NASTAVNO-NAUČNOM VEĆU
TEHNOLOŠKO-METALURŠKI FAKULTET
UNIVERZITETA U BEOGRADU

Odlukom broj 35/205 Nastavno-naučnog veća Tehnološko-metalurškog fakulteta Univerziteta u Beogradu od 26.08.2021, imenovani smo u Komisiju za ocenu ispunjenosti uslova za izbor **dr Katarine Mihajlovski** u zvanje **VIŠI NAUČNI SARADNIK** u oblasti Tehničko-tehnoloških i biotehničkih nauka. Na osnovu pregleda i analize dostavljenog materijala i uvida u dosadašnji rad kandidatkinje, a u skladu sa Zakonom o nauci i istraživanjima, i Pravilnikom o sticanju istraživačkih i naučnih zvanja ("Službeni glasnik RS", broj 159 od 30. decembra 2020), podnosimo sledeći

IZVEŠTAJ

1. OPŠTI BIOGRAFSKI PODACI

Dr Katarina (Radoslav) Mihajlovski, rođena je 05. decembra 1978. godine u Beogradu, Republika Srbija, gde je završila osnovnu školu i XI beogradsku gimnaziju. Godine 1997. upisala je studije na Tehnološko-metalurškom fakultetu u Beogradu. Diplomirala je 17.02.2003. godine na Katedri za Biohemijsko inženjerstvo i biotehnologiju sa prosečnom ocenom 8.97odbranivši diplomski rad na temu „Ispitivanje uticaja ekstrakta omana (*Inula Helenium*) na rast izolata *Bifidobacterium* sp.“ sa ocenom 10. Dobitnik je diplome fonda „Panta S. Tutundzić“ za izuzetan uspeh na studijama u redovnom roku 2001. godine. Dobitnik je diplome Ambasade Kraljevine Norveške programa za dodelu jednokratnih stipendija „15 miliona za 500 najboljih“ 2002. godine. Po završetku redovnih studija, upisala je magistarske studije na Katedri za biohemijsko inženjerstvo i biotehnologiju. Bila je stipendista Ministarstva nauke u periodu od 01.04.2003.-31.12.2006, a nakon toga u januaru 2007. godine zasniva radni odnos na TMF-u na Katedri za Biohemijsko inženjerstvo i biotehnologija. Pohađala je i stekla diplomu kursa: International Summer School and Training Course on „Cell and Tissue Engineering”, TMF, Beograd, 1-8 jul 2006. Magistarsku tezu na Tehnološko-metalurškom fakultetu Univerziteta u Beogradu pod nazivom „Proučavanje i izbor prirodnih jedinjenja za proizvodnju tekstilnih materijala sa antimikrobnim svojstvima“ odbranila je 14. februara 2007. godine. Doktorsku disertaciju pod nazivom „Poljoprivredni i industrijski otpad kao supstrat za proizvodnju celulaza i amilaza pomoću novog bakterijskog soja *Paenibacillus chitinolyticus* CKS1“ je odbranila 04. maja 2016. godine i time stekla zvanje doktor nauka-tehnološko inženjerstvo- biotehnologija.
Od januara 2007. godine zaposlena je na Tehnološko-metalurškom fakultetu, na Katedri za Biohemijsko inženjerstvo i biotehnologiju, u zvanju istraživač pripravnik. Zvanje istraživač-saradnik je stekla 17.07.2007. godine, dok je re-izbor za isto zvanje stekla 28.10.2010. Na osnovu Odluke Komisije za sticanje naučnih zvanja, kandidatkinja je 26.04.2017. (Odluka br. 660-01-00001/520) izabrana u zvanje naučni saradnik, (Prilog 1).
Od 2003-2007. godine, kao stipendista Ministarstva nauke bila je angažovana na sledećim projektima:"*Biofermentisani sokovi na bazi biljnih sirovina*" (BTH.7.1.4.0721.B, Ministarstvo nauke i zaštite životne sredine Republike Srbije, 2003-2005), "*Razvoj biomedicinskih tekstilnih materijala i proizvoda programiranih svojstava*" (TR6713, Ministarstvo nauke i zaštite životne sredine Republike Srbije, 2006-2007).

Od 2008-2010. godine je bila angažovana na projektu "*Razvoj novih prehrambenih i dijetetskih proizvoda sa medicinskim gljivama i lekovitim biljem*" (TR20049, Ministarstvo za nauku i tehnološki razvoj Republike Srbije, 2008-2010).
Dr Katarina Mihajlovski je u periodu od 2009-2019. godine učestvovala na istraživanju u okviru projekta "*Primena biotehnoloških metoda u održivom iskorišćenju nus-proizvoda agroindustrije*" (TR 31035, Ministarstvo za nauku i tehnološki razvoj Republike Srbije) i "*Biološki mehanizmi, nutritivni unos i status polinezasićenih masnih kiselina i folata: Unapređenje ishrane u Srbiji*" (III 41030, Ministarstvo za nauku i tehnološki razvoj Republike Srbije).
Dr Katarina Mihajlovski je rukovodilac međunarodnog bilateralnog projekta sa Republikom Hrvatskom pod nazivom "*Primena lignocelulozne biomase za dobijanje biogoriva*" Ministarstva prosvete, nauke i tehnološkog razvoja Republike Srbije (broj projekta 337-22-205/2019-09/35) za period 2019-2021 godine.
Od oktobra 2020. godine dr Katarina Mihajlovski je rukovodilac projekta, u oviru programa Dokaz koncepta finansiranog od strane Fonda za Inovacionu delatnost Republike Srbije, pod brojem PoC5634 i nazivom "*Green biocatalyst for decolorization and degradation of azo dyes from industrial wastewater: a white-rot fungal laccase immobilized on recycled agro-industrial waste*".
Dr Katarina Mihajlovski je uspostavila saradnju sa Prof. Dr Maja Leitgeb sa Univerziteta u Mariboru, Slovenija, Fakultet za hemiju i hemijsko inženjerstvo, u okviru Erasmus+ programa studentske razmene za 2020/2021 godinu (odobrene su 2 mobilnosti za studente doktorskih studija za zimski semestar 2020/2021 godine). Takođe, dr Katarina Mihajlovski je od 2019. godine član COST Akcije u okviru radne grupe WG7 pod nazivom "*SOURDOugh biotechnology network towards novel, healthier and sustainable food and bIoproCesseS*" (CA18101)".
Od školske 2004/2005. godine, Katarina Mihajlovski je u čestvovala je u izvođenju vežbi na osnovnim studijama iz sledećih predmeta: *Ekološka mikrobiologija* (zimski semestar školske 2004/2005, 2005/2006, 2006/2007, 2007/2008 i 2008/2009), *Tehnologija mikrobnih metabolita* (letnji i zimski semestar 2004/2005 i 2008/2009) na Katedri za Biohemijsko inženjerstvo i biotehnologiju.
Uz saglasnost Nastavno-naučnog veća Tehnološko-metalurškog fakulteta, dr Katarina Mihajlovski je angažovana na izvođenju vežbi na master studijama iz predmeta *Mikrobiologija i mikrobiološka analitika hrane* za školsku 2017/2018 godinu (odluka broj 35/499 od 30.11.2017.), 2018/2019 (odluka broj 35/444 od 01.11.2018.), 2019/2020, (odluka broj 35/368 od 31.10.2019.), 2020/2021 (odluka broj 5/369 od 24.12.2020.) Za potrebe akreditacije studijskih programa Tehnološko-metalurškog fakulteta, dr Katarina Mihajlovski ima saglasnost za angažovanje prilikom izvođenja vežbi iz predmeta *Mikrobiologija i mikrobiološka analitika hrane* u zimskom semestru školske 2021/2022 godine (odluka broj 35/154 od 28. 05.2020.).
Tokom svog dosadašnjeg rada dr Katarina Mihajlovski je učestvovala u izradi više završnih radova, master radova, 1 naučnog rada i nekoliko doktorskih radova koji su rađeni na Tehnološko-metalurškom fakultetu u Beogardu. Od 2019. godine kandidatkinja je bila član dve Komisije za ocenu i odbranu doktorske disertacije kao i 2 master rada koji se realizovani na Tehnološko-metalurškom fakultetu u Beogradu. Takođe, dr Katarina Mihajlovski je bila i član Komisije za izbor u zvanja. Od 2019. godine odlukom Tehnološko-metalurškog fakulteta bila je član komisije za popis imovine na Katedri za Biohemijsko inženjerstvo i biotehnologiju.
Dr Katarina Mihajlovski se bavi istraživanjima u oblastima iskorišćenja otpadnih sirovina, poljoprivrednog i industrijskog porekla, za proizvodnju mikrobnih enzima. U okviru ove oblasti kandidat se bavi izolacijom mikroorganizama, njihovom karakterizacijom i prečišćavanjem u cilju proizvodnje različitih grupa hidrolitičkih enzima. Kandidat se bavi ispitivanjem i optimizacijom

procesa fermentacije različitih otpadnih sirovina pomoću mikroorganizama u cilju proizvodnje enzima i procesima hidrolize lignoceluloznih sirovina u cilju dobijanja biotehnoloških vrednih proizvoda - biogoriva bioetanola. Osim toga, poseban interes je posvećen ispitivanju antioksidativnog potencijala ekstrakata otpadne kafe pre i nakon fermentacije mikroorganizmima. kao i ispitivanje antimikrobnog delovanja različitih tekstilnih vlakana, materijala i supstanci sa širokim spektrom primene u medicini.

