

LISTA LUCRĂRI ȘTIINȚIFICE

Cercetător Științific Grad I Dr. Fiz. Andreea-Maria IORDACHE

A. Teza de doctorat

1. "*Studiul unor sisteme complexe cu aplicații biomedicale și ecologice*" – 2011, Universitatea Babeș-Bolyai, Facultatea de Fizică, Cluj-Napoca, România, Conducător de doctorat: Prof. Univ. Habil. Dr. Onuc COZAR. Domeniul – Biofizică și Fizică Atomică și Moleculară/Fizică-medicală/ Metodologia cercetării științifice

B. Lista de lucrări publicate în jurnale internaționale ISI Web of Science

1. Koç İ., Sevik, H., Nechita, C., Canturk U., **Iordache A.M.**, Camarero J.J., 2026. *Selenium bioaccumulation in industrialized urban forests: case study of five tree species used for phytoremediation*. Urban Ecosystems, 29,73. doi.org/10.1007/s11252-026-01935-3 (IF2.4; Q2) [WOS:001702843000005].
2. Man, G.T., **Iordache, A.M.**, Popescu, D.I., Zgavarogea, I.R., Sutan, N.A., 2026. *Thorium Valorization at the Interface of Technology, Risk, and Sustainability*, Toxics, 14(3) 193, doi.org/10.3390/toxics14030193 (IF4.1; Q1) [WOS:001725259600001]
3. Nechita, C., **Iordache, A.M.**, Roba, C., Pluhacek, T., Koc, I., Ionete, R.E., Camarero, J.J., 2026. *Nutrient imbalances caused by industrial pollution were not affected by extreme climate events*. Journal of Hazardous Materials Advances, 21, 101071, doi.org/10.1016/j.hazadv.2026.101071 (IF7.7; Q1)
4. Voica, C., Ioana, F., Romulus, P., **Andreea, M.I.**, Cristea, G., 2025. *Elemental and Isotopic Fingerprints of Potatoes*, Foods, 14(14), doi.org/10.3390/foods14142440 (IF5.1; Q1) [WOS:001535713200001]
5. Nechita, C., **Iordache, A.M.**, Roba, C., Apetri, A.N., Camarero, J.J., 2025. *Non-linear relationships between climate and toxic metals in stressed polluted areas*. *Environmental Research*, 287, 123124, [DOI: 10.1016/j.envres.2025.123124](https://doi.org/10.1016/j.envres.2025.123124) (IF7.7; Q1) [WOS:001599016100001]
6. Nechita, C., **Iordache, A.M.**, Pluhacek, T., Gregar, F., Camarero, J.J., 2025. *Hazardous metals coupled with increasing summer diurnal temperature range contributed to growth decline of two oak species in a heavily industrialized area*, Journal of Hazardous Materials, 496, 139519, [DOI:10.1016/j.jhazmat.2025.139519](https://doi.org/10.1016/j.jhazmat.2025.139519) (IF11.3; Q1) [WOS:001585552800003]
7. Nechita, C., **Iordache, A.M.**, Roba, C., Sandru, C., Zgavarogea, I.R., Camarero, J.J., 2025, *Heavy Metal Health Risk Assessment in Picea abies L. Forests Along an Altitudinal Gradient in Southern Romania*, Plants, 14(6): 968, doi.org/10.3390/plants14060968 (IF4.1; Q1) [WOS:001452084500001]
8. **Iordache, A.M.**, Zgavarogea, R.I., Nasture, A.M., Feizula, E., Ionete, R.E., Santos, R., Nechita, C., 2025. *Testing Low-Density Polyethylene Membranes for Lithium Isotope Electromigration System*, Materials, 18(11), 2519, doi.org/10.3390/ma18112519 (IF3.2; Q2) [WOS:001506569500001]
9. Paun, N., Zgavarogea, R.I., **Iordache, A.M.**, Feizula, E., Niculescu, V.C., 2025. *Lithium-Enriched Organic Membranes for Future Enhanced Electromigration Performance*, MRS Advances, <https://link.springer.com/article/10.1557/s43580-025-01304-w> (IF0.9; Q4) [WOS:001501883100001]
10. **Iordache, A.M.**, Nasture, A.M., Zgavarogea, R.I., Andrei, R., Mandoc, R., Feizula, E., Santos, R., Nechita, C., 2025. *Lithium Isotope Separation Using the 15-Crown-5 Ether System and Laboratory-Made Membranes*, Materials, 18(9), 2025, doi.org/10.3390/ma18092016 (IF3.2; Q2) [WOS:001486985900001]
11. **Iordache, A.M.**, Voica, C., Roba, C., Nechita, C., 2024. *Evaluation of potential human health risks associated with Li and their relationship with Na, K, Mg, and Ca in Romania's nationwide drinking water*. Frontiers in Public Health, 12, 1456640, doi.org/10.3389/fpubh.2024.1456640 (IF3.4; Q1) [WOS:001329343400001]
12. Man, G.T., **Iordache, A.M.**, Zgavarogea, R., Nechita, C., 2024. *Recycling Lithium-Ion Batteries-Technologies, Environmental, Human Health, and Economic Issues-Mini-Systematic Literature Review*, Membranes (Basel), 21;14(12):277, [doi:10.3390/membranes14120277](https://doi.org/10.3390/membranes14120277) (IF3.6; Q2) [WOS:001384611400001]

