



dr Marina Putnik-Delić, redovni profesor
Uža naučna oblast: Fiziologija i ishrana biljaka
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Obrazovanje

- **Dipl. inž. (2002)** - Poljoprivredni fakultet, Univerzitet u Novom Sadu, smer – Zaštita bilja
- **Magistar nauka (2006)** - Poljoprivredni fakultet, Univerzitet u Novom Sadu, smer - Fitopatologija,
- **Doktor nauka (2013)** - Poljoprivredni fakultet, Univerzitet u Novom Sadu

Odabrane publikacije

- Bognár S, Jovanović D, Putnik P, Despotović V, Ivetić T, Bajac B, Tóth E, , Finčur N, Maksimović I, **Putnik-Delić M**, Zec N, Deák C, Kozma G, Banić N, Jagodić I, Šojić Merkulov D (2024) Solar-driven removal of selected organics with binary ZnO based nanomaterials from aquatic environment: Chemometric and toxicological assessments on wheat. *Journal of Environmental Chemical Engineering* 12 (2), 112016.
- Bognár S, Maksimović I, Putnik P, Orcic D, **Putnik-Delić M**, Šojić Merkulov D (2024) Integrated approach for sustainable degradation of tolperisone hydrochloride from water by photodegradation: Chemometrics, chemical kinetics, intermediates, and environmental toxicity assessment. *Journal of Photochemistry and Photobiology A: Chemistry*, 453, 115628.
- **Putnik-Delić M**, Maksimović I, Miroslavljević M, Ilin Ž, Adamović B, Daničić M (2023) Quality of cabbage and kohlrabi depending on the fertilizing regime and use of mulch. *Contemporary Agriculture* 72, 1-2: 57-63
- Nikolić, L., Maksimović, I., Džigurski, D., **Putnik-Delić, M.**, Ljevnaić-Mašić, B. (2023) Removal of nitrogen and phosphorus by aboveground biomass of *Phragmites australis* in Constructed Wetland System under the conditions of temperate continental climate. *International Journal of Phytoremediation*, 2023, 25(4), pp. 483–492
- Bognar S, Putnik P, Maksimović I, Velebit B, **Putnik-Delić M**, Šojić Merkulov D (2022): Sustainable removal of tolperisone from waters by application of photocatalysis, nanotechnology and chemometrics: Quantification, environmental toxicity and degradation optimization. *Nanomaterials*, 12(23), 4199.
- Nikolić Lj, Maksimović I, Džigurski D, **Putnik-Delić M**, Ljevnaić Mašić B (2022) Removal of nitrogen and phosphorus by aboveground biomass of *Phragmites australis* in Constructed Wetland System under the conditions of temperate continental climate. *International Journal of Phytoremediation*, 3:1-10.
- Vuković S, Žunić*A, Maksimović I, LazićS, Šunjka D, Žunić V and **Putnik-Delić M** (2021): Insecticide-induced changes of photosynthetic pigments content in peach leaves. *SPakistan Journal of Agricultural Sciences*, Vol. 58(6), 1709-1714 ISSN (Print) 0552-9034, ISSN (Online) 2076-0906;
- Čobanov I, Tot A, Gadžurić S, Maksimović I, **Putnik-Delić M**, Daničić M, Bešter-Rogač M, Vraneš M (2021) Influence of structural changes of cation and anion on