U svom dosadašnjem naučno-istraživačkom radu dr Katarina Mihajlovski je autor/koautor ukupno **54** bibliografske jedinica i to:
35 naučnih radova iz kategorije M20 (od kojih u međunarodnom časopisu izuzetnih vrednosti (M21a) 6 radova, u vrhunskom međunarodnom časopisu (M21) 10 radova, u istaknutom međunarodnom časopisu (M22) 9 radova i u međunarodnom časopisu (M23) 10 radova; 2 rada objavljena u vrhunskom časopisu nacionalnog značaja (M51); 5 saopštenja sa međunarodnog skupa štampanih u celini (M33); 7 saopštenja sa međunarodnog skupa štampanih u izvodu (M34);1 saopštenje sa skupa nacionalnog značaja štampananog u celini (M63); 1 doktorska disertacija (M70); 1 magistarska teze, 1 tehničkog rešenja iz kategorije M82 i 1 objavljene patentne prijave iy kategorije M 94. Prema bazi Scopus (na dan 26.07.2021.), radovi dr Katarine Mihajlovski su do sada citirani puta 267 puta. Kandidatkinja je recenzent 16 međunarodnih časopisa kategorija M20, za koje je do sada uradila 28 recenzija. Takođe, dr Katarina Mihajlovski aktivno učestvuje u promociji Tehnološko-metalurškog fakulteta na sajmovima, kao i u promociji srednjoškolcima kroz tehnološku studiju slučaja "Tech Case Study" i direktnoj poseti srednjim školama.

2. PREGLED DOSADAŠNJEG NAUČNOG I STRUČNOG RADA

Dosadašnji naučni i stručni rad dr Katarine Mihajlovski obuhvata objavljene naučne radove, saopštenja na naučnim skupovima, tehničko rešenje i objavljenu patentnu prijavu u periodu 2007-2021. godine. Klasifikacija naučnih rezultata izvršena je prema Pravilniku o sticanju istraživačkih i naučnih zvanja ("Službeni glasnik RS", broj 159 od 30. decembra 2020).

2.1 SPISAK OBJAVLJENIH RADOVA PRE IZBORA U ZVANJE NAUČNI SARADNIK

Rad u međunarodnom časopisu izutetnih vrednosti (M21a=10)

1. Dimitrijević S., **Mihajlovski K.,** Antonović D., A study of the synergistic antilisterial effects of a sub-lethal dose of lactic acid and essential oils from *Thymus vulgaris* L., *Rosmarinus officinalis* L. and *Origanum vulgare* L., (2007), *Food Chemistry*, 104, 774-782. (ISSN 0308-8146; IF(2007)=3,052, Food Science and Technology 4/103). *Broj heterocitata*= 68.
   https://doi.org/10.1016/j.foodchem.2006.12.028
2. Janjić S., Kostić M., Vučinić M., Dimitrijević S., **Mihajlovski K.,** Ristić M, Škundrić P.,(2009), Biologically active fibers based on chitosan-coated lyocell fibers, *Carbohydrate Polymers*, 78, 240-246. (ISSN 0144-8617), IF(2009)=3.167; Chemistry Applied, 5/63). *Broj heterocitata*=33.
   https://doi.org/10.1016/j.carbpol.2009.03.033

Rad u vrhunskom međunarodnom časopisu (M21=8)

3. Kramar A., Prysiazhnyi V., Dojčinović B., **Mihajlovski K.,** Obradović B.M., Kuraica M.M., Kostić M., Antimicrobial viscose fabric prepared by treatment in DBD and subsequent deposition of silver and copper ions—Investigation of plasma aging effect, *Surface and Coatings Technology*, (2013), 234, 92–99. (ISSN: 0257-8972; IF (2013) = 2,199; Material Science, Coatings & Films 4/18). *Broj heterocitata* = 19. https://doi.org/10.1016/j.surfcoat.2013.03.030
4. Pavlović M. D., Buntić A. V., **Mihajlovski K.** R., Šiler-Marinković S. S., Antonović D. G., Radovanović Ž., Dimitrijević-Branković S. I., Rapid cationic dye adsorption on polyphenol-extracted coffee grounds—A response surface methodology approach. *Journal Of The Taiwan Institute Of Chemical Engineers*, (2014), 45, 1691-1699. (ISSN 1876-1070; IF (2014) = 3,00; Engineering, Chemical 19/135). *Broj heterocitata* = 37. https://doi.org/10.1016/j.jtice.2013.12.018
5. **Mihajlovski K. R.**, Radovanović N. R., Miljković M. G., Šiler-Marinković S. S., Rajilić-Stojanović M. D., Dimitrijević-Branković S. D.: β-amylase production from packaging-industry wastewater using a novel strain *Paenibacillus chitinolyticus* CKS1, *RSC Advances*, (2015), 5, 90895-90903. (ISSN 2046-2069; IF (2014) = 3,840; Chemistry, Multidisciplinary 37/157). *Broj heterocitata* = 0. https://doi.org/10.1039/C5RA11964B
6. **Mihajlovski K. R.**, Radovanović N. R., Veljović Đ. N., Šiler-Marinković S. S., Dimitrijević-Branković S. D.: Improved β-amylase production on molasses and sugar beet pulp by a novel strain *Paenibacillus chitinolyticus* CKS1, *Industrial Crops and Products*, (2016), 80, 115-122. (ISSN 0926-6690; IF(2016) = 3,181; Agricultural Engineering 3/14). *Broj heterocitata* = 11. https://doi.org/10.1016/j.indcrop.2015.11.025

Rad u istaknutom međunarodnom časopisu (M22 = 5)

7. Kostić M., Milanović J., Baljak M., **Mihajlovski** K.**,** Kramar A., Preparation and characterization of silver-loaded hemp fibers with antimicrobial activity, *Fibers and Polymers*, (2014), 15, 57-64. (ISSN 1229-9197; IF(2014) = 0,881; Material Science, Textiles 7/22). *Broj heterocitata* = 8. https://doi.org/10.1007/s12221-014-0057-7
8. Buntić A., Pavlović M., **Mihajlovski K**., Ranđelović M., Rajić N., Antonović D., Šiler Marinković S., Dimitrijević-Branković S., Removal of a cationic dye from aqueous solution by microwave activated clinoptilolite - Response surface methodology approach,*Water, Air and Soil Pollution*, (2014), 255, 1816. (ISSN 0049-6979), IF(2014)=1,554; Environmental Sciences 120/223). *Broj heterocitata*= 8. https://doi.org/10.1007/s11270-013-1816-6
9. **Mihajlovski K.**, Carević M., Dević M., Šiler-Marinković S., Rajilić-Stojanović M., Dimitrijević-Branković S., Lignocellulosic waste material as substrate for Avicelase production by a new strain of *Paenibacillus chitinolyticus* CKS1, *International Biodeterioration & Biodegradation*, (2015), 104, 426-434. (ISSN 0964-8305 ;IF (2014) = 2,131; Biotechnology and Applied Microbiology 81/163). *Broj heterocitata* = 7. https://doi.org/10.1016/j.ibiod.2015.07.012
10. Milanović J., **Mihajlovski K.,** Nikolić T., Kostić M., (2016), Antimicrobial cotton fibers prepared by tempo-mediated oxidation and subsequent silver deposition, *Cellulose*

Chemistry and Technology, 50, 905-914. (ISSN 0576-9787; IF (2016)=0,763; Materials Science, Paper and Wood 11/21). *Broj heterocitata*=4.

