

LIST OF SCIENTIFIC PAPERS

**Prof. univ. dr. hab. Munteanu Florentina-Daniela - PhD since 2002,
University Professor since 2008, habilitated since 2018**

A. Doctoral/habilitation thesis

1. **Doctoral Thesis: Munteanu Florentina-Daniela, 2002, *Studies of Electrocatalytic Reactions of NADH at Mediator Modified Electrodes and of H₂O₂ at Peroxidase Modified Electrodes*, Scientific supervisor: Prof. Univ. Dr. Lo Gorton, Lund University, Suedia**
2. **Habilitation thesis: Munteanu Florentina-Daniela, 2018, *Tehnici avansate de monitorizare și prevenire a poluării mediului***

B. Books and chapters published

- B1. Florentina-Daniela Munteanu, *Studies of Electrocatalytic Reactions of NADH at Mediator Modified Electrodes and of H₂O₂ at Peroxidase Modified Electrodes*, 2002 (ISBN 91-7422-005-5), KFS Lund, Universitatea Lund Suedia**
- B2. Munteanu Florentina-Daniela, *Fundamental and Applied Research on Recombinant and Wilde type Horseradish Peroxidase Based Biosensors*, Tipografia Universității Lund, Suedia 1997**
- B3. Annika Lindgren, Tautgirdas Ruzgas, Leonard Stoica, Florentina-Daniela Munteanu, and Lo Gorton *Cellobiose Dehydrogenase and Peroxidase Biosensors for Determination of Phenolic Compounds în Chemical and Biological Sensors for Environmental Monitoring*, A. Mulchandani and O. A. Sadik (Eds), ACS Symposium Series, vol. 762, 113.**
- B4. Munteanu Florentina-Daniela, Nicolae Dincă, Artur Cavaco-Paulo, *MALDI-ToF Mass Spectrometry in Textile Industry*, Springer Verlag, ISBN 978-1-4020-8811-7**
- B5. Ioan Calinovici, Florentina-Daniela Munteanu, Monica Lungu, Virgil Ciutină, *Strategia de Combatare a plantelor invazive*, <http://sesil.eu/ro>**

C. ISI/IDB indexed papers published

- C1. Bud F., Perța-Crișan S., Ursachi C.S., Gavrilas S., **Munteanu F.D.**, *Wastewater Global Pollution Index as an Indicator in Assessing the Quality of the Effluent from the Arad*

Municipal Treatment Plant, **Sci. Study Res.-Chem. Chem. Eng. Biotechnol. Food Ind.** 2024, 25 (3)

C2. Chereji B.-D., **Florentina-Daniela Munteanu**, *Wool-Based Filters for the Retaining of Heavy Metals from Industrial and Contaminated Wastewater*, **Scientific Papers. Series B. Horticulture**, 2024, LXVIII, 1, 699-704

C3 Hărțău R.C., Perța-Crișan S., Ursachi C.S., Gavrilas S., **Munteanu F.D.**, *Source Risk Assessment for Heavy Metals in Soil on the Site of a Hydrocarbon Power Plant*, **Sci. Study Res.-Chem. Chem. Eng. Biotechnol. Food Ind.** 2024, 25 (2), 203-214, doi.org/10.29081/ChIBA.2024.595

C4. Ursachi C.-Ș., Perța-Crișan, S., Tolan I., Chambre D. R., Chereji B.-D., Condrat D., **Florentina-Daniela Munteanu**, *Development and Characterization of Ethylcellulose Oleogels Based on Pumpkin Seed Oil and Rapeseed Oil*, **Gels** 2024, 10(6), 384, doi.org/10.3390/gels10060384

C5. Godja, N.C.; **Munteanu, F.D.** *Hybrid Nanomaterials: A Brief Overview of Versatile Solutions for Sensor Technology in Healthcare and Environmental Applications*. **Biosensors-Basel** 2024, 14, 23, doi:10.3390/bios14020067.

C6. Perta-Crisan, S.; Ursachi, C.S.; Chereji, B.D.; Tolan, I.; **Munteanu, F.D.** *Food-Grade Oleogels: Trends in Analysis, Characterization, and Applicability*. **Gels** 2023, 9, 42, doi:10.3390/gels9050386.

