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Gradul didactic: Conferențiar

Instituția unde este titular: **Universitatea Națională de Știință și Tehnologie POLITEHNICA București**

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L I S T A

lucrărilor științifice în domeniul disciplinelor din postul didactic

1. Teza de doctorat

Gavrila A.I. “Noi catalizatori hidrofilizați cu oligomeri de tip peptidic modificați” Universitatea POLITEHNICA din București, București, **2006**.

2. Cărți și capitole în cărți publicate în ultimii 10 ani

C. Lucrări indexate ISI/BDI publicate în ultimii 10 ani

1. **A.I. Gavrila**, E.J. Damian, A. Rosca, I. Calinescu, C. Hodosan, I. Popa, *Optimization of Microwave-Assisted Extraction of Polyphenols from Crataegus monogyna L.* Antioxidants 14(3), 357, 2025, ISSN: 2076-3921, WOS:001454218200001 (ISI, IF = 6)

2. **A.I. Gavrila**, A. Vartolomei, I. Calinescu, M. Vinatoru, O.C. Parvulescu, G. Psenovschi, P. Chipurici, A. Trifan, *Ultrasound-Assisted Alkaline Pretreatment of Biomass to Enhance the Extraction Yield of Valuable Chemicals*, Agronomy 14(5), 903. 2024, eISSN 2073-4395 WOS:001233105800001 (ISI, IF = 3.7)

3. **A. I. Gavrila**, C.M. Zalaru, R. Tatia, A.M. Seciu-Grama, C.L. Negrea, I. Calinescu, P. Chipurici, A. Trifan, I. Popa, *Green Extraction Techniques of Phytochemicals from Hedera helix L. and In Vitro Characterization of the Extracts*, Plants, 12(9), nr. 3908 (17 pag), **2023**, ISSN: 2223-7747, WOS:001114597100001 (ISI, IF = 4.5).

4. **A. I. Gavrila**, C.G. Chisega Negrila, L.Maholea, , M.L.Gavrila,, O.C.Parvulescu, I. Popa, *Enhancing the Extraction Process Efficiency of Thyme Essential Oil by Combined Ultrasound and Microwave Techniques*, Agronomy, 13(9), nr. 2331 (14 pag), **2023**, eISSN 2073-4395, WOS:001093126200001 (ISI, IF = 3.7).

5. A. C. N. Vintila, M.Vinatoru, A.-M. Galan, A. Vlaicu, M. Ciltea-Udrescu, A. Paulenco, **A. I. Gavrila**, I Calinescu, *The Influence of Ultrasound on the Growth of Nannochloris sp. in Modified Growth Medium*, Life, **2023**, 13(2), nr. 413 (9 pag), WOS:000941285400001 (ISI, IF = 3.2).

6. **A. I. Gavrila**, R. Tatia, A.M. Seciu-Grama, I. Tarcomnicu, C.L. Negrea, I. Calinescu, C.M. Zalaru, L. Moldovan, A.D. Raiciu, I. Popa, *Ultrasound Assisted Extraction of Saponins from Hedera helix L. and an In Vitro Biocompatibility Evaluation of the Extracts*, Pharmaceuticals, 15(10), nr. 1197 (13 pag), **2022**, eISSN 1424-8247, WOS:000873732500001 (ISI, IF = 4.6).