Rad u međunarodnom časopisu (M23=3)

11. Rakin M., Mojović Lj., Dimitrijević S. **Mihajlovski K**., Šiler-Marinković S., (2007), Investigation of antimicrobial activity of encapsulated essential oils, *Materials Science Forum*, 555, 429-434. (ISSN 0255-5476; IF(2005)=0,399; Materials Science, Multidisciplinary 137/178). *Broj heterocitata*=2. https://doi.org/10.4028/www.scientific.net/MSF.555.429
12. Milanović J., Mihailović T., **Mihajlovski K,** Kostić M., (2012) Antimicrobial TEMPO-oxidized hemp fibers with incorporated silver particles, *Journal of the Serbian Chemical Society*, (2012), 77, 1759-1773. (ISSN 1820-742; IF(2012) = 0,912; Chemistry Multidisciplinary 95/152). *Broj heterocitata* = 1. https://doi.org/10.2298/JSC121018143M
13. Milutinović M. D., Šiler-Marinković S. S., Antonović D. G., **Mihajlovski K**. R., Pavlović M. D., Dimitrijević Branković S. I., Antioksidativna svojstva sušenih ekstrakata iz otpadne espreso kafe. *Hemijska Industrija*, (2013), 67, 261-267. (ISSN 0367-598X, IF(2013) = 0,562; Engineering Chemical 103/133). *Broj heterocitata* = 3. https://doi.org/10.2298/HEMIND120410074M
14. Pecarski D., Knežević-Jugović Z., Dimitrijević-Branković S., **Mihajlovski K.,** Janković S., Preparation, characterization and antimicrobial activity of chitosan microparticles with thyme essential oil, *Hemijska Industrija*, (2014), 68, 721–729, 2014 (ISSN 0367-598; IF(2014) = 0,459; Engineering Chemical 121/135). *Broj heterocitata* = 7. https://doi.org/10.2298/HEMIND140415048P
15. **Mihajlovski K.**, Davidović S., Carević M., Radovanović N., Šiler-Marinković S., Rajilić-Stojanović M., Dimitrijević-Branković S., Carboxymethyl cellulase production from a *Paenibacillus* sp., *Hemijska Industrija*, (2016), 70, 329-338 (ISSN 0367-598X; IF(2016) =0.364; Engineering Chemical 125/135). *Broj heterocitata* = 5. https://doi.org/10.2298/HEMIND150222038M

Saopštenje na međunarodnom skupu štampano u celini (M33=1)

16. Djukić-Vuković A., Mojović Lj., Nikolić S., Pejin J., Kocić-Tanackov S., **Mihajlovski K.,** Distillery Stillage as a New Substrate for Lactic Acid Production in Batch and Fed-batch Fermentation, 7 Th Conference On Sustainable Development Of Energy, Water And Environment Systems (SDEWES), (2013), 34, 97-102, ISBN: 978-88-95608-25-9 *Broj heterocitata* = 8. https://doi.org/10.3303/CET1334017
17. Buntić A. V., Pavlović M. D., Šiler-Marinković S. S., Miljković M. G., Davidović S. Z., **Mihajlovski K.** R., Dimitrijević Branković S. I., Screening for factors affecting cellulose adsorption from solutions by modified coffee residues. International conference on civil, biological and environmental engineering (CBEE), Istanbul, Turska, 27-28 maj, 2014, International Institute of Chemical, Biological and Environmental Engineering, Kuala Lumpur, Malezija, (2014), 54-59, ISBN: 978-93-82242-94-9 https://iicbe.org/upload/7317C514540.pdf
18. **Mihajlovski R. K.,** Miljković M. M., Mladenović D. D., Dimitrijević-Branković I. S., Šiler- Marinković S., Sugar beet pulp and molasses as a solid state fermentation media for

cellulase production by *Paenibacillus chitinolyticus* CKS1 In: Radoje V. Pantovic, editor. XXIII International Conference Ecological Truth Hotel Putnik, Kopaonik, Serbia: University of Belgrade-Technical Faculty in Bor, (2015), 403-408, ISBN: 978-86-6305-032-7

19. Miljković, G.M., Davidović, Z.S., Mladenović, D.D., **Mihajlovski, R.K.**, Dimitrijević-Branković, I.S., Šiler-Marinković, S. Molasses and sugar beet pulp as a fermentation media for dextransucrase production by *Leuconostoc mesenteroides* T3, In: Radoje V. Pantovic, Z.S.M., (ed.).X International symposium on recycling technologies and sustainable development, (2015). Hotel Albo, Bor, Serbia. University of Belgrade-Technical Faculty in Bor, 127-132, ISBN: 978-86-6305-037-2

Saopštenje na međunarodnom skupu štampano u izvodu (M34=0.5) (Prilog 2**)**

20. **Mihajlovski K. R.,** Davidović S. Z., Miljković M. G., Rajilić- Stojanović M. D., Dimitrijević-Branković S. I., Cellulolytic potencial of a strain *Paenibacillus* sp. isolated from soil, 8th International Conference of the Chemical Societies of the South-East European Countries - ICOSECS 8, Belgrade, Serbia, (2013), June 27-29, 244, ISBN: 978-86-7132-053-5.
http://eprints.ugd.edu.mk/8532/1/ICSECS8-Book_of_Abstrcts.pdf
21. **Mihajlovski K.,** Pavlović M, Milutinović M., Šiler-Marinković S., Dimitrijević-Branković S. Effect of fermentation by *Streptomyces* sp. on atioxidant properties of spent coffee extracts. CEFOOD, Institute of food technology, Novi Sad, Srbija, 23 - 26 maj, (2012), 424, ISBN: 978-7994-028-5
22. Miljković M., Davidović S., **Mihajlovski K.,** Dimitrijević S., Usage of by-products from sugar industry as a cheap substrate for dextransucrase production, Solid urban waste management, XXI IUPAC Chemrawn Conference, Rome, April 6-8 2016, Book of Abstracts,77
http://www.iupac-rome2016.it/wpcontent/uploads/2016/05/bookABSTRACTS.pdf

Rad u vodećem časopisu nacionalnog značaj (M51=2)

23. Pecarski D.M., Knežević-Jugović Z. D., Dimitrijević-Branković S.I., **Mihajlovski K.** R., Slobodan M. Janković, Comparative analysis of the chemical composition and antimicrobal activities of some of *Lamiaceae* family species and Eucaliptus (*Eucaliptus globules* M), APTEFF, (2014), 45, 1-283, 201-213,; UDC: 582.883.4+582.929.4]:581.192:615.28
https://doi.org/10.2298/APT1445201P

Saopštenje sa nacionalnog skupa štampano u celini (M63=0.5)

24. Dimitrijević Branković S., Pavlović M., Buntić A., Ranđelović M., **Mihajlovski K.,** Rajić N., Antonović D., Šiler-Marinković S., Determination of the natural zeolite capacity for the adsorptive removal of crystal violet dye from aqueous solution using response surface method, 50. Savetovanje Srpskog Hemijskog Društva, Beograd, Srbija, 14. i 15. juni 2012, Serbian Chemical Society, (2012),132-136, ISBN: 978-86-7132-049-8
http://www.chem.bg.ac.rs/~ijuranic/50.%20Savetovanje%20SHD%202012%20Beograd.pdf

Odbranjena doktorska disertacija (M70)

25. **Katarina R. Mihajlovski** „Poljoprivredni i industrijski otpad kao supstrat za proizvodnju celulaza i amilaza pomoću novog bakterijskog soja *Paenibacillus chitinolyticus* CKS1“, Beograd, 04. maj 2016. (UDK: 62-665.9:663.15:579.852.11(043.3) http://technorep.tmf.bg.ac.rs/bitstream/handle/123456789/4634/4631.pdf?sequence=1&isAllowed=y

Učešće u projektima finansiranim od strane nadležnog Ministarstva (pre izbora u zvanje naučni saradnik)

26. Projekat tehnološkog razvoja Ministarstva prosvete, nauke i tehnološkog razvoja “Primena biotehnoloških metoda u održivom iskorišćenju nus-proizvoda agroindustrije” (TR 31035)(rukovodilac projekta Prof. dr Suzana Dimitrijević-Branković)
Uloga u projektu: istraživač
27. Projekat Ministarstva prosvete, nauke i tehnološkog razvoja “Biološki mehanizmi, nutritivni unos i status polinezasićenih masnih kiselina i folata: Unapređenje ishrane u Srbiji” (III 41030). (rukovodilac projekta Dr Marija Gilbetić)
Uloga u projektu: istraživač

