F17 - Memoriul ştiinţific al studentului doctorand

MEMORIU ŞTIINŢIFIC

Drd. Alina Florentina Vladu

Studii de doctorat

Perioada: 2020-2025

Conducător ştiinţific: Prof. Dr. Ing. Anton Ficai

Domeniu: Inginerie Chimică

Titlul tezei de doctorat: Materiale compozite pentru tratamentul ţintit al cancerului osos

Activitate ştiinţifică

A. Lista de lucrări ştiinţifice (articole în reviste sau volume)

1. **Vladu, A.F.**; Ficai, D.; Ene, A.G.; Ficai, A. Combination Therapy Using Polyphenols: An Efficient Way to Improve Antitumoral Activity and Reduce Resistance. Int. J. Mol. Sci. 2022, 23, 10244. https://doi.org/10.3390/ijms231810244
2. **Vladu, A.F.**; Albu Kaya, M.G.; Truşcă, R.D.; Motelică, L.; Surdu, V.-A.; Oprea, O.C.; Constantinescu, R.R.; Cazan, B.; Ficai, D.; Andronescu, E. The Role of Crosslinking Agents in the Development of Collagen–Hydroxyapatite Composite Materials for Bone Tissue Engineering. Materials 2025, 18, 998. https://doi.org/10.3390/ma18050998
3. **Vladu, A.F.**; Motelică, L.; Oprea, O.C; Truşcă, R.D.; Iordache, F.; Ficai, D.; Ficai, A. Chitosan/Hydroxyapatite composite grafts for bone tissue engineering. U.P.B. Sci. Bull., Series B. 2025, Series B, Vol. 87, Iss. 3. https://www.scientificbulletin.upb.ro/rev_docs_arhiva/rez32d_444068.pdf
4. **Vladu, A.F.**; Albu Kaya, M.G.; Ficai, A.; Ficai, D.; Tutuianu, R.; Motelica, L.; Surdu, V.A.; Oprea, O.-C.; Truşcă, R.D.; Titorencu, I. Localized Combination Therapy Using Collagen Hydroxyapatite Bone Grafts for Simultaneous Bone Cancer Inhibition and Tissue Regeneration. Polymers 2025, 17, 2239. https://doi.org/10.3390/polym17162239
5. Ene, A.G., Mihai, C., Visileanu, E., **Vladu, A.F.**, Hertzog, R.-G., Popescu, D., Descriptive statistics for plane structures of the multilayer matrix for tissue haemostasis and regeneration, In: Industria Textila, 2022, 73, 4, 447–453, http://doi.org/10.35530/IT.073.04.202059
6. Visileanu, E., Ene, A., Mihai, C., **Vladu, A.**, Textile structures for the treatment of burn wounds – characterization of elastic and antibacterial properties, In: Industria Textila, 2023, 74, 2, 246–255, http://doi.org/10.35530/IT.074.02.2022108
7. Iordache, O., Cazan, B., Perdum, E., **Vladu, A.-F.**, Grosu, M.-C., Dinca, L., Ene, A.G., Data evaluation for identifying meaningful engineering characteristics of the flexible panels used for aerial module for pedological drought, In: Industria Textila, 2024, 75, 5, 577–583, http://doi.org/10.35530/IT.075.05.2023141
8. Jomir, M., Cazan, B., Grosu, M.-C., Salistean, A., **Vladu, A.-F.**, Iordache, O., Scarlat, R.-V., New approach for design and development of multi-role aerial module for management of the pedological drought, In: Industria Textila, 2025, 76, 4, 555–562, https://doi.org/10.35530/IT.076.04.2022150
9. Visileanu, E.; Altmann, K.; Stepa, R.; Haiducu, M.; Miclea, P.T.; **Vladu, A.**; Dondea, F.; Grosu, M.C.; Scarlat, R. Comparative Analysis of Airborne Particle Concentrations in Textile Industry Environments Throughout the Workday. Microplastics 2025, 4, 34. https://doi.org/10.3390/microplastics4020034
10. Suhaciu, D.T., Chiotoroiu, A.L., Radu, V.G., Visileanu, E., **Vladu, A.**, The endoscopic retromuscular approach (laparoscopic and robotic) of lateral abdominal wall hernias – a retrospective analysis from a single centre/single surgeon over 5 years, In: Industria Textila, 2025, 76, 4, 599–604, https://doi.org/10.35530/IT.076.04.202529
11. Ene, A.G., Popescu, A., Grosu, C., Vladu, A.F., Grosu, M.C., Dondea, F., Scarlat, R.V., Radu, S.M., Iterative development of flexible textile composites for naval emergency shuttles in oil spill recovery, In: Industria Textila, 2025, 76, 5, 625–630, https://doi.org/10.35530/IT.076.05.2024106
12. Maciuceanu-Zarnescu, B.-M., Pana, M., Scafa-Udriste, A., Grama, S., Ene, A.G., Chimirel, A., **Vladu, A.F.**, Chiotoroiu, A., Application of negative wound pressure therapy to skin grafts after coverage of uncertain