7. A. Vartolomei, I. Calinescu, M. Vinatoru, **A. I. Gavrila***, *A parameter study of ultrasound assisted enzymatic esterification*, Scientific reports, 12(1), nr. 1421 (9 pag), **2022**, ISSN 2045-2322, WOS:000749232200025 (ISI, IF = 4.6).
8. V. Staicu, C. Luntraru, I Calinescu, C.G. Chisega-Negrila, M. Vinatoru, M. Neagu, **A. I. Gavrila**, I. Popa, *Ultrasonic or Microwave Cascade Treatment of Medicinal Plant Waste*, Sustainability, 13(22), nr. 12849 (13 pag), **2021**, eISSN 2071-1050, WOS:000806947700001 (ISI, IF = 3.9).
9. I. Asofiei, I. Calinescu, V. Staicu, D.I. Buliga, **A. I. Gavrila***, *A strategy for enhancing the extraction yield of polyphenols from sea buckthorn leaves*, UPB Sci. Bull., Series B, 83(2), p. 37 – 44, **2021**, ISSN 1454 – 2331, WOS:000661663200004 (ISI, IF = 0.5).
10. A. Vartolomei, I. Calinescu, **A. I. Gavrila***, M. Vinatoru, *Ultrasound assisted synthesis of isoamyl acetate catalysed by acidic ion exchange resin*, UPB Sci. Bull., Series B, 83(1), p. 113 – 124, **2021**, ISSN 1454 – 2331, WOS:000627764100010 (ISI, IF =0.5).
11. I. Asofiei, I. Călinescu, A. Trifan, **A. I. Gavrila***, *A Semi-Continuous Process for Polyphenols Extraction from Sea Buckthorn Leaves*, Scientific Reports, 9 nr. 12044 (7 pag), **2019**, ISSN 2045-2322, WOS:000481590200085 (ISI, IF = 4.6).
12. I. Calinescu, A. Vartolomei, **A. I. Gavrila**, M. Vinatoru, T.J. Mason, *A reactor designed for the ultrasonic stimulation of enzymatic esterification*, Ultrasonics Sonochemistry, 54, p. 32 – 38, **2019**, ISSN:1350-4177E-ISSN:1873-2828, WOS:000466997500004 (ISI, IF = 8.4).
13. A. Vartolomei, I. Calinescu, M. Vinatoru, **A. I. Gavrila***, *Intensification of the Enzymatic Esterification Process by Ultrasounds*, Rev de chim, 70(1), p. 41 – 44, **2019**, eISSN: 2668-8212, WOS:000400732400002 (ISI, IF = 0).
14. P. Chipurici, A. Vlaicu, C. E. Raducanu, S. D. Bran, **A. I. Gavrila**, *Biodiesel Production from Waste Oil and Its Blends with Glycerol Ketals*, Rev de chim, 69(7), p. 1881 – 1885, **2018**, eISSN: 2668-8212, WOS:000444595700057 (ISI, IF = 0).
15. C. E. Raducanu, **A. I. Gavrila**, T. Dobre, P. Chipurici, *Study on Alumina Supported Heterogeneous Catalysts for Biodiesel Production* Rev de chim, 69(8), p. 2138 – 2143, **2018**, eISSN: 2668-8212, WOS:000444602300042 (ISI, IF = 0).
16. I. Asofiei, I. Calinescu, **A. I. Gavrila***, D. Ighigeanu, D. Martin, *Microwave Pretreatment of Vegetable Materials to Increase the Extraction Yield of Natural Products*, Rev de chim, 69(8), p. 1976 – 1979, **2018**, eISSN: 2668-8212, WOS:000444602300011 (ISI, IF = 0)
17. I. Asofiei, I. Calinescu, Petre Chipurici, **A. I. Gavrila***, *Enzymatic Pretreatment of Vegetable Materials to Increase the Extraction Yield of Bioactive Compounds*, Rev de chim, 69(7), p. 41 – 44, **2018**, eISSN: 2668-8212, WOS:000451931500067 (ISI, IF = 0).
18. I. Calinescu, V. Lavric, I. Asofiei, **A. I. Gavrila***, A. Trifan, D. Ighigeanu, D. Martin, C. Matei - *Microwave assisted extraction of polyphenols using a coaxial antenna and a cooling system*, Chem. Eng. Process., Process Intensification, 122 p. 373 – 379, **2017**, WOS:000418211800036 (ISI, IF = 4.3).
19. **A. I. Gavrila**, I. Asofiei, P. Chipurici - *Factorial design for optimization of microwave assisted synthesis of 5-hydroxymethylfurfural*, Rev de chim, 68(4), p. 639 – 641, **2017**, eISSN: 2668-8212, WOS:000400732400002 (ISI, IF = 0).

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21. **A. I. Gavrilă**, I. Asofiei, A. Trifan, P. Chipurici, E. Rusen - *Microwave assisted synthesis of 5-hydroxymethylfurfural using mild reaction conditions*, Rev de chim, 68(3), p. 435 – 438, **2017**, eISSN: 2668-8212, WOS:000400731900003 (ISI, IF = 0).