C7. Perta-Crisan, S.; Ursachi, C.S.; Chereji, B.D.; **Munteanu, F.D.** *Oleogels-Innovative Technological Solution for the Nutritional Improvement of Meat Products*. **Foods** 2023, 12, 21, doi:10.3390/foods12010131.

C8. Castro, T.G.; Ferreira, T.; Matamá, T.; **Munteanu, F.D.**; Cavaco-Paulo, A. *Acetylation and phosphorylation processes modulate Tau's binding to microtubules: A molecular dynamics study*. **Biochim. Biophys. Acta-Gen. Subj.** 2023, 1867, 14, doi:10.1016/j.bbagen.2022.130276.

C9. Blidar, E.V.; Gavrilas, S.; Ursachi, C.S.; Perta-Crisan, S.; **Munteanu, F.D.** *Perceptions on Drinking Water and Wastewater in a Local Area in Western Romania*. **Appl. Sci.-Basel** 2023, 13, 13, doi:10.3390/app132011401.

C10. Gavrilas, S.; Ursachi, C.S.; Perta-Crisan, S.; **Munteanu, F.D.** *Recent Trends in Biosensors for Environmental Quality Monitoring*. **Sensors** 2022, 22, 19, doi:10.3390/s22041513.

C11. Gavrilas, S.; Calinovici, I.; Chis, S.; Ursachi, C.S.; Rat, M.; **Munteanu, F.D.** *White Grape Pomace Valorization for Remediating Purposes*. **Appl. Sci.-Basel** 2022, 12, 15, doi:10.3390/app12041997.

- C12. Chereji, B.D.; Munteanu, F.D. *The Impact of Sheep Waste Wool on The Environment*. **Sci. Pap.-Ser. E-Land Reclam. Earth Obs. Surv. Environ. Eng.** 2022, 11, 458-463.
- C13. Burca, V.; Csorba, L.M.; Munteanu, F.D.; Rusu, S. *The Romanian consumers' perception regarding the safety of dietary supplements*. **J. Public Health-Heidelberg** 2022, 30, 1583-1602, doi:10.1007/s10389-020-01425-6.
- C14. Ursachi, C.S.; Munteanu, F.D.; Cioca, G. *The Safety of Slaughterhouse Workers during the Pandemic Crisis*. **Int. J. Environ. Res. Public Health** 2021, 18, 10, doi:10.3390/ijerph18052633.
- C15. Popitanu, C.; Cioca, G.; Copolovici, L.; Iosif, D.; Munteanu, F.D.; Copolovici, D. *The Seasonality Impact of the BTEX Pollution on the Atmosphere of Arad City, Romania*. **Int. J. Environ. Res. Public Health** 2021, 18, 11, doi:10.3390/ijerph18094858.
- C16. Perta-Crisan, S.; Ursachi, C.S.; Gavrilas, S.; Oancea, F.; Munteanu, F.D. *Closing the Loop with Keratin-Rich Fibrous Materials*. **Polymers** 2021, 13, 26, doi:10.3390/polym13111896.
- C17. Constantin, O.E.; Milea, A.S.; Bolea, C.; Mihalcea, L.; Enachi, E.; Copolovici, D.M.; Copolovici, L.; Munteanu, F.; Bahrim, G.E.; Răpeanu, G. *Onion Allium cepa L. peel extracts characterization by conventional and modern methods*. **Int. J. Food Eng.** 2021, 17, 485-493, doi:10.1515/ijfe-2020-0310.
- C18. Ursachi, C.S.; Perta-Crisan, S.; Munteanu, F.D. *Strategies to Improve Meat Products' Quality*. **Foods** 2020, 9, 22, doi:10.3390/foods9121883.
- C19. Ion, S.G.; Brudiu, T.; Hanganu, A.; Munteanu, F.; Enache, M.; Maria, G.M.; Tudorache, M.; Parvulescu, V. *Biocatalytic Strategy for Grafting Natural Lignin with Aniline*. **Molecules** 2020, 25, 14, doi:10.3390/molecules25214921.
- C20. Gavrilas, S.; Ursachi, C.S.; Dochia, M.; Perta-Crisan, S.; Munteanu, F.D. *The Influence of Different Vacuum Impregnation Solutions on the Colour of Fresh-Cut Apple Slices*. **Sci. Study Res.-Chem. Chem. Eng. Biotechnol. Food Ind.** 2020, 21, 523-531.
- C21. Nastuneac, V.; Panainte-Lehadus, M.; Mosnegutu, E.F.; Gavrilas, S.; Cioca, G.; Munteanu, F.D. *Removal of Cypermethrin from Water by Using Fucus Spiralis Marine Alga*. **Int. J. Environ. Res. Public Health** 2019, 16, 9, doi:10.3390/ijerph16193663.
- C22. Nastuneac, V.; Gavrilas, S.; Munteanu, F.D. *Assesment of the Water Quality in Siret Hydrographic Basin*. **Sci. Study Res.-Chem. Chem. Eng. Biotechnol. Food Ind.** 2019, 20, 471-480.
- C23. Cioca, G.; Munteanu, F.D. *Estimation of the Amount of Disposed Antibiotics*. **Sustainability** 2019, 11, 9, doi:10.3390/su11061800.