13. **Iordache, A.M.**, Voica, C., Roba, C., Nechita, C., 2024. *Lithium content and its nutritional beneficence, dietary intake, and impact on human health in edibles from the Romanian Market*, *Foods*, 13 (4), 592, doi.org/10.3390/foods13040592 (IF5.1; Q1) [WOS:001172766100001]
14. Suvar, N.S., Podea, N.S., Mateh Eszter E., **Iordache A.M.**, Matei, A., 2023. *Analysis of seeds and rhizomes of spices for metals, amino acids, polyphenols, flavonoids, and antioxidant capacity for evaluation of the nutritional quality*. *Analytical Letters*, 57(4), 517-530, doi.org/10.1080/00032719.2023.2192505 (IF1.8; Q3) [WOS:000956915400001]
15. Cezara, V., **Iordache, A.M.**, Roba, C., Nechita, C., 2023. *Determination of toxic elements in facial cosmetics from the Romanian market and their health risk assessment*, *Analytical Letters*, 2023, 56(2): 244-256, [DOI:10.1080/00032719.2022.2053699](https://doi.org/10.1080/00032719.2022.2053699) (IF1.8; Q3) [WOS:000773196300001]
16. Badea, S.L., Niculescu, V.C., **Iordache, A.M.**, 2023. *New trends in separation techniques of lithium Isotopes. A Review of chemical separation methods*, *Materials*, 6(10), 3817, doi.org/10.3390/ma16103817 (IF3.2; Q2) [WOS:000997114400001]
17. Cezara, V., Cristea, G., **Iordache, A.M.**, Roba, C., Curean, V., 2023. *Elemental Profile in Chicken Egg Components and Associated Human Health Risk Assessment*, *Toxics*, 2023, 11(11), 900, doi.org/10.3390/toxics11110900 (IF4.1; Q1) [WOS:001115315600001]
18. **Iordache, A.M.**, Nechita, C., Podea, P., Şuvar, N.S., Mesaroş, C., Voica, C., Bleiziffer, R., Culea, M., 2023. *Comparative amino acid profile and antioxidant activity in sixteen plant extracts from Transylvania, Romania*, *Plants*, 12(11), 2183, doi.org/10.3390/plants12112183 (IF4.1; Q1) [WOS:001005356700001]
19. Nechita, C., **Iordache, A.M.**, Voica, C., Costinel, D., Botoran, O.R., Popescu, D.I., Şuvar, N.S., 2023. *Evaluating the chemical hazards in wine production associated with climate change*, *Food*, 12(7), 1524, doi.org/10.3390/foods12071526 (IF5.1; Q1) [WOS:000969566000001]
20. Iordache, M., Bucura, F., Ionete, R.E., Grigorescu, R., **Iordache, A.M.**, Zgavarogea, R.I., Chiţu, A., Zaharioiu, A., Botoran, O.R., Constantinescu M., 2022. *The GHGs Evolution of LULUCF Sector at the European Union (EU-27 + UK): Romania Case Study*, *Atmosphere*, 13(10), 1638, doi.org/10.3390/atmos13101638 (IF2.3; Q3) [WOS:000872256600001]
21. **Iordache, A.M.**, Nechita, C., Zgavarogea, R., Voica, C., Varlam, M., Ionete, R.E., 2022. *Accumulation and ecotoxicological risk assessment of heavy metals in surface sediments of Olt river, Romania*. *Scientific Reports*. 12, 880, doi.org/10.1038/s41598-022-04865-0 (IF 4.996; Q1) [WOS:000744120000038]
22. Iordache, A.M.; Nechita, C.; Voica, C.; Roba, C.; Botoran, O.R.; Ionete, R.E., 2022. *Assessing the Health Risk and the Metal Content of Thirty-Four Plant Essential Oils Using the ICP-MS Technique*. *Nutrients*, 14, 2363, doi.org/10.3390/nu14122363 (IF6.706; Q1) [WOS:000818462600001]
23. **Iordache, A.M.**, Nechita, C., Voica, C., Pluhacek, T., Schug, Kevin A., 2022. *Climate change extreme and seasonal toxic metals occurrence in Romanian freshwaters in the last two decades — case study and critical review*. *npj Clean Water*, doi.org/10.1038/s41545-021-00147-w (IF12.19; Q1) [WOS:000742352600002]
24. Nechita, C., **Iordache, A.M.**, Costinel, D., Botoran, O.R., Dănilă, G., Ionete, R.E., Varlam, M., 2022. *A tree ring proxy evaluation of declining causes in Pinus sylvestris L. and Pinus nigra J. F. Arnold in northeastern Romania*. *Forests*, doi.org/10.3390/f13020336 (IF3.282; Q1) [WOS:000850411600001]
25. Nechita, C., **Iordache, A.M.**, Lemr, K., Levanič, T., Pluhacek, T., 2021. *Evidence of declining trees resilience under long term heavy metal stress combined with climate change heating*. *Journal of Cleaner Production*, 128428, doi.org/10.1016/j.jclepro.2021.128428 (IF11.072; Q1) [WOS:000723159400011]
26. Voica, C., Nechita, C., **Iordache, A.M.**, Roba, C., Zgavarogea, R., Ionete, R.E., 2021. *ICP-MS assessment of essential and toxic trace elements in foodstuffs with different geographic origins available in Romanian supermarkets*. *Molecules*, 26, 7081, doi.org/10.3390/molecules26237081 (IF4.412; Q2) [WOS:000734582000001]
27. Voica, C., Roba, C., **Iordache, A.M.**, 2021. *Lithium Levels in Food from the Romanian Market by Inductively Coupled Plasma – Mass Spectrometry (ICP-MS): A Pilot Study*, *Analytical Letters*, 54(1-2): 242-254, [DOI: 10.1080/00032719.2020.1748642](https://doi.org/10.1080/00032719.2020.1748642) (IF2.267; Q3) [WOS:000527696600001]