22. I. Asofiei, I. Calinescu, **A. I. Gavrilă**, D. Ighigeanu, D. Martin, C. Matei - *Microwave hydrodiffusion and gravity, a green method for the essential oil extraction from ginger – energy considerations*, UPB Sci. Bull., Series B, Vol. 79, Iss. 4, p. 81 – 92, **2017**, ISSN 1454 – 2331, WOS:000424134600009. (ISI, IF = 0)

23. O. C. Pârvulescu, **A. I. Gavrilă***, T. Dobre, L. Ceatră - *Effects of process factors on slow pyrolysis of sorghum waste*, Rev de chim, 67(11), p. 2254 – 2257, **2016**, eISSN: 2668-8212, WOS:000388361900027 (ISI, IF = 0).

24. E. Rusen, A. Diacon, A. Mocanu, **A. Gavrilă***, A.M. Dumitrescu, A. Dinescu - *Photonic crystals band gap modulation using the pattern of a written DVD* - Materiale plastice, 53 (2), p. 185 – 188, **2016**, ISSN: 0025-5289, WOS:000380629300001 (ISI, IF = 0.8).

25. I. Asofiei, I. Calinescu, A. Trifan, I.G. David, **A.I. Gavrilă*** - *Microwave Assisted Batch Extraction of Polyphenols From Sea Buckthorn Leaves*, Chem. Eng. Commun., 203(12), p. 1547 – 1553, **2016**, ISSN: 0098-6445, eISSN: 1563-5201, WOS:000387245100003 (ISI, IF = 2.5).

D. Lucrări publicate în ultimii 10 anii în reviste și volume de conferințe cu referenți (neindexate)

1. **A. I. Gavrilă**, A. Trifan, I. Popa, L. Maholea, E. Feizula, Ultrasound assisted extraction of phytocompounds from *Melissa Officinalis* L with neuroprotective effect, RICCCE 23 – 23rd Romanian International Conference on Chemistry and Chemical Engineering, September 2024, Constanta, Romania.

2. A. M. Simion, C. Simion, A. Ș. Racovanu, **A. I. Gavrilă**, Microwave assisted enzymatic transesterification for biodiesel production, RICCCE 23 – 23rd Romanian International Conference on Chemistry and Chemical Engineering, September 2024, Constanta, Romania.

3. P. Chipurici, A. Trifan, E. Feizula, **A.I. Gavrilă**, Green extraction of biocompounds with neuroprotective properties from tomato processing waste, RICCCE 23 – 23rd Romanian International Conference on Chemistry and Chemical Engineering, September 2024, Constanta, Romania.

4. A. Trifan, M. Vinatoru, I. Călinescu, **A. I. Gavrilă**, I. Popa Mapping of ultrasonic tank with a new and simple method (applied for ultrasound extraction of phytocompounds with neuroprotective effect, RICCCE 23 – 23rd Romanian International Conference on Chemistry and Chemical Engineering, September 2024, Constanta, Romania.

5. A.M. Drăghici-Popa, **A. I. Gavrilă**, C. A. Boscornea, I. Popa Bioactive compounds extraction using sequential green technology: ultrasound and microwave RICCCE 23 – 23rd

Romanian International Conference on Chemistry and Chemical Engineering, September 2024, Constanta, Romania.

6. I. Popa, A.M. Drăghici-Popa, **A. I. Gavrilă**, D. I. Buliga, C. A. Boscornea, A promising solvent, fatty acid ethyl esters, for ultrasound-assisted extraction of liposoluble bioactive compounds RICCCE 23 – 23rd Romanian International Conference on Chemistry and Chemical Engineering, September 2024, Constanta, Romania.

7. A.M. Barbu, V.C. Popa, P. Oancea, **A. I. Gavrilă**, M. Marinescu, C. Zalaru, Identification, determination of the content of bioactive compounds from *Anagallis arvensis* L. Extracts RICCCE 23 – 23rd Romanian International Conference on Chemistry and Chemical Engineering, September 2024, Constanta, Romania.

8. **A. I. Gavrilă**, I. Popa, C. M. Zălaru, I. Călinescu, C. Negrea, Comparison of Different Techniques for the Extraction of Bioactive Compounds with Immunostimulatory Activity from Ivy Leaves RICCCE 22 – 22nd Romanian International Conference on Chemistry and Chemical Engineering, September 2022, Sinaia, Romania.

9. R. Tatia, C. Zălaru, I. Țârcomnicu, L. Moldovan, A. D. Raiciu, **A. Gavrilă**, I. Călinescu, Comparative Study of Hederagenin Isolation from *Hedera helix* L. Extracts, RICCCE 22 – 22nd Romanian International Conference on Chemistry and Chemical Engineering, September 2022, Sinaia, Romania.

