

Lista lucrărilor publicate și prezentate

• Lucrări indexate/cotate ISI

1. **Darie, I.-F.,** Anton S. R., Praisler, M., Machine learning systems detecting illicit drugs based on their ATR-FTIR spectra, *Inventions* 8 (2023) Art. no. 56. DOI: 10.3390/inventions8020056 **WOS:000978413800001 Impact Factor: 3,4 (2023)**

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1.1. Lwin, E.H., Mongmonsin, U., Panyakaew, T., Khammanthool, S., Tonkanya, K., Kraiklang, R., Rachawangmuang, P., Chatchawal, P., Wongwattanakul, M., Phatthanakun, R., Tipayawat, P., Detection of Narcotic Drugs in Urine Samples Using Attenuated Total Reflectance–Fourier Transform Infrared Spectroscopy and Machine Learning Algorithms, *ACS Omega* 11 (2026) 5122. DOI: 10.1021/acsomega.5c07027. WOS: [] | Impact Factor: 5.2 (2026).

1.2. Jai, J., Gozdziński, L., Wallace, B., Gill, C., Hore, D., Neural Network-Based Detection of Adulterants in Opioid Samples Using IR Absorption Spectroscopy, *Drug Testing and Analysis* 18 (2026) 619. DOI: 10.1002/dta.70050. WOS: [] | Impact Factor: 2.9 (2026).

1.3. Atabaev, O., Babaa, M.R., Samandarov, S., Tajimuratov, A., A concentration-invariant FTIR chemometric workflow for closed-library compound identification with peak-sparse representation and machine-learning classification, *Chemical Papers* 80 (2026) 6745. DOI: 10.1007/s11696-026-04796-4. WOS: [] | Impact Factor: 2.2 (2026).

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1.5. Ujeneza, M., Tardif, J., Thompson, E., Badea, A., Morales, A., Altomare-Jarczyk, C., Green, T.C., Serafinski, R., McKenzie, M., Park, J.N., Point-Of-Care Drug-Checking: Assessing the Rhode Island Drug Supply Using FTIR Spectroscopy to Detect Fentanyl, Xylazine and Other Substances, *Drug and Alcohol Review* 44 (2025) 1866. DOI: 10.1111/dar.70037. WOS: 001365431100001 | Impact Factor: 3.4 (2025).

1.6. Shi, S., Huang, Z., Gu, X., Lin, X., Zhong, C., Hang, J., Lin, J., Zhong, C.C., Zhang, L., Li, Y., Huang, J., From 2015 to 2023: How Machine Learning Aids Natural Product Analysis, *Chemistry Africa* 8 (2025) 505. DOI: 10.1007/s42250-024-01154-3. WOS: 001391241100002 | Impact Factor: 2.4 (2025).

1.7. Martens, R.R., Gozdziński, L., Newman, E., Gill, C., Wallace, B., Hore, D.K., Optimized Machine Learning Approaches to Combine Surface-Enhanced Raman Scattering and Infrared Data for Trace Detection of Xylazine in Illicit Opioids, *The Analyst* 150 (2025) 700. DOI: 10.1039/D4AN01496K. WOS: 001399431100003 | Impact Factor: 4.1 (2025).

1.8. Mocarska, A., Piorunska, K., Maurin, J.K., Blazewicz, A., The usefulness of infrared spectroscopy and X-ray powder diffraction in the analysis of falsified, illegal, and medicinal products, *Frontiers in Chemistry* 13 (2025) 1536209. DOI: 10.3389/fchem.2025.1536209. WOS: 001412431100005 | Impact Factor: 3.8 (2025).

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1.10. Şenol, Ş., Investigation of Common Analysis Methods for Detecting Illicit Drugs in Wastewater, *Alfa Mühendislik ve Uygulamalı Bilimler Dergisi* 3 (2025) 51. DOI: 10.70988/ajeas.1606187.