28. **Iordache, A.M.**, Nechita, C., Pluhacek, T., Iordache, M., Zgavarogea, R., Ionete, R.E., 2020. *Past and present anthropic environmental stress reflect high susceptibility of natural freshwater ecosystems in Romania*. Environmental Pollution, 267, 115505, doi.org/10.1016/j.envpol.2020.115505 (IF8.071; Q1) [WOS:000593966400012]
29. Voica, C., **Iordache, A.M.**, Ionete, R.E., 2020. *Multielemental characterization of honey using inductively coupled plasma mass spectrometry fused with chemometrics*, Journal of Mass Spectrometry, 55(7): 196-200, [DOI: 10.1002/jms.4512](https://doi.org/10.1002/jms.4512) (IF1.98; Q3) [WOS:000530157600001]
30. **Iordache, A.M.**, Iordache, M., Zgavarogea, R., Şandru, C., Ionete, R.E., 2019. *The Impact of Industrial Process Viewed from Side of Heavy Metals Bioaccumulation in Surface Sediments of a Watershed*, Journal of Biotechnology, 305, S37-S37, [DOI:10.1016/j.jbiotec.2019.05.134](https://doi.org/10.1016/j.jbiotec.2019.05.134) (IF3.503; Q2) [WOS:000491118400116]
31. Zgavarogea, R., Iordache, M., **Iordache, A.M.**, Şandru, C., Ionete, R.E., 2019. *Modelling the dynamics of VOCs and BTEXs bioaccumulation as tool for environmental risk assessment*, Journal of Biotechnology, 305, S37-S37, [DOI:10.1016/j.jbiotec.2019.05.133](https://doi.org/10.1016/j.jbiotec.2019.05.133) (IF: 3.503; Q2) [WOS:000491118400115]
32. **Iordache, A.M.**, Iordache, M., Sandru, C., Voica, C., Stegarus, D., Ionete, R.E., 2019. *A fugacity based model for the assessment of pollutant dynamic evolution of VOCs and BTEX in the Olt river basin (Romania)*, Revista de Chimie, 70(10), 3456-3463, doi.org/10.37358/RC.19.10.7575 (IF1.755; Q3) [WOS:000500795900002]
33. Zgavarogea, R.I., Covaliu, C., **Iordache, A.M.**, Niculescu, V., Neacsu, M., 2017. *The use of anaerobic membrane bioreactor and reverse osmosis system for wastewater treatment*, UPB Scientific Bulletin, B Series: Chemistry and Material Science, 79(2): 55-62, https://www.scientificbulletin.upb.ro/rev_docs_arhiva/full249_698627.pdf (IF0.44; Q4) [WOS:000405523600006]
34. Zgavarogea, R.I., Niculescu, V., Miricioiu, M., **Iordache, A.M.**, Paun, N., Covaliu, C., 2017. *Waste gas biotreatment*, Journal of Biotechnology, 256, S62-S62, <https://doi.org/10.1016/j.jbiotec.2017.06.1010> (IF3.533; Q2) [WOS:000413585400195]
35. Bleiziffer, R., Mesaros, C., Suvar, S., Podea, P., **Iordache, A.M.**, Yudin, F.D., Culea, M., 2017. *Comparative characterization of basil, mint and sage extracts*, Studia Universitatis Babes-Bolyai -Chemia, 62(2), 2, 373-385, [DOI: 10.24193/subbchem.2017.2.30](https://doi.org/10.24193/subbchem.2017.2.30) (IF0.305; Q4) [WOS:000417263800018]
36. Şuvar, S., Bleiziffer, R., Podea, P., **Iordache, A.M.**, Voica, C., Zgavarogea, R.I., Culea, M., 2016. *A comparative mass spectrometric study of fatty acids and metals in some seed extracts*, European Journal of Mass Spectrometry, 22(5), 253-260, [DOI: 10.1255/ejms.1448](https://doi.org/10.1255/ejms.1448) (IF1.00; Q4) [WOS:000388836100006]
37. Culea, M., **Iordache, A.M.**, Horj, E., Mesaros, C., Bleiziffer, R., 2016. *GC-MS methods for amino acids determination in different biological extracts*, Studia Universitatis Babes-Bolyai Chemia, 61(1), 213-222 (IF0.244; Q4) [WOS:000385902800021]
38. Voica, C., Feher, I., **Iordache, A.M.**, Cristea, G., Dehelean, A., Magdas, D.A., Mirel, V., 2016. *Multielemental analysis of coffee by inductively coupled plasma-mass spectrometry*, Analytical Letters, 49(16), 2627-2643, [DOI: 10.1080/00032719.2015.1116003](https://doi.org/10.1080/00032719.2015.1116003) (IF1.15; Q3) [WOS:000387452800009]
39. Sistik, P., Turjap, M., **Iordache, A.M.**, Saldanha, H., Lemr, K., Bednar, P., 2016. *Quantification of selected antidepressants and antipsychotics in clinical samples using chromatographic methods combined with mass spectrometry: A review (2006-2015)*, Biomedical Papers-Olomouc, 160(1), 39-53, [DOI: 10.5507/bp.2015.065](https://doi.org/10.5507/bp.2015.065) (IF0.894; Q4) [WOS:000373390800005]
40. Suvar, S., Horj, E., Podea, P., **Iordache, A.M.**, Gocan, D., Culea, M., 2015. *Fatty acids determination in trout plasma and meat by GC-MS*, Studia Universitatis Babes-Bolyai Chemia, 60(2):109-116. (IF0.148; Q4) [WOS:000369161800010]
41. Hermannova, M., **Iordache, A.M.**, Slovakova, K., Havliček, V., Pelantova, H., Lemr, K., 2015. *Arrival time distributions of product ions reveal isomeric ratio of deprotonated molecules in ion mobility-mass spectrometry of hyaluronan derived oligosaccharides*, Journal of Mass Spectrometry, 50(6):854-863, [DOI 10.1016/j.saa.2012.07.056](https://doi.org/10.1016/j.saa.2012.07.056) (IF2.541; Q2) [WOS:000355618600009]