2.2 SPISAK OBJAVLJENIH RADOVA POSLE IZBORA U ZVANJE NAUČNI SARADNIK

Rad u međunarodnom časopisu izuzetnih vrednosti (M21a = 10)

1. Lazić B., Pejić B., Kramar, A., Vukčević M., **Mihajlovski K.**, Rusmirović, J., Kostić M., Influence of hemicelluloses and lignin content on structure and sorption properties of flax fibers (*Linum usitatissimum* L.), *Cellulose*, (2017), 25, 697-709. (ISSN 0969-0239, IF(2016)=3.147; Material Science, Textiles 2/24). *Broj heterocitata* = 13. https://doi.org/10.1007/s10570-017-1575-4
2. **Mihajlovski K.,** Radovanović Ž., Carević M., Dimitrijević- Branković S., Valorization of damaged rice grains: Optimization of bioethanol production by waste brewer's yeast using an amylolytic potential from the *Paenibacillus chitinolyticus* CKS1, *Fuel*, (2018), 224, 591-599. (ISSN 0016-2361; IF(2018)=5,128; Energy and Fuels 20/103). *Broj heterocitata* = 7. https://doi.org/10.1016/j.fuel.2018.03.135
3. Korica M.,Fras-Zemljic L., Bracic M., Kargl R., Spirk S., Reishofer D., **Mihajlovski K.** and Kostic M., Novel protein-repellent and antimicrobial polzsaccharide multilayer thin films, *Holzforschung*, (2019), 73, 93-103. (ISSN 0018-3830; IF(2018)=2,579; Materials Science, Paper and Wood 2/21). *Broj heterocitata* = 0. https://doi.org/10.1515/hf-2018-0094
4. Ivanovska A., Asanović K., Jankoska M., **Mihajlovski K.,** Pavun L., Kostić M., Multifunctional jute fabrics obtained by different chemical modifications, *Cellulose*, (2020), 27, 8485–8502. (ISSN 0969-0239; IF(2020)=5,044; Materials Science, Textiles 2/25). *Broj heterocitata* = 1. https://doi.org/10.1007/s10570-020-03360-x

Rad u vrhunskom međunarodnom časopisu (M21=8)

5. **Mihajlovski K.,** Rajilić-Stojanović M., Dimitrijević Branković S., Enzymatic hydrolysis of waste bread by newly isolated *Hymenobacter* sp. CKS3: Statistical optimization and bioethanol production, *Renewable Energy*, (2020), 152, 627-633. (ISSN 0960-1481; IF(2020)=8,001; Energy and Fuels 16/114). *Broj heterocitata* = 3.
   https://doi.org/10.1016/j.renene.2020.01.101
6. Kramar A., Petrović M., **Mihajlovski K.,** Mandić B., Vuković G., Blagojević S., Kostić M., Selected aromatic plants extracts as an antimicrobial and antioxidant finish for cellulose fabric-Direct impregnation method, *Fibers and Polymers*, (2021), In press;- (ISSN 1229-9197, IF(2020)=2,153; Materials Science, Textiles 6/25). *Broj heterocitata* =0.
   https://doi.org/10.1007/s12221-021-3007-1
   *potvrda editora o prihvatanju rada data je u prilogu-Prilog 14
7. Knežević M., Stajković-Srbinović O.,Assel M., Marija D.Milić, **Mihajlovski K**., Delić D., Buntić A., The ability of a new strain of *Bacillus pseudomycoides* to improve the germination of alfalfa seeds in the presence of fungal infection or chromium, *Rhizosphere*,(2021), 18, 100353, (ISSN 2452-2198; IF(2020)=3,129; Plant sciences 69/235). *Broj heterocitata* = 0.
   https://doi.org/10.1016/j.rhisph.2021.100353
8. **Mihajlovski, K.**, Pecarski, D., Rajilić-Stojanović, M., Dimitrijević-Branković, S., Valorization of corn stover and molasses for enzyme synthesis, lignocellulosic hydrolysis and bioethanol production by *Hymenobacter* sp. CKS3, *Environmental Technology and Innovation*, (2021), 23,101627. (ISSN 2352-1864; IF (2020)=5,263; Biotechnology and Applied Microbiology 31/159). *Broj heterocitata* = 0.
   https://doi.org/10.1016/j.eti.2021.101627
9. Milić M., Buntić A., **Mihajlovski K.,** Ilić N., Davidović S., Dimitrijević-Branković S., The development of a combined enzymatic and microbial fermentation as a viable technology for the spent coffee ground full utilization, *Biomass Conversion and Biorefinery*,(2021), (ISSN 2190-6815; IF(2020)=4,987; Engineering, Chemicals 31/143). Broj heterocitata = 0.
   https://doi.org/10.1007/s13399-021-01605-8
10. Ivanovska A., Veljović S., Dojčinović B., Tadić N., **Mihajlovski K**., Natić M., Kostić M., A Strategy to Revalue a Wood Waste for Simultaneous Cadmium Removal and Wastewater Disinfection, *Adsorption Science and Technology*, (2021), (ISSN 0263-6174; IF(2020)=4,232; Engineering, Chemical 42/143). Broj heterocitata=0.
    https://doi.org/10.1155/2021/3552300
    * potvrda editora o prihvatanju rada data je u prilogu- Prilog 14

Rad u istaknutom međunarodnom časopisu (M22 = 5)

11. Radovanović N., Milutinović M., **Mihajlovski K.,** Jović J., Nastasijević B., Rajilić-Stojanović M., Dimitrijević-Branković S., Biocontrol and plant stimulating potential of novel strain *Bacillus* sp. PPM3 isolated from marine sediment, *Microbial Pathogenesis*, (2018),120,71-78. (ISSN 0882-4010; IF(2018)=2,581; Microbiology 79/133). *Broj heterocitata* = 5.
    https://doi.org/10.1016/j.micpath.2018.04.056

12. Korica M., Peršin Z., Trifunović S., **Mihajlovski K.**, Nikolić T., Maletić S., Fras-Zemljic L. , Kostić M., Influence of Different Pretreatments on the Antibacterial Properties of Chitosan Functionalized Viscose Fabric: TEMPO Oxidation and Coating with TEMPO Oxidized Cellulose Nanofibrils, *Materials*, (2019), 12, 3144. (ISSN 1996-1944; IF(2019)=3,057; Materials Science, Multidisciplinary 132/314). *Broj heterocitata* = 3. https://doi.org/10.3390/ma12193144
13. Buntić A., Milić M., Stajković-Srbinović O., Rsulić N., Delić D., **Mihajlovski K**., Cellulase production by *Sinorhizobium meliloti* strain 224 using waste tobacco as substrate, *International Journal of Environmental Science and Technology* (2019), 1-10. (ISSN 1735-1472, IF(2019)=2,540; Environmental Sciences 125/265). *Broj heterocitata* = 5. https://doi.org/10.1007/s13762-019-02230-9
14. **Mihajlovski K.,** Buntić A., Milić M., Rajilić-Stojanović M., Dimitrijević Branković S., From agricultural waste to biofuel: enzymatic potential of a bacterial isolate *Streptomyces fulvissimus* CKS7 for bioethanol production, *Waste and Biomass Valorization*, (2020), 12, 165-174. (ISSN 1877-2641, IF(2020)=3,703; Environmental Sciences 108/274). *Broj heterocitata* = 6. https://doi.org/10.1007/s12649-020-00960-3
15. Korica M., Peršin Z., Fras Zemljič L., **Mihajlovski K.**, Dojčinović B., Trifunović S., Vesel A., Nikolić T., Kostić M., Chitosan Nanoparticles Functionalized Viscose Fabrics as Potentially Durable Antibacterial Medical Textiles, *Materials*, (2021), 14, 3762. (ISSN 1996-1944, IF(2020)=3,623; Materials Science, Multidisciplinary, 152/133). *Broj heterocitata* =. https://doi.org/10.3390/ma14133762

Rad u međunarodnom časopisu (M23=3)