- C24. Castro, T.G.; **Munteanu, F.D.**; Cavaco-Paulo, A. *Electrostatics of Tau Protein by Molecular Dynamics*. **Biomolecules** 2019, 9, 16, doi:10.3390/biom9030116.
- C25. Andrei, V.; Copolovici, D.; **Munteanu, F.D.**; Wetie, A.G.N.; Mihai, I.; Darie, C.C.; Vasilescu, A. *Detection of Biomedically Relevant Stilbenes from Wines by Mass Spectrometry*. In *Advancements of Mass Spectrometry in Biomedical Research*, 2nd Edition, Woods, A.G., Darie, C.C., Eds.; **Advances in Experimental Medicine and Biology**; Springer International Publishing Ag: Cham, 2019; Volume 1140, pp. 665-684.
- C26. **Munteanu, F.D.**; Titoiu, A.M.; Marty, J.L.; Vasilescu, A. *Detection of Antibiotics and Evaluation of Antibacterial Activity with Screen-Printed Electrodes*. **Sensors** 2018, 18, 26, doi:10.3390/s18030901.
- C27. Bucur, B.; **Munteanu, F.D.**; Marty, J.L.; Vasilescu, A. *Advances in Enzyme-Based Biosensors for Pesticide Detection*. **Biosensors-Basel** 2018, 8, 28, doi:10.3390/bios8020027.
- C28. **Munteanu, F.D.**; Sanislav, A.; Stanescu, M.D. *Coupled Electrochemical and Enzymatic Degradation of Two Anthraquinone Dyes*. **Rev. Roum. Chim.** 2015, 60, 233-239.
- C29. Sirghie, C.; Bodescu, A.M.; Botar, A.; Cavaco-Paulo, A.; **Munteanu, F.D.** *Characterization of ligno-cellulosic materials bleached with oxo-diperoxo-molybdates*. **Carbohydr. Polym.** 2013, 98, 490-494, doi:10.1016/j.carbpol.2013.06.021.
- C30. Fernandes, M.M.; Gomes, A.C.; Vasconcelos, A.; **Munteanu, F.D.**; Tzanov, T.; Gonçalves, M.S.T.; End, N.; Schoening, K.U.; Guebitz, G.M.; Cavaco-Paulo, A. *Protein disulphide isomerase-assisted functionalization of keratin-based matrices*. **Appl. Microbiol. Biotechnol.** 2011, 90, 1311-1321, doi:10.1007/s00253-011-3194-6.
- C31. **Munteanu, F.D.**; Cavaco-Paulo, A. *Biosensors Based on Laccase for Detection of Commercially Reactive Dyes*. **Anal. Lett.** 2010, 43, 1126-1131, doi:10.1080/00032710903518567.
- C32. **Munteanu, F.D.**; Ferreira, P.; Ruiz-Dueñas, F.J.; Martínez, A.T.; Cavaco-Paulo, A. *Bioelectrochemical investigations of aryl-alcohol oxidase from *Pleurotus eryngii**. **J. Electroanal. Chem.** 2008, 618, 83-86, doi:10.1016/j.jelechem.2008.02.023.
- C33. Tzanov, T.; **Munteanu, F.D.**; Cavaco-Paulo, A. *CELL 130-Isomerases for functional modification of fibrous polymers*. **Abstr. Pap. Am. Chem. Soc.** 2007, 233, 674-674.
- C34. **Munteanu, F.D.**; Dinca, N.; Cavaco-Paulo, A. *MALDI-ToF Mass Spectrometry In Textile Industry*. in **Proceedings of the NATO Advanced Research Workshop on Applications of Mass Spectrometry in Life Safety**, Arad, ROMANIA, Sep 24-27, 2007; pp. 193-+.
- C35. **Munteanu, F.D.**; Basto, C.; Gübitz, G.M.; Cavaco-Paulo, A. *Staining of wool using the reaction products of ABTS oxidation by Laccase:: Synergetic effects of ultrasound and*