42. Geana, E.I., Marinescu, A., **Iordache, A.M.**, Sandru, C., Ionete, R.E., Bala, C., 2014. *Differentiation of Romanian Wines on Geographical Origin and Wine Variety by Elemental Composition and Phenolic Components*, Food Analytical Methods, 7(10):2064-2074, [DOI: 10.1007/s12161-014-9846-2](https://doi.org/10.1007/s12161-014-9846-2) (IF1.956; Q2) [WOS:000343707100013]
43. Geana, E.I., **Iordache, A.M.**, Ionete, R., Marinescu, A., Ranca, A., Culea, M., 2013. *Geographical origin identification of Romanian wines by ICP-MS element analysis*, Food Chemistry, 138(2-3): 1125-1134, [DOI: 10.1016/j.foodchem.2012.11.104](https://doi.org/10.1016/j.foodchem.2012.11.104) (IF3.259; Q1) [WOS:000316039500056]
44. Florescu, D., **Iordache, A.M.**, Costinel, D., Horj, E., Ionete, R.E., Culea, M., 2013. *Validation procedure for assessing the total organic carbon in water samples*, Romanian Journal of Physics, 58(1-2):211-219. (IF0.745; Q4) [WOS:000320141600021]
45. Voica, C., Kovacs, M.H., Dehelean, A., Ristoiu, D., **Iordache, A.M.**, 2012. *ICP-MS determinations of heavy metals in surface waters from Transylvania*, Romanian Journal of Physics, 57(7-8), 1184-1193 (IF0.526; Q4) [WOS:000309633600017]
46. Voica, C., Dehelean, A., **Iordache, A.M.**, Geana, E.I., 2012. *Method validation for determination of metals in soils by ICP-MS*, Romanian Reports in Physics, 64(1), 221-231 (IF1.123; Q4) [WOS:000302105700020]
47. Florescu, D., Ionete, R.E., Sandru, C., **Iordache, A.M.**, Culea, M., 2012. *The Influence of Pollution Monitoring Parameters in Characterizing the Surface Water Quality from Romania Southern Area*, Romanian Journal of Physics, 56(7-8), 1001-1010 (IF0.526; Q4) [WOS:000295495400017]
48. Geana, E.I., **Iordache, A.M.**, Ionete, R.E., 2012. *Ochratoxin a occurrence in Romanian wines*, Revista de Chimie, 63(9), 883-886, doi.org/10.37358/Rev.Chim.1949 (IF0.538; Q4) [WOS:000310928900007]
49. Florescu, D., Ionete, R.E., **Iordache, A.M.**, Horj, E., Stefanescu, I., Culea, M., 2011. *Optimal measurements of surface water pollution-case study on southern part of Romania*, Asian Journal of Chemistry, 23(12), 5209-5212 (IF0.266; Q4) [WOS:000296219000006]
50. Culea, M., Horj, E., **Iordache, A.M.**, Cozar, O., 2011. *Determination of glycine in biological fluids by isotopic dilution Mass Spectrometry*, Asian Journal of Chemistry, 23(10), 4279-4281 (IF0.266; Q4) [WOS:000296218600009]
51. Horj, E., **Iordache, A.M.**, Toma, A., Cozar, O., Culea, M., 2011. *Determination of fatty acid composition of two carp species by GC-MS*, Asian Journal of Chemistry, 23(11) 4768-4770 (IF0.266; Q4) [WOS:000296218700007]
52. **Iordache, A.M.**, Horj, E., Toma, A., Cozar, O., Culea, M., 2011. *Determination of amino acid composition of two carp species by GC-MS*, Asian Journal of Chemistry, 23(11), 4757-4760 (IF0.266; Q4) [WOS:000296218700005]
53. **Iordache, A.M.**, Culea, M., Horj, E., Cozar, O., 2011. *Determination of amino acids and selenium in fish plasma*, Romanian Journal of Physics, 56(7-8), 963-970 (IF0.414; Q4) [WOS:000295495400012]
54. Horj, E., **Iordache, A.M.**, Culea, M., 2011. *Isotopic dilution GC/MS method for methionine determination in biological media*, AIP Conference Proceedings, 1387, 241-246, doi.org/10.1063/1.3647081 (IF0.364; Q4) [WOS:000301176200035]
55. Geana, E.I., **Iordache, A.M.**, Voica, C., Culea, M., Ionete, R.E., 2011. *Comparison of three digestion methods for heavy metals determination in soils and sediments materials by ICP-MS technique*, Asian Journal of Chemistry, 23(12), 5213-5216 (IF0.355; Q4) [WOS:000296219000007]
56. **Iordache, A.M.**, Horj, E., Ani, A.R., Mesaros, C., Morar, S., Cozar, O., Culea, M., 2010. *Amino acids profiles in biological media*, AIP Conference Proceedings, 1262, 192-197, <https://doi.org/10.1063/1.3482230> (IF0.364; Q4) [WOS:000287169800030]
57. Mesaros, C., Culea, M., **Iordache, A.M.**, Visovan, I., Cozar, C., Cosma, C., 2010. *A new caffeine test for diagnosis of cirrhosis by GC/MS*, Asian Journal of Chemistry, 22(5), 3608-3614 (IF0.247; Q4) [WOS:000279844500040]
58. Culea, M., Jimborean, M., Pinteau, A., Chiriac, M., **Iordache, A.M.**, 2009. *Cheese amino acids characterization by isotopic dilution GC-MS*, Journal of Environmental Protection and Ecology, 10(1), 149-155, <https://scibulcom.net/en/article/JEbuwBF4fhjhZig6dbvL> (IF0.168; Q4) [WOS:000265259400019]
59. Culea, M., **Iordache, A.M.**, Cozar, O., Ristoiu, D., 2009. *Trihalomethanes analysis in drinking water*, Journal of Environmental Protection and Ecology, 10(2), 342-350

<https://scibulcom.net/en/article/rOsOTCHk6OxNYYzsbQ1z>
[WOS:000268400000005]

(IF0.168;

Q4)

60. **Iordache, A.M.**, Culea, M., Gherman, C., Cozar, O., 2009. *Characterization of some plant extracts by GC-MS*, Nuclear Instruments & Methods in Physics Research Section B-Beam Interactions with Materials and Atoms, 267(2), 338-342 DOI: [10.1016/j.nimb.2008.10.021](https://doi.org/10.1016/j.nimb.2008.10.021) (IF1.156; Q2) [WOS:000263586200041]