16. **Mihajlovski K.**, Davidović S., Veljović Đ., Carević, M., Lazić, V., Dimitrijević-Branković, S., Effective valorization of barley bran for simultaneous cellulase and β-amylase production by *Paenibacillus chitinolyticus* CKS1: Statistical optimization and enzymes application, *Journal of the Serbian Chemical Society*, (2017), 82, 1223-1236. (ISSN 0352-5139; IF (2016)= 0.822); Chemistry, Multidisciplinary 131/166). *Broj heterocitata* = 2. https://doi.org/10.2298/JSC170514092M
17. Lazić V., **Mihajlovski K.,** Mraković A., Illes E., Stoljković M., Ahrenkiel S., Nedeljkovic J., Antimicrobial activity of silver nanoparticles supported by magnetite, *Chemistry Select*, (2019), 4, 4018-4024. (ISSN 2365-6549; IF(2019)=1,811; Chemistry, Multidisciplinary 111/177). *Broj heterocitata* = 2. https://doi.org/10.1002/slct.201900628
18. **Mihajlovski K.**, Milić M., Pecarski D., Dimitrijević Branković S., Statistical optimization of bioethanol production from waste bread hydrolysate, *Journal of the Serbian Chemical Society*, (2021), Online first, (ISSN 0352-5139; IF(2020)=1.240; Chemistry, Multidisciplinary 141178). *Broj heterocitata* = 0. https://doi.org/10.2298/JSC210308032M
19. Radovanović L., Zdravković J.**,** Simović B., Radovanović Ž., **Mihajlovski K.,** Dramićanin M., Rogan J., Zinc oxide nanoparticles prepared by thermal decomposition of zinc benzenepolycarboxylato precursors: Photoluminescent, photocatalytic and antimicrobial

properties, *Journal of the Serbian Chemical Society*, (2020), 85,1475-1488 (ISSN 0352-5139; IF(2020)= 1.0240; Chemistry, Multidisciplinary 141/178). *Broj heterocitata* = 0. https://doi.org/10.2298/JSC200629048R

20. Radovanović Ž., **Mihajlovski K.,** Radovanović L., Janaćković Đ., Petrović R., Hydroxyapatite/nifuroxazide conjugate: Characterization, drug release and antimicrobial activity, *Journal of the Serbian Chemical Society*, (2021), OnLine-First Issue 00, 40-40. (ISSN 0352-5139; IF(2020)=1.240; Chemistry, Multidisciplinary 141/178). *Broj heterocitata* = 0. https://doi.org/10.2298/JSC210420040R

Saopštenje na međunarodnim skupu štampano u celini (M33=1)

21. Nevena V. Ilić, Vesna Lazić, Neda R. Radovanović, **Katarina R. Mihajlovski**, Slađana Z. Davidović, Miona G. Miljković, "Investigation Of The Influence Of Different Nanoparticles On The Growth Of Soil Microorganisms And Organic Mung Bean", VII International Congress "Engineering, Environment and Materials in Process Industry" University of East Sarajevo and Faculty of Technology Zvornik, Jahorina, Bosnia and Herzegovina, 17-19 March, 2021.
    * potvrda editora o prihvatanju rada u prilogu- Prilog 14

Saopštenje na međunarodnom skupu štampano u izvodu (M34=0.5)

22. Zdravković J., Radovanović L., Simović B., Poleti D., Rogan J., Radovanović Ž., **Mihajlovski K.,** ZnO nanopowders obtained by thermolysis of zinc benzenedicarboxylate complexes with 2,2'-dipyridylamine, 4th Conference of the Serbian Society for Ceramic Materials, 4th International Conference The Serbian Society for Ceramic Materials, Book of abstracts, p. 79, 14 - 16 June, 2017, Belgrade, Serbia. http://www.ceramic-society.rs/wp-content/uploads/2018/11/Book-of-Abstracts-2017.pdf
23. **Mihajlovski K.,** Milić M., Dimitijević-Branković S., Production of enzymes by a new strain *Streptomyces fluvissimus* CKS7 using agricultural by-products, Book of abstracts /25th Congress of the society of chemists and technologists of Macedonia (with international participation) 19-22 September 2018 Ohrid, R. Macedonia, Metropol Lake Resort; edited by Trajče Stafilov, Jasmina Petreska Stanoeva, page 200. (ISBN 978-9989-760-16-7). https://eprints.ugd.edu.mk/20543/1/25Congress-Book%20of%20abstracts-final-BB.pdf
24. **Mihajlovski K.,** Milić M., Marković D., Possibility of using microbial enzymes produced by *Streptomyces fluvissimus* CKS7 in hydrolysis process, Book of abstracts / 25th Congress of the society of chemists and technologists of Macedonia (with international participation) 19-22 September 2018 Ohrid, R. Macedonia, Metropol Lake Resort; edited by Trajče Stafilov, Jasmina Petreska Stanoeva, page 203. (ISBN 978-9989-760-16-7). https://eprints.ugd.edu.mk/20543/1/25Congress-Book%20of%20abstracts-final-BB.pdf
25. Davidović S., Milutinović M., **Mihajlovski K.,** Dimitrijević-Branković S., Utilization of different agro-industrial wastes for bioethanol production using an amylolytic potential from the *Paenibacillus chitinolyticus* CKS1, Knjiga sažetaka, Šesnaesta međunarodna konferencija mladih istraživača, Beograd, Srbija, 6-8 decembar 2017, SANU Instituti, Knez Mihailova 36, Beograd, Srbija, 2017, str 17. (ISBN: 978-86-80321-33-2). https://books.google.rs/books?id=IOg_DwAAQBAJ&pg=PA17&lpg=PA17&dq=Utilization+of+different+agro-industrial+wastes+for+bioethanol+production+using+an+amylolytic+potential+from+the

+Paenibacillus+chitinolyticus+CKS1,&source=bl&ots=o10fYhQJDl&sig=ACfU3U03vNciRWIjQ7pXlH96ZjxLxAQKqw&hl=sr&sa=X&ved=2ahUKEwiw9oTsg5fxAhVNw4sKHQH4AYAQ6AEwAXoECAMQAw#v=onepage&q=Utilization%20of%20different%20agro-industrial%20wastes%20for%20bioethanol%20production%20using%20an%20amylolytic%20potential%20from%20the%20Paenibacillus%20chitinolyticus%20CKS1%2C&f=false

Rad u vodećem časopisu nacionalnog značaj (M51=2)

26. Radovanović N., Davidović S, Miljković M, Pavlović M., Buntić A., Lazić V., **Mihajlovski K**, β-amylase production by a novel strain *Paenibacillus chitinolyticus* CKS1 using commercial and waste substrates, *Journal on Processing and Energy in Agriculture*, (2018), 22, 18-22. (ISSN 1821-4487).
https://scindeks-clanci.ceon.rs/data/pdf/1821-4487/2018/1821-44871801018R.pdf

Novo tehničko rešenje (metoda) primenjeno na nacionalnom nivou (M82 = 6) – (Prilog 3)

27. Danijela Pecarski, Zprica Knežević-Jugović, Nina Dragićević, Verica Đorđević, **Katarina Mihajlovski**, Suzana Dimitrijević-Branković, (2018), "Formulacija gela za intimno pranje sa hitozanskim česticama sa inkapsuliranim etarskim uljem timijana u profilaksi bakterijskih vaginoza". Korisnik: Mella Cosmetics d.o.o., Vojvode Stepe 116, Beograd, Srbija, Prihvaćeno od: Mella Cosmetics d.o.o., Vojvode Stepe 116, Beograd, Srbija. Odgovorno lice: dr Danijela Pecarski. Prihvaćeno od strane MNO za biotehnologiju i poljoprivredu na sednici održanoj 29.11.2018. godine.

Objavljen patent na nacionalnom nivou (M94=7)

28. **Katarina Mihajlovski**, Milica Simović, Suzana Dimitrijević-Branković, Mirjana Rajilić-Stojanović, Novi bakterijsku soj *Hymenobacter* sp. CKS3 za proizvodnju enzima amilaza i primena ovih enzima".
https://www.zis.gov.rs/upload/documents/pdf_sr/pdf/glasnik/GIS_2019/Glasnik_10_2019.pdf

Učešće u projektima finansiranim od strane nadležnog Ministarstva (posle izbora u zvanje naučni saradnik)

29. Projekat tehnološkog razvoja Ministarstva prosvete, nauke i tehnološkog razvoja "Primena biotehnoloških metoda u održivom iskorišćenju nus-proizvoda agroindustrije" (TR 31035)(Rukovodilac projekta Prof. dr Suzana Dimitrijević-Branković)
Uloga u projektu: istraživač
30. Projekat Ministarstva prosvete, nauke i tehnološkog razvoja "Biološki mehanizmi, nutritivni unos i status polinezasićenih masnih kiselina i folata: Unapređenje ishrane u Srbiji" (III 41030).(Rukovodilac projekta dr Marija Gilbetić)
Uloga u projektu: istraživač
31. Međunarodni projekat bilateralne saradnje Srbije sa Hrvatskom pod nazivom "*Primena lignocelulozne biomase za dobijanje biogoriva*" Ministarstva prosvete, nauke i tehnološkog razvoja Republike Srbije (broj projekta 337-22-205/2019-09/35) za period 2019-2021 godine. Rukovodilac projekta **dr Katarina Mihajlovski**. (rukovodilac projekta

u Hrvatskoj, prof. dr Mirela Ivančić-Šantek, Prehrambeno-biotehnološki fakultet u Zagrebu) (Prilog 4)

Učešće u projektima finansiranim od strane Fonda za inovacionu delatnost Republike Srbije (posle izbora u zvanje naučni saradnik) (Prilog 5)

32. Projekat Fonda za inovacionu delatnost- Dokaz koncepta, (*Proof of concept*), broj projekta PoC5634 pod nazivom "*Green biocatalyst for decolorization and degradation of azo dyes from industrial wastewater: a white-rot fungal laccase immobilized on recycled agro-industrial waste*", rukovodilac projekta **dr Katarina Mihajlovski** (2020-2021), nosilac projekta Tehnološko-metalurški fakultet u Beogradu.