- phytotoxicity of selected surface active ionic liquids. *Journal of Molecular Liquids*, 2021, 342, 117458
- Daničić M, Vraneš M, **Putnik-Delić M***, Tot A, Weihs P, Maksimović I (2021) Mineral composition and growth of tomato and cucumber affected by imidazolium-based ionic liquids. *Plant Physiology and Biochemistry* 167 (2021) 132–139.
 - Daničić M, Maksimović I, **Putnik-Delić M***, Kastori R, Crnobarac J, Jaćimović G, Šeremešić S (2021) Biomass production and mineral composition of coriander (*Coriandrum sativum* L.) exposed to NaCl. *Biologia Futura (Acta Biologica Hungarica)* 72(4): 453-459.
 - Finčur N, Sfirloagă P, Putnik P, Despotović V, Lazarević M, Uzelac M, Abramović B, Vlazan P, Ianăsi C, Alapi T, Náfrádi M, Maksimović I, **Putnik-Delić M** and Šojić Merkulov D (2021) Removal of Emerging Pollutants from Water Using Environmentally Friendly Processes: Photocatalysts Preparation, Characterization, Intermediates Identification and Toxicity Assessment. *Nanomaterials*, 11, 215.
 - Maksimović I, Kastori R, **Putnik-Delić M**, Momčilović V, Denčić S, Miroslavljević M (2020) Genetic differences in aluminium accumulation in the grains of field grown *Aegilops* and *Triticum*. *Plant, Soil and Environment* 66: 351-356.
 - Tot A, Maksimović I, **Putnik-Delić M**, Daničić M, Gadžurić S, Bešter-Rogač M, Vraneš M (2020) The effect of polar head group of dodecyl surfactants on the growth of wheat and cucumber. *Chemosphere Volume 254*, September 2020, Article number 126918
 - Lazić D, **Putnik-Delić M***, Daničić M, Župunski M, Arsenov D, Vuković S, Maksimović I (2020) Efficiency of Si in alleviating nacl-induced stress in oilseed rape. *Pakistan Journal of Agricultural Sciences*, Vol 57, Issue 4: 901 – 907.
 - Kastori R., **Putnik-Delić M**, Maksimović I (2020) Zink u ishrani biljaka (Zinc in plant nutrition). *Matica srpska Novi Sad* ISBN: 978-86-7946-335-7
 - Maged M. Saad MM, Michalet S, Fossou R, **Putnik-Delić M**, Crèvecoeur M, Meyer J, Malézieux C, Hopfgartner G, Maksimović I, Perret X (2019) Loss of NifQ leads to accumulation of porphyrins and altered metal-homeostasis in nitrogen-fixing symbioses. *Molecular Plant-Microbe Interactions* 32(2):208-216
 - Kastori R., Maksimović I, **Putnik-Delić M** (2018): Bor u ishrani biljaka (Boron in plant nutrition). *Matica srpska Novi Sad*, p 178 ISBN 978-86-7946-237-4
 - **Putnik-Delić M**, Maksimović I, Nagl N, Lalić B (2018) Sugar beet tolerance to drought - physiological and molecular aspects. In book: *Plant, Abiotic Stress and Climate Change*, IntechOpen CY – Rijeka, Croatia. ISBN 978-953-51-5866-0
 - Tot A, Vraneš M, Maksimović I, **Putnik-Delić M**, Daničić M, Belić S, Gadžurić S (2018) The effect of imidazolium based ionic liquids on wheat and barley germination and growth: Influence of length and oxygen functionalization of alkyl side chain. *Ecotoxicology and Environmental Safety* 147, 401-406
 - Miroslavljević M, Momčilović V, Maksimović I, **Putnik-Delić M**, Pržulj N, Hristov N, Mladenov N (2018) Pre-anthesis development of winter wheat and barley and relationships with grain yield. *Plant, soil and environment*, vol 64, no 7, 310-316.
 - Tot A, Vraneš M, Maksimović I, **Putnik-Delić M**, Daničić M, Gadžurić S. (2018) Evaluation of the impact of different alkyl length and type of substituent in imidazolium ionic liquids on cucumber germination, growth and oxidative stress. *Environ Sci Pollut Res Int.* 2018 Dec;25(35):35594-35601.
 - Kastori, R., Maksimović, I., Denčić, S., Kádár, I., **Putnik-Delić, M.** and Momčilović, V. (2017), Strontium accumulation in whole grain of *Aegilops* and *Triticum* species . *J. Plant Nutr. Soil Sci.*, vol 180, issue 2.: 212-219.

- Kastori R, Maksimović I, Ilin Ž, **Putnik-Delić M** (2016) Magnezijum u ishrani biljaka Novi Sad, Poljoprivredni fakultet, p 240. ISBN: 978-86-7520-368-1821-3
- **Putnik-Delić M**, Maksimović I, Venezia A, Nagl N (2013) Free proline accumulation in young sugar beet plants and in tissue culture explants under water deficiency as tools for assessment of drought tolerance. Romanian Agricultural Research 30, 141-148
- Kastori R, Ilin Ž, Maksimović I, **Putnik-Delić M** (2013) Kalijum u ishrani biljaka: kalijum i povrće (Potassium in plant nutrition: potassium and vegetables Novi Sad, Poljoprivredni fakultet, p 309. ISBN: 978-86-7520-821-3