C. Cărți

1. Botoran, O.R., Ionete, R.E., Ciucure, C.T., Cîrîc, A., Costinel, D., Geană, E.I., **Iordache, A.M.**, Moisac, A., Șandru, C., 2025. *Metode Analitice pentru Evaluarea Siguranței și Compoziției Fructelor Produse în Sistem Organic – COMPENDIU*. Validare – Studiu de caz „Zmeura”, 114 pagini, ISBN: 978-973-0-41400-4, Institutul Național de Cercetare-Dezvoltare pentru Tehnologii Criogenice și Izotopice – ICSI Rm. Vâlcea, Rm. Vâlcea, 2025, Romania
2. Voica, C., **Iordache, A.M.**, 2025. Chapter 7: *Analysis of Strontium and Lead Isotopic Ratios in Environmental Matrices Using ICP-MS*, in book: *Geography, Earth Science and Environment: Research Highlights*, Vol. 8, pp. 142-154, DOI: <https://doi.org/10.9734/bpi/geserh/v8/4862>, Print ISBN: 978-93-49729-94-0, eBook ISBN: 978-93-49729-43-8, BP International, Romania
3. Voica, C., Marincas, O., Feher, I., **Iordache A.M.**, 2025. Chapter 5: *River Water Chemistry in Romania: An Overview*. In book: *Chemistry and Biochemistry: Research Progress*, Vol. 5, 48-62, <https://doi.org/10.9734/bpi/cbrp/v5/4863>, ISBN: 978-93-49729-89-6, eBook ISBN: 978-93-49729-51-3, BP International, Romania
4. Voica, C., Roba, C., **Iordache, A.M.**, 2024. Health Risk Assessment of Heavy Metals in Selected Root Vegetables. *Innovations in Biological Science Vol. 3*, 50–64. <https://doi.org/10.9734/bpi/ibs/v3/3428G>
5. Voica, C., Cristea, G., **Iordache, A.M.**, 2023. Metal content and stable isotope determinations in daily food from the Romanian Market", in book "Current Perspectives in Agriculture and Food Science", 3(1-17), Editor Publisher Book Publisher International; Edited by Dr. Muhammad Shehzad; India, DOI 10.9734/bpi/cpafs/v3/5113E, ISBN: 978-81-19217-13-7 (Print); 978-81-19217-15-1 (eBook), Editura Publisher International.
6. Șuvar, N.S., **Iordache, A.M.**, Nechita, C., Mesaroș, C., Podea, P., Culea, M., 2021. *Studii asupra unor compuși biologici și toxici prin metode spectroscopice*. Editura Presa Universitară Clujeană. ISBN-978606-37-1165-7.
7. Voica, C., **Iordache, A.M.**,*, Ionete, R.E., Ștefănescu, I., 2017. Aspects on the accumulation of trace metals in various environmental matrices (Water, Soil, Plant and Sediments): Case study on catchment are of the Somes River, Romania, *Water Quality*, chapter 12, page 269-291, Book edited by Hlanganani Tutu, ISBN 978-953-51-2882-3, print ISBN: 978-953-51-2881-6. <http://dx.doi.org/10.5772/65700>
8. Voica, C., Feher, I., **Iordache, A.M.**, 2019. Evaluation of Metal Concentration in Herbal Tea Beverages by ICP-MS and Chemometrics Techniques, Chapter 6, *Book Quality Control in the Beverage Industry*, Pages 205-224, i, 1st Edition, Volume 17: *The Science of Beverages*, Editors: Alexandru Grumezescu, Alina-Maria Holban, Woodhead Publishing – Elsevier, Paperback ISBN: 9780128166819, eBook ISBN: 9780128166826, Imprint: Academic Press, Romania <https://doi.org/10.1016/B978-0-12-816681-9.00006-0>
9. **Iordache A.M.**, Culea, M., Mesaroș, C., Ștefănescu, I., 2012. Aplicații biomedicale și ecologice prin spectrometrie de masă”, Editura Risoprint, Cluj-Napoca, ISBN 978-973-53-0784-4, 543.421.
10. Cornelia, M., Culea, M., **Iordache, A.M.**, Diagnosticare prin GC-MS, Editura Risoprint, Cluj-Napoca, ISBN: 978-973-53-0762-2, 543.544, 2012.

D. *Patente*

1. **Iordache, A.M.**, Zgavarogea, I.R., Ionete, E.R., Ionete, I.E., Spiridon, I.S., "Celulă de separare electrochimică", OSIM, no. CBI nr. A/00238/2025; BOPI 10/2025
2. **Iordache, A.M.**, Zgavarogea, R.I., Nasture, A.M., Ionete, E.I., Chițu, A., Niculescu, V. C., Ionete, R.E., "Instalație modulară automatizată în cascadă pentru separarea izotopică a litiului prin electromigrare cu cristalizare controlată", CBI nr. A/00230/23.04.2026.