granular sites: a case series, In: Industria Textila, 2024, 75, 3, 381–386, http://doi.org/10.35530/IT.075.03.202449

13. **Vladu, A.**, Visileanu, E., Popescu, A., Constantinescu, R. (2023). Antimicrobial treatments of undergarments designed for the combat-protective clothing of soldiers. In: Waldemar Karwowski and Tareq Ahram (eds) Artificial Intelligence, Social Computing and Wearable Technologies. AHFE (2023) International Conference. AHFE Open Access, vol 113. AHFE International, USA. http://doi.org/10.54941/ahfe1004210
14. **Vladu, A.F.**, Visileanu, E., Albulescu, R.N., Albulescu, Adrian. (2024). Evaluation of Skin Irritation Potential of Airborne Particles. http://doi.org/10.2478/9788367405386-029
15. MIHAI Carmen, GROSU Catalin, SCARLAT Razvan, **VLADU Alina**, ENE Alexandra, JOMIR Mihaela, "Modular system meant for epibiontic biofilter development in the black sea", Annals of the University of Oradea, Fascicle of Textiles, Leatherwork, vol.22(2), pp.63-68, 2021. https://textile.webhost.uoradea.ro/Annals/Vol%2022%20no%202-2021/Textile/Art%20484%20pag%2063-68.pdf
16. Visileanu, E., Mihai, C., Ene, A., Grosu, M-C., Scarlat, R., **Vladu, A.** (2021). Characterization Of Airborne Particles in Mechanical Textile Yarns Processing. TEXTEH Proceedings. 2021. 263-271. 10.35530/TT.2021.58
17. VISILEANU Emilia, CHIRIAC Laura, SCARLAT Razvan, **VLADU Alina**, "Composite textile structures for parietal defects", Annals of the University of Oradea, Fascicle of Textiles, Leatherwork, vol.22(1), pp.89-94, 2021, https://textile.webhost.uoradea.ro/Annals/AUO_FTL_Vol%2022-No%201-2021.pdf
18. Ene, A., Visileanu, E., Maier, S., Popescu, D., **Vladu, A.** (2022). Functionalized multilayer structures for burns treatment. In: Waldemar Karwowski and Stefan Trzcielinski (eds) Human Aspects of Advanced Manufacturing. AHFE (2022) International Conference. AHFE Open Access, vol 66. AHFE International, USA. http://doi.org/10.54941/ahfe1002686
19. Emilia Visileanu, Alexandra Ene, Razvan Scarlat, **Alina Vladu**, „Textile structures with anti-inflammatory properties for the treatment of burn injuries", Annals of the University of Oradea, Fascicle of Textiles, Leatherwork, vol.23(2), pp.81-86, 2022. https://textile.webhost.uoradea.ro/Annals/Vol%2023%20no%202-2022/Textile/Art%20521%20pag%2081-86.pdf
20. Jomir Mihaela, Salistean Adrian, Badea Ionela, **Vladu Alina**, „Flexible panel assembly techniques used in the construction of aerodynamic decelerator", Annals of the University of Oradea, Fascicle of Textiles, Leatherwork, vol.23(1), pp.25-30, 2022. https://journals.indexcopernicus.com/api/file/viewByFileId/1738232
21. Carmen Mihai, **Alina Vladu**, Alexandra Ene, „Dataset Analysis of Flexible Composites Pannels for Agricultural Air Cargo Transport Scenario", Proceedings of 10th SWS International Scientific Conference on Social Sciences - ISCSS 2023, Vol. 10, Issue 1, Page: 897-904, 2023. http://doi.org/10.35603/sws.iscss.2023/sv15.24
22. Dondea F.M., Grosu M.C., Visileanu E., **Vladu A.F.**, Scarlat R.V., Sputtering Method for Conductive Textiles, Annals of The University of Oradea, Fascicle of Textiles, Leatherwork, Volume 25, No. 2, 2024, P. 37-42. https://textile.webhost.uoradea.ro/Annals/Vol%2025%20no%202-2024/Art%20587%20pag%2037_42.pdf
23. Visileanu E., Grosu C., Dondea F., Scarlat R., **Vladu A.F**, Structural Characteristics of Textiles Collected for Reuse and Recycling, Annals of The University of Oradea, Fascicle of Textiles, Leatherwork, Volume 25, No. 2, 2024. https://journals.indexcopernicus.com/api/file/viewByFileId/2416400
24. **A.F Vladu**, E. Visileanu, A.G. Ene, Designing electrical circuits on textiles through the sputtering method, Proceedings of the 50th Textile Research Symposium. TRS 2023. SDGs and Textiles. Springer, Singapore. Proceedings of the 50th Textile Research Symposium. TRS 2023. SDGs and Textiles. Springer, Singapore. pp 235–243; Springer. https://link.springer.com/chapter/10.1007/978-981-97-4422-0_19
25. E. Visileanu, A.G. Ene, M.C. Grosu, B. Mihilescu, **A.F. Vladu**, Screen Printing Method for Conductive Textiles, Proceedings of the 50th Textile Research Symposium. TRS 2023. SDGs and Textiles. Springer, Singapore. pp 51–62; Springer. https://link.springer.com/chapter/10.1007/978-981-97-4422-0_5
26. Grosu M.C.; Visileanu E.; **Vladu A.F.**; Scarlat R.V.; Dondea M.F., Aspects Relating to the Structure of the Textile Fraction Contained In Municipal Solid Waste, Proceedings of 24th International Multidisciplinary Scientific GeoConference SGEM 2024, Vol. 24, Issue 5.1, Issue: 5.1, Page: 11-16. http://doi.org/10.5593/sgem2024/5.1/s20.02