Odabrani projekti

1. Projekat bilateralne saradnje sa Hrvatskom: „Bioraspoloživost benefcijalnih elemenata i antioksidativni potencijal klijanaca soje (*Glycine max* (L.) Merill), 2019-2022 (rukovodilac projekta)
2. H2020-TWINN-2015: SERBian-Austrian-Italian (SAI) partnership FORcing EXCELLence in ecosystem research, 2016-2018 (učesnik)
3. Izgradnja kapaciteta srpskog obrazovanja u oblasti poljoprivrede radi povezivanja sa društvom, CaSa, Tempus, 2013-2016 (učesnik)
4. 2011-2012 - Istraživanje mehanizama otpornosti biljaka na abiotiski stres, Projekat bilateralne saradnje sa Republikom Hrvatskom, 2011-2012. (učesnik)
5. Razvoj novih tehnologija za savremenu i održivu proizvodnju povrća, TR31036, 2011- (učesnik)
6. Unapređenje tehnologije gajenja krmnih biljaka na oranicama i travnjacima, TR31016, 2011- (učesnik)
7. Uticaj različitih tehnologija proizvodnje i čuvanja na parametre kvaliteta povrća, APV No.114-451-2218/2011, 2011-2014. (učesnik)

Akadske aktivnosti

- **Asistent** na predmetima uže naučne oblasti Fiziologija i ishrana biljaka na osnovnim akademskim i master studijama (2008-2013)
- **Mentor** 2 odbranjena master rada i 1 doktorske disertacije
- **Docent** na predmetima uže naučne oblasti Fiziologija biljaka na osnovnim akademskim i master studijama (2014-2019)
- **Vanredni profesor** na predmetima uže naučne oblasti Fiziologija i ishrana biljaka na osnovnim akademskim i master studijama (2019-2024)
- **Redovni professor** na predmetima uže naučne oblasti Fiziologija i ishrana biljaka na svim nivoima studija (2024-)

Članstvo u udruženjima (do 5)

- FESPB (Federacija evropskih društava za biljnu biologiju) – član
- Društvo za fiziologiju biljaka Srbije - član
- Odeljenje za prirodne nauke Matice srpske – član
- Od 2020 - International Society for Horticultural Science

Ostale aktivnosti (do 5)

- Predsednik organizacionog odbora međunarodnog skupa "Symposium on Advances on Meteorological application in Agriculture" »H2020 TWINNING - SERBIA FOR EXCELL final workshop«, 25-29. Jun 2018., Novi Sad
- Organizacioni odbor međunarodnog skupa "XXXIV ESNA Annual Meeting", 2004, sa oko 100 učesnika iz 19 zemalja (ESNA je The European Society for New Methods in Agricultural Research) – član
- Učesnik u organizaciji dve letnje škole organizovane u okviru projekta Serbia for Excell (H2020) tokom 2016. i 2017. godine
- Učesnik naučnog i organizacionog odbora skupova Društva za fiziologiju biljaka Srbije.
- Član naučnog odbora XXIII, XXIV, XXV Međunarodne naučna EKO-konferencija®, XIV Zaštita životne sredine gradova i prigradskih naselja, Novi Sad

Professor Marina Putnik-Delic, M.Sc. (docent – Assistant Professor, vanredni profesor – Associate Professor, redovni profesor – Professor)

Field of research: Plant physiology and nutrition

E-mail: putnikdelic@polj.uns.ac.rs; marina.putnikdelic@polj.edu.rs;

Telephone: +381 21 485 3513

Academic qualifications

- **B.Sc.** (2002) - University of Novi Sad, Faculty of Agriculture
- **M.Sc.** (2006) - University of Novi Sad, Faculty of Agriculture
- **Ph.D.** (2013) - University of Novi Sad, Faculty of Agriculture