Učešće u projektima međunarodne saradnje finansiranim od strane EU (Prilog 6)

33. Član radne grupe WG7 u COST action CA 18101 "*SOURDOugh biotechnology network towards novel, healthier and sustainable food and bIoproCesseS*" (2019-2023).

2.3 PET NAJZNAČAJNIJIH NAUČNIH OSTVARENJA KANDIDATKINJE POSLE PRETHODNOG IZBORA U ZVANJE

1. **Mihajlovski K.,** Radovanović Ž., Carević M., Dimitrijević- Branković S., Valorization of damaged rice grains: Optimization of bioethanol production by waste brewer's yeast using an amylolytic potential from the *Paenibacillus chitinolyticus* CKS1, *Fuel*, (2018), 224, 591-599. (ISSN 0016-2361; IF(2018)=5,128; Energy and Fuels 20/103). *Broj heterocitata* =7.
   https://doi.org/10.1016/j.fuel.2018.03.135
2. **Mihajlovski K.,** Rajilić-Stojanović M., Dimitrijević Branković S., Enzymatic hydrolysis of waste bread by newly isolated *Hymenobacter* sp. CKS3: Statistical optimization and bioethanol, production, *Renewable Energy*, (2020), 152, 627-633. (ISSN 0960-1481; IF(2020)=8,001; Energy and Fuels 16/114). Broj heterocitata = 3.
   https://doi.org/10.1016/j.renene.2020.01.101
3. **Mihajlovski K.,** Buntić A., Milić M., Rajilić-Stojanović M., Dimitrijević Branković S., From agricultural waste to biofuel: enzymatic potential of a bacterial isolate *Streptomyces fulvissimus* CKS7 for bioethanol production, *Waste and Biomass Valorization*, (2020), 12, 165-174. (ISSN 1877-2641; IF(2020)=3,703; Environmental Sciences 108/274). *Broj heterocitata* = 6.
   https://doi.org/10.1007/s12649-020-00960-3
4. **Mihajlovski K.**, Pecarski D., Rajilić-Stojanović M., Dimitrijević-Branković S., Valorization of corn stover and molasses for enzyme synthesis, lignocellulosic hydrolysis and bioethanol production by *Hymenobacter* sp. CKS3, *Environmental Technology and Innovation*, (2021), 23,101627. (ISSN 2352-1864; IF (2020) =5,263; Biotechnology and Applied Microbiology 31/159). *Broj heterocitata* = 0.
   https://doi.org/10.1016/j.eti.2021.101627
5. Milić M., Buntić A., **Mihajlovski K.,** Ilić N., Davidović S., Dimitrijević-Branković S., The development of a combined enzymatic and microbial fermentation as a viable technology for the spent coffee ground full utilization, *Biomass Conversion and Biorefinery*,(2021), (ISSN 2190-6815; IF(2020)=4,987; Engineering, Chemicals 31/143). Broj heterocitata = 0.

https://doi.org/10.1007/s13399-021-01605-8

Svih pet navedenih naučnih ostvarenja su rezultat rada na nacionalnom projektu Ministarstva prosvete, nauke i tehnološkog razvoja "Primena biotehnoloških metoda u održivom iskorišćenju nus-proizvoda agroindustrije" (TR 31035).

2.4 ANALIZA RADOVA KOJI KANDIDATKINJU KVALIFIKUJU ZA IZBOR U ZVANJE VIŠI NAUČNI SARADNIK

Naučno-istraživački rad dr Katarine Mihajlovski se nakon izbora u prethodno zvanje, a na osnovu tema istraživanja, može podeliti u tri grupe.

Prvu grupu čine radovi (2.2/2; 2.2/5; 2.2/8; 2.2/13; 2.2/14; 2.2/16; 2.2/18; 2.2/23; 2.2/24; 2.2/25; 2.2/26; 2.2/28) koji se odnose na iskorišćenje različitih otpadnih sirovina, poljoprivrednog i industrijskog porekla, njihovu fermentciju pomoću novoizolovanih bakterijskih sojeva za proizvodnju mikrobnih enzima, a potom za primenu dobijenih enzima u postupcima hidrolize lignoceluloznih sirovina i dobijanju biogoriva –bioetanola.

Radovi 2.2/16 i 2.2/26 se odnose na ispitivanje mogućnosti proizvodnje enzima β-amilaza i celulaza pomoću novog prirodnog bakterijskog izolata *P. chitinolyticus* CKS1 na različitim komercijalnim ali i otpadnim sirovinama. U radu 2.2/26 bakterijski izolat *Paenibacillus chitinolyticus* CKS1, izolovan iz zemljišta četinarske šume, pokazao je sposobnost proizvodnje β-amilaza tokom svog rasta na i na otpadnim supstratima. Maksimalna aktivnosti β-amilaza koja je iznosila 0,820 U/ml postignuta je korišćenjem izomaltideksa, šećernog alkohola, u koncentraciji od 0,5% (w/v), kao supstrata za rast mikroorganizma i proizvodnju enzima. Soj CKS1 je pokazao mogućnost korišćenja otpadnog biljnog materijala kao supstrata za rast i proizvodnju enzima amilaza sa aktivnošću od 0,569 U/mL. Korišćenje otpadne sirovine u mikrobnim procesima proizvodnje enzima je i ekološki mnogo prihvatljivije usled uticaja na smanjene skladištenja otpada a samim tim i sveukupnog zagađenje životne sredine. Simultana proizvodnja enzima β-amilaza i celulaza (endoglukanaza i egzoglukanaza) soja CKS1 na otpadnom supstratu ječmenim mekinjama prikazana je u radu 2.2/16. Primenom metode statistički planiranog eksperimenta (metoda odzivnih površina), pod optimalnim uslovima, maksimum proizvodnje endoglukanaza iznosio je 0,405 U mL/, egzoglukanaza 0,433 U/ml i β-amilaza 1,594 U/ml. Sirovi bakterijski supernatant soja CKS1, koji sadrži celulaze i β-amilaze je potom korišćen za hidrolizu pamučnog materijala, kao i ječmenih mekinja.

U radovima 2.2/2 i 2.2/25 ispitana je mogućnost proizvodnje bioetanola koristeći otpadna i oštećena zrna pirinča pomoću amilaza koje proizvodi prirodni bakterijski izolat *Paenibacillus chitinolyticus* CKS1. Sirove amilaze koje proizvodi soj CKS1 su korišćenje u procesu presaharifikacije otpadnog pirinča za dobijanje maltoze koju je zatim otpadni pivski kvasac uspešno ferementisao do etanola. Ovo je prvi rad koji se bavi primenom amilolitičkog potencijala vrste *P. chitinolyticus* koja je do sada opisana kao ne-amilolitička. U ovom radu, statistička metoda odzivne površine, je korišćena za optimizaciju usolova proizvodnje bioetanola. Koristeći centralni kompozitni dizajn, pod optimalnim uslovima koji su iznosili 0,5% sladnog ekstrakta, 3,84% inokuluma otpadnog pivskog kvasca i ~3 dana fermentacije, dobijena je maksimalna koncentracija etanola koja je iznosila 4,69%. Rezultati ovog rada su pokazali da se koristeći otpadna zrna pirinča,