27. Maria-Felicia Dondea, Emilia Visileanu, Catalin Grosu, Razvan, Scarlat, **Alina Vladu** (2025). Textile Waste Management in Romania in the Context of the Circular Economy. Fascicle of Textiles, Leatherwork, 49. https://textile.webhost.uoradea.ro/Annals/AUO_FTL_Vol%2026%20no.%201-2025.pdf#page=49

B. Participări la conferințe/workshop-uri

1. ICNF 2021 - 5th International Conference on Natural Fibers, online, 17-19.05.2021
2. International Scientific Conference "Applications of chemistry in nanosciences and biomaterials engineering" - NANOBIOMAT, online, 25-26.06.2021
3. International Scientific Conference "Applications of chemistry in nanosciences and biomaterials engineering" – NANOBIOMAT, online, 25-27.11.2021
4. International Scientific Conference "Applications of chemistry in nanosciences and biomaterials engineering" - NANOBIOMAT, online, 22-24.06.2022
5. International Scientific Conference "Applications of chemistry in nanosciences and biomaterials engineering" - NANOBIOMAT, online, 24-26.11.2022
6. International Conference on Textiles and Affiliated R&D Areas – TEX TEH XI, București, Romania, 12-13.10.2023
7. International Scientific Conference "Applications of chemistry in nanosciences and biomaterials engineering" - NANOBIOMAT, online, 28-30.06.2022
8. 50th Textile Research Symposium (TRS 50), Balaclava, Mauritius, 7-8.09.2023
9. 14th AHFE International Conference on Human Factors in Design, Engineering, and Computing for All (AHFE 2023 Hawaii Edition), Hawaii, SUA, 4-6.12.2023
10. The 10th International Conference on Advanced Materials and Systems,ICAMS Conference, online, 30-31.10.2024
11. 7th International Conference on Emerging Technologies in Materials Engineering EMERGEMAT, București, România, 30-31.10.2024
12. 16th International Conference on Applied Human Factors and Ergonomics (AHFE 2025), Orlando, SUA, 26-30.07.2025
13. The 12th International Conference Texteh 2025, București, România, 23-24.10.2025
14. WORKSHOP ERASMUS+ DigiTex, "Soluții inovative de dezvoltare accelerată a materialelor textile avansate pe bază de tehnologii digitale", Bucureşti, România, 26.04.2023
15. WORKSHOP 3D-WearIoT PN 23 26 01 03 "Inovare accelerată prin intermediul materialelor textile avansate în contextul trnziției smart-green-digital", Bucureşti, România, 10.10.2023
16. WORKSHOP 3D-WearIoT PN 23 26 01 03 "Sustenabilitate și inovare în domeniul materialelor textile avansate", Bucureşti, Romania, 25.10.2024