Selected publications

- Bognár S, Jovanović D, Putnik P, Despotović V, Ivetić T, Bajac B, Tóth E, , Finčur N, Maksimović I, Putnik-Delić M, Zec N, Deák C, Kozma G, Banić N, Jagodić I, Šojić Merkulov D (2024) Solar-driven removal of selected organics with binary ZnO based nanomaterials from aquatic environment: Chemometric and toxicological assessments on wheat. *Journal of Environmental Chemical Engineering* 12 (2), 112016.
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- Putnik-Delić M, Maksimović I, Miroslavljević M, Ilin Ž, Adamović B, Daničić M (2023) Quality of cabbage and kohlrabi depending on the fertilizing regime and use of mulch. *Contemporary Agriculture* 72, 1-2: 57-63
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- Čobanov I, Tot A, Gadžurić S, Maksimović I, Putnik-Delić M, Daničić M, Bešter-Rogač M, Vraneš M (2021) Influence of structural changes of cation and anion on phytotoxicity of selected surface active ionic liquids. *Journal of Molecular Liquids*, 2021, 342, 117458
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- Daničić M, Maksimović I, Putnik-Delić M*, Kastori R, Crnobarac J, Jaćimović G, Šeremešić S (2021) Biomass production and mineral composition of coriander

(*Coriandrum sativum* L.) exposed to NaCl. *Biologia Futura (Acta Biologica Hungarica)* 72(4): 453-459.

- Finčur N, Sfirloagă P, Putnik P, Despotović V, Lazarević M, Uzelac M, Abramović B, Vlazan P, Ianăsi C, Alapi T, Náfrádi M, Maksimović I, Putnik-Delić M and Šojić Merkulov D (2021) Removal of Emerging Pollutants from Water Using Environmentally Friendly Processes: Photocatalysts Preparation, Characterization, Intermediates Identification and Toxicity Assessment. *Nanomaterials*, 11, 215.
- Maksimović I, Kastori R, Putnik-Delić M, Momčilović V, Denčić S, Mirosavljević M (2020) Genetic differences in aluminium accumulation in the grains of field grown *Aegilops* and *Triticum*. *Plant, Soil and Environment* 66: 351-356.
- Tot A, Maksimović I, Putnik-Delić M, Daničić M, Gadžurić S, Bešter-Rogač M, Vraneš M (2020) The effect of polar head group of dodecyl surfactants on the growth of wheat and cucumber. *Chemosphere Volume 254*, September 2020, Article number 126918
- Lazić D, Putnik-Delić M*, Daničić M, Župunski M, Arsenov D, Vuković S, Maksimović I (2020) Efficiency of Si in alleviating nacl-induced stress in oilseed rape. *Pakistan Journal of Agricultural Sciences*, Vol 57, Issue 4: 901 – 907.
- Kastori R., Putnik-Delić M, Maksimović I (2020) Zink u ishrani biljaka (Zinc in plant nutrition). *Matica srpska Novi Sad* ISBN: 978-86-7946-335-7
- Maged M. Saad MM, Michalet S, Fossou R, Putnik-Delić M, Crèvecoeur M, Meyer J, Malézieux C, Hopfgartner G, Maksimović I, Perret X (2019) Loss of NifQ leads to accumulation of porphyrins and altered metal-homeostasis in nitrogen-fixing symbioses. *Molecular Plant-Microbe Interactions* 32(2):208-216

Selected projects

1. Bioavailability of beneficial elements and antioxidant potential of soybean sprouts (*Glycine max* (L.) Merrill), Bilateral cooperation project Serbia-Croatia, 2019-2022 (coordinator)
2. H2020-TWINN-2015: SERBian-Austrian-Italian (SAI) partnership FORcing EXCELLence in ecosystem research, 2016-2018 (participant)
3. Building capacity of Serbian Agricultural Education to link with Society, CaSa, Tempus, 2013-2016 (participant)
4. Research of Plant Abiotic Stress Resistance Mechanisms. Bilateral cooperation project Serbia-Croatia, 2011-2012 (participant)
5. Development of new technologies for modern and sustainable production of vegetables. TR31036, 2011-2014 (participant)
6. Improvement of Forage Crops Production on Fields and Grasslands. TR-31016, 2011-2016 (participant)
7. Impact of different technologies of production and storage conditions on quality of vegetables. APV No.114-451-2218/2011, 2011-2014 (participant)

Academic activities

- Teaching assistant at undergraduate and postgraduate studies (Plant Physiology, Plant nutrition)
- Assistant professor at undergraduate and postgraduate studies (Plant Physiology, Plant nutrition)
- Associate professor at undergraduate and postgraduate studies (Plant Physiology, Plant nutrition)

- Full professor at undergraduate and postgraduate studies (Plant Physiology, Plant nutrition)

Memberships

- FESPB (Federation of European Societies of Plant Biology) – member
- Serbian Society for Plant Physiology – member
- Department for Natural Sciences of Matica Srpska – member
- International Society for Horticultural Science – member