Continuum Source AAS: The Better Way to Do Atomic Absorption Spectrometry, Bernhard Welz, Helmut Becker-Ross, Stefan Florek, Uwe Heitmann John Wiley & Sons, 2006
2. Fundamentals of Environmental Sampling and Analysis, Chunlong Zhang, John Wiley and Sons, New Jersey, 2007.
3. Environmental Chemistry. A Global Perspective. Garry W. Van Loon and Stephen J. Duffy, Oxford University Press Inc., New York, 2000.



Prof. univ. dr. Aurel PUI

1. Materiale nanostructurate cu aplicații în nanomedicină.

2. Compuși coordinativi și nanomateriale.

Bibliografie/ Bibliography:

1. Schubert U. New materials by sol-gel processing: design at the molecular level, *J Chem Soc Dalton Trans* 1996; 45: 3343-3348.
2. D.F.Williams, The relationship between biomaterials and nanotechnology *Biomaterials* 2008, 29, 1737-1738.
3. F. Watari, *Nanobiomedicine* 1,2, pp 2-8, 2010.
4. Silvia Marchesan, and Maurizio Prato, *Nanomaterials for (Nano)medicine*, *ACS Med.Chem.Lett.* 2013, 4, 147–149.
5. Amaeva, V.; Sahlgren, C.; Lindén, M. Mesoporous silica nanoparticles in medicine, *Recent advances. Adv. Drug Delivery Rev.* 2012.