cyclic voltammetry. **Ultrason. Sonochem.** 2007, 14, 363-367, doi:10.1016/j.ultsonch.2006.07.008.

C36. **Munteanu, F.D.**; Gligor, D.; Popescu, I.C.; Gorton, L. *Formate dehydrogenase-modified carbon paste electrodes for amperometric detection of formate.* **Rev. Roum. Chim.** 2006, 51, 25-30.

C37. Fernandes, M.; Basto, C.; Zille, A.; **Munteanu, F.**; Guebitz, G.M.; Cavaco-Paulo, A. *POLY 441-Sono-enzymatic polymerization of catechol.* **Abstr. Pap. Am. Chem. Soc.** 2006, 232, 1.

C38. Zille, A.; **Munteanu, F.D.**; Gübitz, G.M.; Cavaco-Paulo, A. *Laccase kinetics of degradation and coupling reactions.* **J. Mol. Catal. B-Enzym.** 2005, 33, 23-28, doi:10.1016/j.molcatb.2005.01.005.

C39. **Munteanu, F.D.**; Ruiz-Dueñas, F.J.; Martínez, A.T.; Cavaco-Paulo, A. *Kinetics of direct and substrate-mediated electron transfer of versatile peroxidase-modified graphite electrodes.* **J. Electroanal. Chem.** 2005, 580, 35-40, doi:10.1016/j.jelechem.2005.02.022.

C40. **Munteanu, F.D.**; Mano, N.; Kuhn, A.; Gorton, L. *NADH electrooxidation using carbon paste electrodes modified with nitro-fluorenone derivatives immobilized on zirconium phosphate.* **J. Electroanal. Chem.** 2004, 564, 167-178, doi:10.1016/j.jelechem.2003.10.034.

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C42. **Munteanu, F.D.**; Dicu, D.; Popescu, I.C.; Gorton, L. *NADH oxidation using carbonaceous electrodes modified with dibenzo-dithia-diazapentacene.* **Electroanalysis** 2003, 15, 383-391, doi:10.1002/elan.200390044.

C43. Dicu, D.; **Munteanu, F.D.**; Popescu, I.C.; Gorton, L. *Indophenol and o-quinone derivatives immobilized on zirconium phosphate for NADH electro-oxidation.* **Anal. Lett.** 2003, 36, 1755-1779, doi:10.1081/al-120023613.

C44. **Munteanu, F.D.**; Mosbach, M.; Schulte, A.; Schuhmann, W.; Gorton, L. *Fast-scan cyclic voltammetry and scanning electrochemical microscopy studies of the pH-dependent dissolution of 2-electron mediators immobilized on zirconium phosphate containing carbon pastes.* **Electroanalysis** 2002, 14, 1479-1487, doi:10.1002/1521-4109(200211)14:21<1479::Aid-elan1479>3.0.Co;2-t.

C45. **Munteanu, F.D.**; Mano, N.; Kuhn, A.; Gorton, L. *Mediator-modified electrodes for catalytic NADH oxidation: high rate constants at interesting overpotentials.* **Bioelectrochemistry** 2002, 56, 67-72, doi:10.1016/s1567-5394(02)00009-9.