E. *Alte articole, studii publicate în reviste de specialitate sau în volumele unor manifestări științifice internaționale recunoscute (BDI).*

1. Dang, F.H., Caminschi, M., Drăgușin, V., Ionete, R.E., **Iordache, A.M.**, Mirea, I.C., Șandru, C., Vlaicu, M., Zgavarogea, R.I., 2025. *Hydrogeochemical parameters of karst and thermo-mineral waters in the Motru-Cerna karst area (SW Romania) and their relationship with multi-decadal climate variability*, *Karst Science Days Symposium, Proceedings*, 3 (2025), pp. 48-69, DOI: 10.70655/KSD.2025.09, ISSN-L: 2972-1261, ISSN: 2972-127x, Ed. Emil Racoviță” Institute of Speleology of the Romanian Academy, Romania
2. Botoran, O.R., Ionete, R.E., Costinel, D., Șandru, C., Geană, E.I., Ciucure, C., **Iordache, A.M.**, Păun, N., Pruteanu, M.A., Dunca, E.C., Bahrim, G.E., 2025. *Chemistry in Service of Nutrition: Multi-marker Profiling of Raspberries for Safe and Functional Food Development*, *Congresul Medicina, Științele Moleculare și de Mediu (MedMolMed 2025)*, 10-15.11.2025, Chișinău, Republica Moldova, Book of abstracts, pg. 222, <https://doi.org/10.19261/medmol25>, ISBN: 978-9975-62-925-6
3. Paun, N., Niculescu, V., Zgavarogea, R.I., Badea, S.L., **Iordache, A.M.**, 2024. *An overview of methods for lithium separation*. *Smart Energy and Sustainable Environment*, 27 (2), 73-84, <https://doi.org/10.46390/j.smensuen.27224.461>
4. **Iordache, A.M.**, Nechita, C., Niculescu, V., 2024. *Trends of the years: Sistematic literature review analysis based on the methodological principles of the electromigration process*. *Smart Energy and Sustainable Environment*, 27(2), 43-58, <https://doi.org/10.46390/j.smensuen.27224.459>
5. **Iordache, A.M.**, Voica, C., Nechita, C., Grigorescu, R., Zgavarogea, R.I., Paun, N., 2024. *Statistical Analysis of Li concentration and the ⁶⁷Li isotopic from specific provenance environments*. *Smart Energy and Sustainable Environment*, 27(1), 5-24, <https://doi.org/10.46390/j.smensuen.27124.456>
6. Iordache, M., Zgavarogea, R.I., **Iordache, A.M.**, Constantinescu, M., Bucura, F., Ionete, R.E., Grigorescu, R., Nechita, C., 2021. *Temporal Evolution Of Greenhouse Gas Emissions In European Union (Eu-28): A Perspective On Romania*, *Smart Energy and Sustainable Environment*, 2021, 24(2): 43-58, <https://doi.org/10.46390/j.smensuen.24221.438>
7. Zgavarogea, R.I., Iordache, M., **Iordache, A.M.**, Constantinescu, M., Bucura, F., Ionete, R.E., Grigorescu, R., Nechita, C., 2021. *The contribution of Romania to climate change – the effects of accounting the ghg emissions from land use, land-use change and forestry (LULUCF)*. *Smart Energy and Sustainable Environment*. 24(1), 5–20, <https://doi.org/10.46390/j.smensuen.24121.433>
8. Iordache, M., Zgavarogea, R.I., **Iordache, A.M.**, Ionete, R.E., Bucura, F., Grigorescu, R., Nechita, C., 2021. *Temporal evolution of greenhouse gas emissions in European Union (EU-28): a perspective on Romania*. *Smart Energy and Sustainable Environment*. 24(2), 43–58, <https://doi.org/10.46390/j.smensuen.24221.436>
9. **Iordache, A.M.**, Sandru, C., Miricioiu, M., Nechita, C., Ionete, R.E., & Botoran, O.R., 2020. *Influence of anthropogenic activity to the macronutrient loading in water and soil—Case study of industrial area*. *Smart Energy and Sustainable Environment*, 23(2), 81–92, <https://doi.org/10.46390/j.smensuen.23220.431>

10. Sandru, C., **Iordache, M., Iordache (Rădulescu), A.M.**, Zgavarogea, R.I., Ionete, R.E., 2020. *Hydrochemical characterization and quality of surface water from Olt River, Romania*, Smart Energy and Sustainable Environment, 23(1): 35-46, <https://doi.org/10.46390/j.smensuen.23120.80>
11. Sandru, C., Iordache, M., **Iordache, A.M.**, Ionete, R.E., Zgavarogea, R.I., 2020. *CWQI Index as Quality Indicator of Surface Water - An Approach on the Olt River, Romania*, Smart Energy and Sustainable Environment, 23(2): 93-106, <https://doi.org/10.46390/j.smensuen.23220.432>
12. Voica, C., Rosu, C., **Iordache, A.M.**, Pisteu, I.C., 2020. *The Romanian consumer among education, information, health risk, food quality and ethics*, Revista de Chimie, 71(2), 436-442, <https://doi.org/10.37358/RC.20.2.7946>
13. Voica, C., Iordache, A.M., Miricioiu, M., Magdas, A.D., Cristea, G., 2020. *Preliminary Study on Characterization of Edible Oils Using Inductively Coupled Plasma Mass Spectrometry (ICP-MS) and Isotope Ratio Mass Spectrometry (IRMS)*, Revista de Chimie, 71(5), 436-443, <https://doi.org/10.37358/RC.20.5.8135>
14. Sandru, C., Iordache, M., **Iordache (Rădulescu), A.M.**, Zgavarogea, R.I., Ionete, R.E., 2019. *Distribution of heavy metals in water and sediments from lakes of the Olt watershed*, Progress of Cryogenics and Separation, 22(1), 77-90.
15. Iordache, M., **Iordache, A.M.**, Sandru, C., Voica, C., Zgavarogea, R.I., Miricioiu, M., Ionete, R.E., 2019. *Assessment of heavy metals pollution in sediments from reservoirs of the Olt river as tool for environmental risk management*, Revista de Chimie, 70(12), 4153-4162. <https://doi.org/10.37358/RC.19.12.7725>
16. Sandru, C., Iordache, M., **Iordache, A.M.**, Ionete, R.E., 2018. *Assessment of heavy metal sludge quality in a municipal wastewater treatment plant*, Progress of Cryogenics and Isotopes Separation, 21(1), 117-124 <https://www.energen.ro/assets/pdfsc/0167747c2fc1a6174bf113105b7906e6.pdf>
17. Bleiziffer, R., Culea, M., Sarbu, C., Podea, P., Suvar, S., **Iordache, A.M.**, Mesaros, C., 2017. *Classical chemometrics methods applied for clinical data analysis*, IFMBE Proceedings – 5th International Conference on Advancements of Medicine and Health Care Through Technology, Meditech 2016, Cluj-Napoca, Springer International Publishing AG, Switzerland, 59, 39-42, DOI: 10.1007/978-3-319-52875-5_9
18. Zgavarogea, R.I., Covaliu, C., Niculescu, V., Miricioiu, M., Paun, N., **Iordache, A.M.**, Neacşa, M., 2016. *Membrane bioreactor (MR) technology- a new and effective treatment of wastewater*, Progress of Cryogenics and Isotopes Separation, 19(2), 61-72.
19. Cezara, V., Ionete, R.E., Culea, M., Suvar, S., **Iordache, A.M.**, 2015. *Assessment of trace elements in fish tissues as tool for monitoring pollution in the aquatic ecosystem*, Czech Chemical Society Symposium Series – Chemicke Listy, 13(45-162), 78-80
20. Suvar, S., **Iordache, A.M.**, Voica, C., Ionete, R.E., Bleiziffer, R., Culea, M., 2015. *Comparison of nutrients composition of some vegetable oils*, Czech Chemical Society Symposium Series – Chemicke Listy, 13(45-162), 146-148
21. Geana, E.I., **Iordache, A.M.**, Ionete, R., 2012. *Simultaneous determination of artificial sweeteners in possible counterfeited wines, using high performance liquid chromatography with dad detection*, Ovidius University Annals of Chemistry, 23(1), 77-81
22. Florescu, D., **Iordache, A.M.**, Picioarea, I., Ionete, R.E., 2011. *Assessment of heavy metals contents in soil from an industrial plant of southern part of Romania*, Advances in Environmental Sciences, International Journal of the Bioflux Society, 3(2), 206-210
23. Geana, E.I., **Iordache, A.M.**, Ionete, R.E., 2011. *Assessing the wine anthocyanin profile for red grape varieties identification*, Progress of Cryogenics and Isotopes Separation, 14(1), 127-133
24. Geana, E.I., **Iordache, A.M.**, Saros, G., Ionete, R.E., 2011. *Determination of some polycyclic aromatic hydrocarbons in surface water of Valcea County*, Progress of Cryogenics and Isotopes Separation, 14(2), 87-94