sirove amilaze kao i otpani pivski kvasac može na ekonomičan način proizvesti (bio)etanol (rad 2.2/2).
U radovima 2.2/5, 2.2/8, 2.2/18 i 2.2/28 izolovan je iz zemljišta i okarakterisan novi bakterijski soj *Hymenobacter* sp. CKS3 za koji se pokazalo da ima širok enzimski potencijal i mogućnost primene u različitim granama industrije. Ovaj novoizolovani soj je pokazao mogućnost proizvodnje mikrobnih enzima, iz grupe hidrolaza, gajenjem na otpadnim supstratima, a dobijeni enzimi se dalje mogu koristiti u procesima hidrolize i dobjanju etanola kao krajnjeg proizvoda. U radu 2.2/5 i 2.2/28 je pokazano po prvi put da sirovi hidrolitički enzimi koje proizvodi soj CKS3 na otpadnom supstratu se mogu koristiti u postupku hidrolize otpadnog hleba u cilju dobijanja bioetanola. Primenom statističkog dizajna, optimizovani su uslovi hidrolize otpadnog hleba pomoću prethodno proizvedenih sirovih hidrolaza (amilaza). Pod optimalnim uslovima (vreme hidrolize 100h, 20% otpadnog hleba i broj obrtaja tresilice 200 rpm), dobijeni otpadni hlebni hidrolizat je sadržao 19.89 g/l redukujućih šećera. Otpadni pivski kvasac je dalje korišćen u postupku fermentacije redukujućih šećera do etanola (rad 2.2/18). Metodom odzivne površine optimizovani su uslovi fermentacije otpadnog pivskog kvasca (48,6 sati fermentacije i 2,85 % inokuluma kvasca) pri čemu je dobijena maksimalna koncentracija etanola koja je iznosila 2,06%. Dalji nastavak istraživanja, u okviru ispitivanja enzimskog potencijala soja CKS3, je predstavljen u radu 2.2/8. Koristeći agro-industrijski otpad, melasu i kukuruzni otpad, soj CKS3 u okviru roda *Hymenobacter*, po prvi put proizvodi enzime celulaze i pektinaze. Optimizovani su uslovi za simultanu proizvodnju ovih enzima (5% kukuruznog otpada, 2,5% melase i ~4 dana fermentacije), da bi se potom dobijene celulaze (endoglukanaze 1,11 U/ml i egzoglukanaze 0,92 U/ml) i pektinaze (3,69 U/ml) uspešno koristile u hidrolizi lignocelulozne sirovine – kukuruznog otpada za dobijanje redukujućih šećera. Otpadni pivski kvasac je dalje korišćen za fermentaciju redukujućih šećera do (bio)etanola. Rezultati ovog ispitivanja su pokazali da bakterije koje pripadaju rodu *Hymenobacter* imaju još uvek nedovoljno ispitan enzimski potencijal koji se može koristiti za dobijanje biotehnološki vrednih proizvoda među kojima je bioetanol.
U radovima 2.2/14, 2.2/23 i 2.2/24 opisana je izolacija i karakterizacija novog bakterijskog soja *Streptomyces fulvissimus* CKS7 iz zemljišta, koji poseduje visok enzimski potencijal sa potencijalnom upotrebom u industrijskim procesima. U radovima je ispitana mogućnost proizvodnje celulaza (endoglukanaza i egzoglukanaza), amilaza, pektinaza i ksilanaza soja CKS7 koristeći različite agro-industrijske supstate u cilju proizvodnje bioetanola. Rezultati ovog rada su pokazali da soj CKS7 za svoj rast i proizvodnju hidrolaza veoma uspešno koriti ražane mekinje i da se porizvedeni sirovi enzimi (enzimski koktel) mogu koristiti u hidrolizi otpadnog lignocelulozno bilja (rastavića) i korona predtretiranog pamučnog materijala za dobijanje redukujućih šećera. Dobijeni hidrolizati rastavića i korona predtretiranog pamučnog materijala (celulozni otpadni supstrat) su pomoću otpadnog pivska kvasca iskorišćeni za dobijanje bioetanola. Rezultati ovog istraživanja su pokazali da je soj CKS7, u okviru bakterija roda *Streptomyce*s, potencijalni kandidat za biodegradaciju lignocelulozno otpadnog supstrata koji se može koristiti u proizvodnji biogoriva bioetanola.
U okviru radova 2.2/7, 2.2/11 i 2.2/13 izolovan je i okarakterisan veliki broj mikroorganizama, prirodnih bakterijskih izolata iz morskog sedimenta i iz zemljišta, koje pripadaju rodovima *Bacillus* i *Sinorhizobium*. Novoizolovani soj *Bacillus* sp. PPM3, koji je izolovan iz morskog sedimenta, je pokazao da inhibira rast patogenih gljivica: *Aspergillus flavus*, *Fusarium graminearum*, *Mucor* sp. i *Alternaria* sp. (rad 2.2/11). Antifungalni efekat soja PPM3 je bio najizraženiji nasuprot *Mucor* sp. i procenat inhibicije ove patogene gljivice je iznosio 97,5%. U eksperimentu sa staklenikom, soj PPM3 efikasno je smanjio učestalost bolesti patogene gljivice

Fusarium graminearum kod kukuruza i tako pokazao dodatni stimulativni efekat rasta biljaka. Rezultati ovog rada su pokazali da novi soj PPM3 može imati potencijalnu primenu kao sredstvo za biokontrolu za tretman različitih biljnih bolesti koje izazivaju patogene gljivice (rad 2.2/11).
U okviru bakterija roda *Bacillus*, novi soj *Bacillus pseudomycoides* BM1 pokazao je mogućnost suzbijanja biljnih patogena i visoku toleranciju na prisustvo hroma što je važno u procesu fitoremedijacije (rad 2.2/7). Rizobakterija BM1, je pokazala snažnu inhibiciju patogenih gljivica *Fusarium graminearum* (59,68%), *F. proliferatum* (48,72%) i *F. oxysporum* (43,59%). Procenat inhibicije semena lucerke zaražene patogenom gljivicom *F. oxysporum* je smanjen sa 27,87% na 2,46%. Novi soj BM1, koji je pokazao dobru sposobnost preživljavanja i povećanu klijavost semena lucerke u uslovima povećane koncentracije hroma, može biti dobar izbor u fitoremedijaciji kontaminiranog zemljišta i kao deo nekog novog bioproizvoda kao što je biođubrivo.
U nastavku istraživanja, u radu 2.2/13, bakterijski soj *Sinorhizobium meliloti* 224, je po prvi put korišćen za proizvodnju celulaza koristeći lignoceluloznu biomasu - otpadni duvan. Rezultati ovog rada su pokazali da se blagim baznim predretmanom otpadnog duvana a potom njegovom fermentacijom pomoću soja 224, primenom statističke metode odzivne površine, proizvode dva tipa celulaza endoglukanaze (1.615 U/g) i egzoglukanaze (1.503 U/g). Soj 224, pored svoje glavne uloge u kolonizaciji biljnog korona i obezbedjivanju azotnih jedinjenja, može da se koristi za proizvodnju enzima celulaza u procesima biokonverzije lignoceluloznog biljnog otpada.
Potpuno iskorišćenje otpadne kafe primenom kombinovanog enzimskog procesa uz dodatak bakterije mlečno-kiselinskog vrenja *Lactobacillus rhamnosus* (ATCC 7469) prikazano je u radu 2.2/9. Primenom ovog bioprocesa dolazi do značajnog povećanja bioaktivnih komponenti otpadne kafe kao što je ukupan sadržaj polifenola (povećanje za 67%), hlorogenske kiseline (povećanje za 50%), redukujućih šećera (povećanje za 57%) i slobodnih amino kiselina (povećanje α-amino azota za 80%), uz znatno smanjenje kofeina (smanjenje za 38%), a dobijeni proizvod se može koristiti kao dodatak u prehrambenoj i stočnoj industriji (rad 2.2/9).
Drugu grupu čine radovi (2.2/1; 2.2/3; 2.2/4; 2.2/6; 2.2/10, 2.2/12 i 2.2/15) koji se bave ispitivanjem antimikrobne aktivnosti tekstilnih vlakana i materijala. U radu 2.2/1 korišćeni su alkalni i oksidativni tretmani za dobijanje lanenih vlakana koja ima različit sadržaj hemiceluloze i lignina koji utiču na strukturu i sorpciju ovih vlakana. Adsorpcijom srebrnih jona na lanena vlakna dobijaju se vlakna sa antimikrobnim svojstvima koja mogu imati primenu, kao proizvod sa dodatnom vrednošću, kao što je odeća za specijalne medicinske namene. Lanena vlakna sa inkorporiranim jonima srebra pokazuju inhibiciju prema testiranim indikatorskim patogenim sojevima, *Escherichia coli* ATCC 25922 kao Gram negativnoj bakteriji, *Staphylococcus aureus* ATCC 25923 kao Gram pozitivnoj bakteriji i prema *Candida albicans* patogenoj gljivici. U radu 2.2/3 dobijeni su nanostrukturni i bioaktivni ultra-tanki filmovi na bazi polisaharida metodom rotirajućeg diska, subsekventnim deponovanjem sloja RC (regenerativne celuloze) i sloja TOCN (TEMPO oksidisanih celuloznih nanofibrila). Bioaktivnost dvosloja je potignuta dodavanjem hitozana. Ovakvi ultra tanki polisaharidni filmovi su pokazali visok stepen redukcije patogenih indikatorskih sojeva, *E. coli* i *S. aureus* (99,6%-99,8 % za oba ispitivana indikatorska soja) i kao takvi imaju potencijal za medicinsku primenu kao zavoji za rane. Rad 2.2/4 se odnosi na ispitivanje i karakterizaciju vlakna jute koja su funkcionalizovana ugradnjom jona srebra. Vlakna jute sa inkorporiranim Ag^+ jonima i ona dobijena nakon biosorpcije Zn^+ jona su pokazala maksimum bakterijske redukcije patogenih indikatorskih sojeva sojeva, *E. coli* i *S. aureus* (99,9 % redukcije za oba ispitivana indikatorska soja).
U radu 2.2/12 dobijeni su tekstilni materijali sa antibakterijskim svojstvima funkcionalizacijom viskozne tkanine sa hitozanom. U cilju poboljšanja antibakterijskih svojstava kao i njihove