10. A. Geambulat, C.-I. Koncsag, O. Parvulescu, **A. Gavrilă**, T. Dobre, The Sorption Capacity of Microplastics - A Review, RICCCE 22 – 22nd Romanian International Conference on Chemistry and Chemical Engineering, September 2022, Sinaia, Romania.

11. C. Negrea, **A. I. Gavrilă**, I. Popa, I. Calinescu, Ultrasound-assisted extraction of active principles from *Hedera Helix* L. leaves, International Chemical Engineering and Materials Symposium, SICHEM 2022, November, Bucuresti, Romania.

12. **A. I. Gavrilă**, A. Vartolomei, M. Vinatoru, I. Calinescu, The effect of ultrasounds on enzymatic transesterification, 4th International Caparica Conference on Ultrasonic-based Applications: from analysis to synthesis 2020, ULTRASONICS 2020 Proceedings Book, p. 115, ISBN 978-989-54470-7-7.

13. A., Vartolomei, I., Calinescu, **A. I. Gavrilă**, M. Vinatoru, T. J. Mason, A reactor designed for the ultrasonic stimulation of enzymatic esterification, 4th International Caparica Conference on Ultrasonic-based Applications: from analysis to synthesis 2020, ULTRASONICS 2020 Proceedings Book, p. 109, ISBN 978-989-54470-7-7.

14. I. Calinescu, **A. I. Gavrilă**, A. Vartolomei, M. Vinatoru, Effects of Ultrasound on Enzymatic Esterification, 2019, 21st Romanian International Conference on Chemistry and Chemical Engineering,

15. I. Calinescu, **A. I. Gavrilă**, A. Vartolomei, Intensification of Enzymatic Synthesis of Esters in Ultrasound Assisted System, 2019, 21st Romanian International Conference on Chemistry and Chemical Engineering,

16. I. Calinescu, **A. I. Gavrilă**, A. Trifan, M. Vinatoru, Microwave Assisted Pretreatment of Lignocellulosic Biomass, 2019, 21st Romanian International Conference on Chemistry and Chemical Engineering,

17. I. Calinescu, V.Lavric, I. Asofiei, **A.I. Gavrilă**, D. Ighigeanu, D. Martin, C. Matei, *Microwave Assisted Extraction Using an Open-end Coaxial Antenna and a Cooling System*, Conferinta IUPAC 2016, Venetia, Italia

18. D. Ighigeanu, I. Calinescu, I. Asofiei, **A.I. Gavrilă**, D. Martin, C. Matei, *Extraction of Essential Oil from Ginger Using Microwave Hydro-iffusion and Gravity Method – Energy Considerations*, Conferinta IUPAC 2016, Venetia, Italia

19. Calinescu, I. Asofiei, A. Trifan, **A.I. Gavrilă**, D. Ighigeanu, D. Martin, *Microwave Assisted Extraction of Polyphenols from Sea Buckthorn Leaves*, Romanian International Conference on Chemistry and Chemical Engineering RICCCCE XIX, Sibiu 2015, ISSN 2344-1895, S2-9

20. **A.I. Gavrilă**, P. Chipurici, *Surfactants from Renewable Sources*, Romanian International Conference on Chemistry and Chemical Engineering RICCCCE XIX, Sibiu 2015, ISSN 2344-1895, S2-9

E. Brevete obținute în întreaga activitate

1. Călinescu Ioan, **Gavrilă Adina-Ionuta**, Asofiei Ioana, Ighigeanu Daniel Paul, Martin Diana, 2024, Procedeu pentru pretratamentul cu microunde al materialelor vegetale, în vederea creșterii eficienței de extracție a polifenolilor, nr. RO133142 (B1)/30.12.2024
2. **Gavrilă Adina-Ionuta**, Călinescu Ioan, Vinătoru Mircea, Vartolomei Anamaria, Ignat Nicoleta Daniela, 2021, Metodă de pretratament alcalin al biomasei lignocelulozice în prezența esterilor metilici ai acizilor grași, nr. RO134127 (B1)/30.12.2021
3. Călinescu Ioan, Vinătoru Mircea, **Gavrilă Adina-Ionuta**, Vartolomei Anamaria, Ignat Nicoleta Daniela, 2021, Instalație cu ultrasunete destinată studiului reacțiilor enzimatiche, nr. RO133341 (B1)/30.12.2021

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