25. Culea, M., Horj, E., Florescu, D., **Iordache, A.M.**, Mesaros, C., Vulturar, R., 2011. *Diagnosis and monitoring by GC/MS*, Chemicke Listy, 105(s6)
26. Horj, E., **Iordache, A.M.**, Florescu, D., Culea, M., 2011. *Amino acids determination in dry fermented salami*, Chemicke Listy, 105(s6), s1047-1048
27. Horj, E., **Iordache, A.M.**, Florescu, D., Culea, M., 2011. *Leucine transmembrane transport study in human red cell*, Chemicke Listy, 105(s6), s1048-s1049
28. **Iordache, A.M.**, Florescu, D., Horj, E., Culea, M., 2011. *Fatty Acids Determination in Biological Samples by GC-MS*, Chemicke Listy, 105(s6), s1015
29. Florescu, D., **Iordache, A.M.**, Horj, E., Ionete, R.E., Stefanescu, I., Culea, M., 2011. *SIM-GC/MS determination of BTEX in ambient air*, Chemicke Listy, 105(s6), s984
30. Yudin, D., **Iordache, A.M.**, Horj, E., Ionete, R.E., Sandru, C., Culea, M., 2011. *Trace of heavy metals in fish tissues, sediment and water from Danube river in Romania*, Chemicke Listy, 105(s6), s984
31. Yudin, D., **Iordache, A.M.**, Saros, G., Bucura, F., Constantinescu, M., Ionete, R.E., Culea, M., 2011. *Investigation and monitoring of ambiental pollutants of atmosphere from in situ collected samples in an industrial area*, Chemicke Listy, 105(s6), s985
32. **Iordache, A.M.**, Voica, C., Florescu, D., Ionete, R.E., Culea, M., 2011. *The potentialities of multi-element composition and $87\text{Sr}/86\text{Sr}$ ratio of wine provenance*, Chemicke Listy, 105(s6), s1038
33. **Iordache, A.M.**, Florescu, D., Ionete, R.E., Culea, M., 2011. *Low-levels specification of elements in drinking waters using ICP-MS*, Chemicke Listy, 105(s6), s1039
34. Horj, E., **Iordache, A.M.**, Culea, M., 2010. *Method validation for free amino-acids determination in biological samples*, Studia Universitatis Physica, Babeş-Bolyai, LV, 2, 61-68
35. **Iordache, A.M.**, Sandru, C., Geana, E.I., Bara, L., Ionete, R.E., Culea, M., 2010. *Metal concentrations in sediment and fish from the Topalu area*, Bulletin USAMV Animal Science and Biotechnologies, 67(1-2), 459
36. **Iordache A.M.**, Geana, E.I., Horj, E., Pop, C., Ionete, R.E., 2010. *Determination of metals content from wines by Inductively Coupled Plasma Mass Spectrometry*, Bulletin USASM Agriculture, 67(2), 500
37. Pop, C., Bara, L., Horj, E., **Iordache, A.M.**, Laslo, C., 2010. *Determination of free fatty acids in sausage meat*, Bulletin of UASVM Agriculture, Cluj-Napoca, volume 67(2), 373-377
38. **Iordache, A.M.**, Horj, E., Ani, A.R., Mesaroş, C., Morar, S., Culea, M., 2010. *Fatty acids profile in fish plasma*, Analele Universităţii de Vest Timişoara, Seria Fizica, volume: LIV, 55-61
39. Mesaroş, C., **Iordache, A.M.**, Cozar, O., Cosma, C., Culea, M., 2010. *Diagnosis by Mass Spectrometry*, Rom. J. Biophys., 20(1), 71-82
40. **Iordache, A.M.**, Geana, I., Ionete, R.E., Culea, M., 2010. *The optimisation of the method for metals content determination in Romanian wines by ICP-MS after microwave mineralization*, Progress of Cryogenics and Isotopes Separation, 13(1), 137-145
41. Geana, E.I., **Iordache, A.M.**, Ionete, R.E., 2010. *Evaluating heavy metal contents in soils using microwave digestion method and ICP-MS technique*, Proceedings of Nuclear 2010, The third Annual International Conference on Sustainable Development through Nuclear Research and Education, 26-28, 613-617
42. Culea, M., **Iordache, A.M.**, Cozar, O., 2010. *Allegens Determination by GC/MS*, Journal of Environmental Protection and Ecology, 11(2), 523-528
43. Mesaros, C., Culea, M., **Iordache, A.M.**, Cozar, O., 2009. *GC-MS Characterization of the compounds in some essential oils*, Bulletin UASVM Agriculture, 66(1), 111-116
44. Mesaros, C., Culea, M., **Iordache, A.M.**, Cozar, O., Cosma, C., 2009. *GC-MS Analysis of Flavonoids in Orthosiphon Stamineus Benth*, Bulletin UASVM Agriculture, 66(1), 547-548
45. **Iordache, A.M.**, Culea, M., Cozar, O., 2009. *Characterization of some extracts for therapeutic use by GC/MS*, Journal of Physics: Conference Series, 182(1), 012027 [10.1088/1742-6596/182/1/012027](https://doi.org/10.1088/1742-6596/182/1/012027)

