



Scoala Doctorală de Chimie

Nr. 276/S/21.03.2023

TEMATICA PENTRU CONCURSUL DE ADMITERE LA DOCTORAT sesiunea septembrie 2023

Prof. univ. dr. habil. Cecilia ARSENE

1. Hidrocarburi aromatice policiclice și derivați ai acestora în atmosfera zonei urbane Iași, nord-estul României. Atribuirea surselor și estimarea riscurilor asupra sănătății umane (ro)

Polycyclic aromatic hydrocarbons (PAHs) and their derivatives in the atmosphere of the Iasi urban area, north-eastern Romania: Sources apportionment and health risk assessments (en)

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2. Maceira, A., Marce, R.M., Borrull, F., Analytical methods for determining organic compounds present in the particulate matter from outdoor air, *Trends in Analytical Chemistry*, 122, 115707, 2020.
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4. Singh, R., Yadav, A., Chopra, A., Christopher, J., Kapur, G.S., Comparison of five different HPLC columns with different particle sizes, lengths and make for the optimization of seven polycyclic aromatic hydrocarbons (PAH) analysis, *Springer Nature Applied Sciences*, 1, 313, 2019.
5. Song, W., Cao, F., Lin, Y.C., Haque, M., Wu, X., Zhang, Y., Zhang, C., Xie, F., Zhang, Y.L., Extremely high abundance of polycyclic aromatic hydrocarbons in aerosols from a typical coal-combustion rural site in China: Size distribution, source identification and cancer risk assessment, *Atmospheric Research*, 248, 105192, 2021.

Prof. univ. dr. Elena BÎCU

1. Noi compuși azaheterociclici penta- și hexa-atomici. Sinteze și aplicații (ro)

New penta- and hexa-atomic azaheterocyclic compounds. Syntheses and applications (en)

Bibliografie/References

1. Moise, I.M., Bicu, E., Farce, A., Dubois, J., Ghinet, A., Indolizine-phenothiazine hybrids as the first dual inhibitors of tubulin polymerization and farnesyl transferase with synergistic antitumor activity, *Bioorganic Chemistry*, 103, 104184, 2020.
2. Metwally, N.H., Mohamed, M.S., Ragb, A.E., Design, synthesis, anticancer evaluation, molecular docking and cell cycle analysis of 3-methyl-4,7-dihydropyrazolo [1,5-a]pyrimidine derivatives as potent histonelysine demethylases (KDM) inhibitors and apoptosis inducers, *Bioorganic Chemistry*, 88, 102929, 2019.



3. Makhaeva, G.F., Lushchekina, N.P., Boltneva, S.V., Novel potent bifunctional carboxylesterase inhibitors based on a polyfluoroalkyl-2-imino-1,3-dione scaffold, *European Journal of Medicinal Chemistry*, 218, 113385, 2021.
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Prof. univ. dr. habil. Mihail-Lucian BÎRSĂ

1. Noi flavonoide triciclice cu proprietăți antimicrobiene (ro)

New tricyclic flavonoids with antimicrobial properties (en)

Bibliografie/References

1. World Health Organization. *Global Antimicrobial Resistance and Use Surveillance System (GLASS) Report*; World Health Organization: Geneva, Switzerland, 2021.
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<https://doi.org/10.3390/ph14111130>.
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<https://doi.org/10.1371/journal.pone.0194898>

Prof. univ. dr. Gabi DROCHIOIU

1. Poluanți majori ai mediului: implicații biomedicale și metode specifice de investigare a acțiunii metalelor grele, dinitrofenolilor și cianogenilor (ro)

Major environmental pollutants: biomedical implications and specific methods to investigate the action of heavy metals, dinitrophenols and cyanogens (en)

Bibliografie/References

1. Drochioiu, G., Gradinaru, R. V., Risca, I. M., Mangalagiu, I. *Toxicologie-Aplicații în protecția mediului, industrie, agricultură, biologie și criminalistică*. Edit. Univ. Al. I. Cuza Iași, 2013.
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Prof. univ. dr. Ionel MANGALAGIU

1. **Compuși hibridi azaheterociclici cu potențiale aplicații practice (ro)**
Hybrid azaheterocyclic compounds with potential practical applications (en)
2. **Compuși hibridi și/sau chimerici și/sau hibrid-chimeric cu schelet azinic: design, sinteză, structură, aplicații (ro)**
Hybrid and/or chimeric and/or hybrid-chimeric compounds with azine skeleton: design, structure, applications (en)
3. **Compuși hibridi și/sau chimerici și/sau hibrid-chimeric cu schelet 1,2-diazinic: design, sinteză, structură, aplicații (ro)**
Hybrid and/or chimeric and/or hybrid-chimeric (en)
4. **Compuși azaheterociclici de 5 și 6 atomi: sinteză, structură, aplicații (ro)**
Five and six member ring azaheterocycles: design, structure, applications (en)

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1. Antoci, V., Cucu, D., Zbancioc, Ghe., Moldoveanu, C., Mangalagiu, V., Amariuca-Mantu, D., Aricu, A., Mangalagiu, I.I., Bis-(imidazole/benzimidazole)-pyridine derivatives: synthesis, structure and antimycobacterial activity. Part XII, *Future Medicinal Chemistry*, 12, 207-222, 2020.
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Prof. univ. dr. habil. Romeo-Iulian OLARIU

- 1. Studiul degradării atmosferice a unor solvenți organici curați (ro)**
Study of the atmospheric degradation of selected clean organic solvents (en)

Bibliografie/References

1. Byrne, F. P., Forier, B., Bossaert, G., Hoebers, C., Farmer, T.J., Hunt, A.J., A methodical selection process for the development of ketones and esters as bio-based replacements for traditional hydrocarbon solvents. *Green Chemistry*, 20, 4003–4011, **2018**.
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Prof. univ. dr. Aurel PUI

- 1. Nanostructuri oxidice avansate pentru fotocataliza si producerea de energie verde (ro)**
Advanced oxide nanostructures for catalysis and green energy production (en)

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4. Roman, T., Ghercă, D., Borhan, A.I., Grigoraș, M., Stoian, G., Lupu, N., ... & Pui, A., Nanostructured quaternary Ni_{1-x}Cu_xFe_{2-y}Ce_yO₄ complex system: Cerium content and copper substitution dependence of cation distribution and magnetic-electric properties in spinel ferrites. *Ceramics International*, 47(13), 18177-18187, **2021**.

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