C. Proiecte de cercetare științifică

1. **Proiect 56/2025** – Sistem hemostatic autonom bazat pe soluţii digiatele (M`HASS)
2. **PN 19 17 02 02** – Structuri compozite high tech pentru dezvoltarea durabila a biodiversitatii si ecosistemelor acvatice (4AquaSave)
3. **PN 19 17 03 01** - Sisteme integrate multifunctionale pe baza de nanocompozite si agenti terapeutici farmacodinamici pentru diferite afectiuni cutanate (BIOPANTEX)
4. **PN 19 17 02 01** – Sisteme multifunctionale avansate de logistica, comunicatie si protectie pentru imbunatatirea sigurantei, operabilitatii si eficacitatii lucratorilor de urgenta (SiMaLogPro)
5. **6PFE/2018** - Dezvoltarea performantei institutionale si cresterea excelentei in activitatea CDI a INCDTP, 4PERFORM-TEX-PEL
6. Proiect **PED 496/2020**, Dispozitiv medical inovativ pentru medicina de urgentă şi operaţională (CELLMATRIX)
7. **4PFE/2021** - INCDTP în avangarda cercetarii de excelenta (TEX&PEL4FUTURE)
8. **PN 23 26 01 02** - Echipament inteligent pentru asigurarea supraviețuirii combatanților in condiții operaționale (IRHEM)
9. **PN 23 26 02 01** - Soluții digitale inovatoare, reziliente, pentru redresarea şi creşterea sustenabilă a resurselor naturale terestre şi acvatice, precum şi pentru valorificarea a resurselor energetice aeriene

neconvenţionale (THORR)

10. **Proiect PED 729/2022** - Unitate navala de intervenţie rapidă, din compozit ranforsat cu material textile, utilizată pentru stocarea şi transportul amestecului apă-hidrocarburi rezultat în caz de dezastre (STRATTON)
11. **MANUNET ERA-NET 95_19M**/PN III-Subprogram 3.2-Orizont 2020/Textile noi pentru defecte parietale/PariTEX
12. **964766H0_21** - Proiect Orizont 2020, Understanding human exposure and health hazard of micro-and nanoplastic contaminats in our environment (POLYRISK)
13. **Contract EUREKA 133/2020** – Dezvoltarea de noi materiale textile cu compusi bioactivi microincapsulati (NOVAHEAL)
14. **Contract EUREKA 134/2020** – Materiale cu cedare anioni si radiatii infrarosii (FairTex)
15. **Proiect JRC/SVQ/2023/MVP/0008 -** Quantification and composition analysis of textiles intended for re-use, recycling, and disposal

D. Cursuri de perfecţionare

1. CHARISMA Raman School 2022, 18-19.10.2022, Torino, Italia
2. Nanosafety Training School 2023: SSbD Approaches for Chemicals, Advanced Materials & Plastics, 15-19.05.2023, Veneţia Italia
3. Biomaterials and Tissue Engineering Course, februarie-mai 2023, online
4. 6th International Mass Spectrometry School, 17-23.09.2023, Cagliari, Italia

Student-doctorand

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