46. **Iordache, A.M.**, Mesaros, C., Cozar, O., Culea, M., 2009. Determination of theophylline in biological fluids by isotopic dilution mass spectrometry. *Studia Universitatis Babes-Bolyai, Physica*, LIV, 2.
47. Mesaros, C., **Iordache, A.M.**, Culea, M., Craciun, C., Cozar, O., Fechete, R., Culea, E., 2009. Sea Buckthorn Oil Study GC/MS and IR, *Studia Universitatis Babes-Bolyai, Physica*, LIV, 1.
48. Mesaros, C., Culea, M., **Iordache, A.M.**, 2008. *Diagnosis of cirrhosis by GC/MS*, *Chemicke Listy I*, 102(15) s961-s9622008
49. Culea, M., **Iordache, A.M.**, Mesaroș, C., 2008. *Aminoacid profiles monitoring for diagnosis*, *Chemicke Listy*, 102(15), s936-s938
50. **Iordache, A.M.**, Minea, R., Culea, M., Lehene, C., 2008. *Gas Chromatography-Mass Spectrometry Characterization of Sea Buckthorn*, *Chemicke Listy*, 102(15), s663-s664
51. **Iordache, A.M.**, Culea, M., Cozar, O., 2008. *Rapid Authentication of Natural Juices by GC-MS*, *Chemicke Listy*, 102(15), s665-s666
52. **Iordache, A.M.**, Culea, M., Cozar, O., 2008. *Comparative extraction methods of some biologic active compounds in herbs*, *Chemicke Listy*, 102(15), s667-s669
53. **Iordache, A.M.**, Mesaros, C., Culea, M., Cozar, O., 2008. Statistics for Cirrhosis diagnosis by GC/MS, *Studia Universitatis Babes-Bolyai, Physica*, LIII.
54. Tamaian, R., Păun, N., Niculescu, V., **Iordache, A.M.**, Vremeră, R., Broscățean, Ș., 2008. Antibiotic Effects of The Naphtoquinonic Derivative on Gram-Positive and Gram-Negative Germs. *Chemické Listy*, 102(15s):s479-481.

F. Proiecte câștigate prin competiție și contracte de servicii cu valoare mai mare de 10.000 Euro

1. **Contract no. 20N/2023 (2023-2026)** – "Dezvoltarea tehnologiei inovative de separare a izotopilor litiului prin electromobilitate și algoritmi de inteligență artificială", acronim: ISO-Li. Valoare: 8.185.783 lei, Perioada derulată 05.1.2023-24.11.2026.
2. **Contract de servicii no. 5330/17.05.2022** – "Servicii pentru etalonare și umplere canistre cu etaloane de apă grea". Valoare: 237.437 lei, Perioada 2022.
3. **Contract no. 626/24.05.2021** – "Servicii de analize de mediu" Valoare: 102.816 Lei, Perioada 2021.
4. **Contract de servicii și furnizare 41/25.01.2019**. "Servicii pentru etalonare și umplere canistre cu etaloane de apă grea". Valoare: 213.698 Lei. Perioada derulată 2019.
5. **PN ctr. Nr. 9N** — "Tehnici avansate pentru identificarea surselor de contaminare și a reacțiilor biochimice în ecosistemele acvatice" Valoare: 11.000.000 Lei. Perioada derulată 16.04.2019-14.04.2022.
6. **PN ctr.1N/2018** — "Evaluarea impactului deversărilor de ape uzate asupra mediului prin investigații analitice avansate bazate pe tehnici nucleare și conexe" 2018. Valoare: 2.500.000 Lei. Perioada derulată 04.01.2018-10.12.2018
7. **Ctr. 32-127/2008 Proiect PNII** — "Determinarea mecanismului prin care poluanți la nivel de urme, organici și anorganici, cu potențial toxic, pot pătrunde în apele care alimentează mari aglomerări urbane din județele Cluj și Sălaj" 2008-2011. Valoare: 1.940.900 Lei. Perioada derulată 2008-2011.
8. **Ctr. 1376/2015** — "Servicii de etalonare și umplere canistre cu etaloane de apă grea" 2016-2019, *Responsabil contract de servicii și furnizare*. Valoare 295.598 Lei. Perioada derulată 2008-2011.

Mai 2026

Candidat,



Dr. Fiz. CSI Andreea-Maria IORDACHE