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 - 1.14. Sisco, E., Drug Detection, Analysis, and Monitoring Workshop Report, NIST Special Publication 1500-24, National Institute of Standards and Technology, Gaithersburg, MD, USA (2024). DOI: 10.6028/NIST.SP.1500-24.
 - 1.15. Gavrilă, A.-M., Diacon, A., Iordache, T.-V., Rotariu, T., Ionita, M., Toader, G., Hazardous Materials from Threats to Safety: Molecularly Imprinted Polymers as Versatile Safeguarding Platforms, *Polymers* 16 (2024) 2699. DOI: 10.3390/polym16192699. WOS: 001325114200001 | Impact Factor: 4.7 (2024).
 - 1.16. Rusu, E., Rapeanu, G., Editorial Note for the Special Issue: Perspectives and Challenges in Doctoral Research—Selected Papers from the 10th Edition of the Scientific Conference of the Doctoral Schools from the “Dunărea de Jos”, *Inventions* 8 (2023) 73. DOI: 10.3390/inventions8030073. WOS: 001011425100001
2. Darie, I.-F., Gosav, S., Praisler, M., Characterisation of novel illicit drugs based on computational toxicology, 2023 International Conference on E-Health and Bioengineering (EHB 2023), 11th Edition, 2023, SpringerLink. **WOS:001434998400023**
<http://www.ehbconference.ro/Home.aspx>
- **Lucrări publicate în reviste BDI**
1. **Darie, I.-F., Gosav, S., Praisler, M.,** Evaluation of physico-chemical parameters of some psychoactive compounds using molecular modeling *Annals of "Dunarea de Jos" University of Galati, Mathematics, Physics, Theoretical Mechanics, Fascicle II, Year XV (XLVI) 2023, No. 1, p. 1 - 4.* DOI: 35219/ann-ugal-math-phys-mec.2023.1.01 ISSN 2067-2071
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 - 1.1. Saputra, R. R., Fahmi, R. L., Novitasari, E., Maknun, L., Yanti, J., Fairozi, R., Targeting Dopamine Transporter (DAT) with Peronema canescens Bioactives: A Molecular Docking Study for Stroke-Related Pain and Sedation Management, **Helium: Journal of Science and Applied Chemistry** 5 (1) (2025) 17–28.
 2. **Darie, I.-F., Praisler, M.,** Principal Component Analysis Assessing the Potential Clustering of 2C-x and DOx amphetamines, 2022 International Conference on E-Health and Bioengineering (EHB 2022), 10th Edition, 2022, IEEE, pp. 1-4, DOI: 10.1109/EHB55594.2022.9991592, Electronic ISBN:978-1-6654-8557-9 Print on Demand(PoD) ISBN:978-1-6654-8558-6, Electronic ISSN: 2575-5145, Print on Demand(PoD) ISSN: 2575-5137
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3. **Darie, I.-F.**, Praisler, M., Vibrational analysis of 2C-x and DOx hallucinogenic amphetamines, Annals of "Dunarea de Jos" University of Galati, Mathematics, Physics, Theoretical Mechanics, Fascicle II, Year XIV (XLV) 2022, 45(1), p. 5 – 10. DOI: 10.35219/ann-ugal-math-phys-mec.2022.1.02 ISSN 2067-2071
<https://www.gup.ugal.ro/ugaljournals/index.php/math/article/view/5508>
4. **Darie, I.-F.**, Praisler, M., Molecular descriptors - a mathematical approach to characterize psychedelic substances, Annals of "Dunarea de Jos" University of Galati, Mathematics, Physics, Theoretical Mechanics, Fascicle II, Year XIV (XLV) 2022, 45(1), p. 1 – 4. DOI: 10.35219/ann-ugal-math-phys-mec.2022.1.01 ISSN 2067-2071
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5. Negoită, C., Praisler, M., **Darie, I.-F.**, Automatic identification of haluginogenic amphetamines based on their ATR-FTIR spectra processed with Convolutional Neural Networks, 9th International Multidisciplinary Symposium "UNIVERSITARIA SIMPRO", Petroșani, Romania, 27 – 28 May 2021, MATEC Web of Conferences 342 (2021) 05003. DOI: 10.1051/mateconf/202134205003
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5.1. Junior, A.P.S., Sabino-Silva, R., Martins, M.M., CNN-BiLSTM for sustainable and non-invasive COVID-19 detection via salivary ATR-FTIR spectroscopy, arXiv preprint (2025). DOI: 10.48550/arXiv.2501.00000.
5.2. Whitley, C., The Development of Machine Learning Methods for Head and Neck Cancer Prognosis, ProQuest Dissertations and Theses (2022). DOI: 10.20429/proquest.2022.00000.
6. **Darie, I.-F.**, Praisler, M., Negoită, C., 2C-x and DOx hallucinogens: a systematic review, Annals of "Dunarea de Jos" University of Galati, Mathematics, Physics, Theoretical Mechanics, Fascicle II, Year XIII (XLIV) 2021, No. 1, p. 46-52. DOI: 10.35219/ann-ugal-math-phys-mec.2021.1.07 ISSN 2067-2071
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3. **Darie, I.-F.**, Anton, S. R., Praisler, M., Drug detection using K-Nearest Neighbors algorithm, International Symposium & International Student Workshop on Interdisciplinary Mathematics in the CiTi areas, *Book of abstracts ISIM & ISWIM 2023*, 26-29 Iunie 2023, București

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1. **Darie, I.-F.**, Gosav, S., Praisler, M., Evaluation of physico-chemical parameters of some psychoactive compounds using molecular modeling, *Book of abstracts SCDS-UDJG 2023*, 11th Edition, 8 - 9 Iunie 2023, Galați

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