- C46. **Munteanu, F.D.**; Kubota, L.T.; Gorton, L. *Effect of pH on the catalytic electro oxidation of NADH using different two-electron mediators immobilised on zirconium phosphate*. **J. Electroanal. Chem.** 2001, 509, 2-10, doi:10.1016/s0022-0728(01)00376-x.
- C47. **Munteanu, F.D.**; Gorton, L.; Lindgren, A.; Ruzgas, T.; Emnéus, J.; Csöregi, E.; Gazaryan, I.G.; Ouporov, I.V.; Mareeva, E.A.; Lagrimini, L.M. *Direct and mediated electron transfer catalyzed by anionic tobacco peroxidase -: Effect of calcium ions*. **Appl. Biochem. Biotechnol.** 2000, 88, 321-333, doi:10.1385/abab:88:1-3:321.
- C48. Gorton, L.; Lindgren, A.; Larsson, T.; **Munteanu, F.D.**; Ruzgas, T.; Gazaryan, I. *Direct electron transfer between heme-containing enzymes and electrodes as basis for third generation biosensors*. **Anal. Chim. Acta** 1999, 400, 91-108, doi:10.1016/s0003-2670(99)00610-8.
- C49. **Munteanu, F.D.**; Lindgren, A.; Emnéus, J.; Gorton, L.; Ruzgas, T.; Csöregi, E.; Ciucu, A.; van Huystee, R.B.; Gazaryan, I.G.; Lagrimini, L.M. *Bioelectrochemical monitoring of phenols and aromatic amines in flow injection using novel plant peroxidases*. **Anal. Chem.** 1998, 70, 2596-2600, doi:10.1021/ac980022s.
- C50. Lindgren, A.; **Munteanu, F.D.**; Gazaryan, I.G.; Ruzgas, T.; Gorton, L. *Comparison of rotating disk and wall-jet electrode systems for studying the kinetics of direct and mediated electron transfer for horseradish peroxidase on a graphite electrode*. **J. Electroanal. Chem.** 1998, 458, 113-120, doi:10.1016/s0022-0728(98)00326-x.

E. Patents obtained in the whole activity

E1. Sîrghie Cecilia, Radu Dana Gina, **Munteanu Florentina-Daniela**, Pag Andreea, Dochia Mihaela, Tomescu Daniel, *Process for Melting Bast Fiber Plants, Such As: Flax, Hemp, Jute Etc*, 2014

F. Research contracts across the whole activity

F1. 2021-2024 Research Centre in Sustainable Bio-Eco-Economy; **Member in management team**; <https://www.bioecoes.uav.ro/>

F2. 2022-2024 Cell-penetrating peptides-containing systems as a potential platform for the use in breast and prostate cancer treatment; Senior Researcher, <https://cpps-cancer.uav.ro/>

F3. 2018-2020 PN-III-P1-1.2-PCCDI2017-0569 - **Principal Investigator** "Closing bioeconomy value chains through innovative market demanded bioproducts -PRO-SPER", -10-PCCDI/2018

- F4.** 2017-2018 PN3, Romania-France Bilateral Cooperation Projects, BM46, **Principal investigator** "Valorisation of wine by-products - applications for wastewater treatment"
- F5.** 2014-2017 PN2, Collaborative Applied Research Projects, **Principal investigator** PN-II-PT-PCCA-2013-4-0191 Interactomics of galactosaminoglycans in extracellular matrix by advanced mass spectrometry
- F6.** 2010-2012 PN2, Capacities, Module III, **Principal investigator** - Folate-based nanobiodevices for integrated diagnosis/therapy targeting chronic inflammatory diseases
- F7.** 2009-2013 FP7- NMP-2008-LARGE-2, **Principal investigator** Proiect No 228827- Folate-based nanobiodevices for integrated diagnosis/therapy targeting chronic inflammatory diseases
- F8.** 2006-2009 NATO Nr. EAP.RIG.982234 - **Principal investigator** „Biosensors for Environmental Pollutants Monitoring”
- F9.** 2006-2008 Research of excellence entitled **Principal investigator** "Computerized filtration systems and separation systems for textile processes".
- F10.** 2005-2007 Research Contract of Excellence No. 3179/12.10.2005 **Principal investigator** "Electrochemical Characterization and Kinetic Study of Biodegradation of Pollutants Environment"
- F11.** 2005-2006 SFRH/BPD/16674/2004, **Principal investigator Portugal** „Electrochemical Characterization of Redox Biodegradation of Redox Dyes” within Minho University, Portugal

23.09.2024

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