postojanosti na pranje viskozna tkanina je pre funkcionalizacije sa CS predtretirana naslojavanjem sa TOCN i TEMPO oksidacijom kako bi se u strukturu viskozne tkanine uvele karboksilne i aldehidne grupe kao pogodna mesta za ireverzibilno vezivanje CS. Sa oba predtretmana postignuto je poboljšanje adsorpcije CS i antibakterijskih svojstva funkcionalizovanih materijala, koja su visokopostojana na pranje. Nakon pet pranja viskozne tkanine sa hitozanom zadržavaju antimikrobno delovanje nasuprot *S. aureus*. Ovakvi materijali mogu naći primenu kao medicinski tekstil. Direktna impregnacija bioaktivnih biljnih ekstrakta na viskoznu tkaninu (rad 2.2/6) se pokazala kao veoma jednostavna metoda za dobijanje medicinskog tekstila koji se može koristiti u terpaijske i profilaktičke svrhe. Viskozne tkanine sa anisom, komoračem, lavandom, žalfijom i nanom su pokazale širok spektar inhibicije prema ispitivanim patogenim indikatorskim sojem *S. aureus* i *C. albicans*. U radu 2.2/10 ispitana je mogućnost revalorizacije otpad drveta za istovremeno uklanjanje kadmijuma i dezinfekciju otpadnih voda. Ispitivani uzorci otpanog drveta hrasta su pokazala visok stepen redukcije patogenih sojeva *E. coli* i *S. aureus*.
U radu 2.2/15 ispitana je mogućnost obrade viskozne tkanine TEMPO oksidacijom i oblaganje TEMPO-oksidizovanim celuloznim nanofibrilima, da bi se uvele funkcionalne grupe pogodne za nepovratno vezivanje nanočestica hitozana sa i bez cinka kao i isiptivanjaantimikrobne aktivnosti ovako funkcionalizovanih tkanina. Pretrhodno obrađene i funkcionalizovane tkanine sa inkorporiranim jonima cinka su sačuvale antibakterisjku aktivnost nasuprot *S. aureus* nakon 5 ciklusa pranja dok se u slucaju *E. coli* antimikrobna aktivnost sačuvala nakon samo jednog ciklusa pranja.
Treću grupu čine radovi (2.2/17; 2.2/19; 2.2/20; 2.2/22 i 2.2/27) u kojima su prikazana istraživanja koja se odnose na ispitivanje antimikrobnog delovanja različitih hemijskih jedinjenja i supstanci. U radu 2.2/17 ispitana je antibakterisjka i antifungalna aktivnost nanočestica srebra funkcionalizovanih magnetitom sa 5-aminosalicilnom kiselinom na Gram negativnu bakteriju *E. coli*, Gram pozitivnu bakteriju *S. aureus* i gljivicu *C. albic*ans. Efikasna inhibicija obe testirane bakterije (*E. coli* i *S. aureus*) je primećena pri niskim koncentracijama srebra (40 μg/ml) i vremenu kontakta od 24h, dok je potpuna inaktivacija oba patogena indikatorska soja postignuta u pet ponovljenih ciklusa.
U radovima 2.2/19 i 2.2/22 ispitana su antimikrobna svojstva nanočestičnih prahova cink-oksida dobijenih termičkom degradacijom cink-benzenpolikarboksilato prekursora. Svi oksidi su pokazali odločno inhibitorsko delovanje na bakterije *S. aureus* i *E .coli*. U radu 2.2/20 pripremljen je konjugat HAp/NFX, sintetisanog hidroksiapatita (HAp) kao nosača i antibiotskog leka nifuroksazida (NFX) koji je pokazao odličan inhibitorski efekat prema *E. coli*, *S. aureus* i *C. albicans*. Rezultati ovog ispitivanja su pokazalai da je nanočestični HAp obećavajući nosač leka.
Rad 2.2/27 odnosi se na tehnološki postupak dobijanja mukoadhezivnog „drug delivery" sistema tj. hitozanskih čestica sa etarskim uljem timijana, koje kontrolisano otpuštaju etarsko ulje. Dobijene hitozanske čestice sa etarskim uljem timijana namenjene su za formulaciju vaginalnog preparata, koji će obezbediti održavanje normalne vaginalne mikroflore i time omogućiti upotrebu ovakvog preparata u profilaksi vaginalnih (bakterijskih i gljivičnih) infekcija.
Istraživanja u okviru bilateralnog međunarodnog projekta 2.2/31 finansiranom od strane Ministarstva prosvete, nauke i tehnološkog razvoja Republike Srbije, odnose se na ispitivanja iskorišćenja otpadne lignocelulozne biomase u cilju proizvodnje bioetanola. Najnovija istraživanja u okviru projekta 2.2/32 Fonda za inovacionu delatnost, usmerena su ka dobijanju ekološkog biokatalizatora za obezbojavanje i degradaciju azo boja iz industrisjkih otpadnih voda pomoću lakaza izolovanih iz gljive belog truljenja.

2.5 CITIRANOST NAUČNIH RADOVA (bez autocitata) PREMA BAZI SCOPUS (*na dan 26.07.2021.*)

U svom dosadašnjem naučno-itstraživačkom radu (2007-2021), naučni radovi dr Katarine Mihajlovski citirani su ukupno **344** puta (sa autocitatima svih autora), **267** puta (bez autocitata svih autora), dok je Hiršov indeks (h-indeks) **9** (sa autocitatima), odnosno **8** (bez autocitata) prema Scopus bazi na dan 26.07.2021. Citirani su sledeći radovi:

Mihajlovski K., Buntić A., Milić M., Rajilić-Stojanović M., Dimitrijević Branković S., From agricultural waste to biofuel: enzymatic potential of a bacterial isolate *Streptomyces fulvissimus* CKS7 for bioethanol production, *Waste and Biomass Valorization*, (2020), 12, 165-174. (ISSN 1877-2641, IF(2020)=3,703; Environmental Sciences 108/274). *Broj heterocitata* = 6.
https://doi.org/10.1007/s12649-020-00960-3

1. Doan, C.T., C.L. Chen, V.B. Nguyen, T.N. Tran, A.D. Nguyen, S.L. Wang: Conversion of pectin-containing by-products to pectinases by bacillus amyloliquefaciens and its applications on hydrolyzing banana peels for prebiotics production. Polymers. (2021), 13. doi: 10.3390/polym13091483
2. Kee, S.H., J.B.V. Chiongson, J.P. Saludes, S. Vigneswari, S. Ramakrishna, K. Bhubalan: Bioconversion of agro-industry sourced biowaste into biomaterials via microbial factories – A viable domain of circular economy. Environmental Pollution. (2021), 271. doi: 10.1016/j.envpol.2020.116311
3. Kumar, M., P. Kumar, P. Das, R. Solanki, M.K. Kapur: Potential applications of extracellular enzymes from Streptomyces spp. in various industries. Archives of Microbiology. (2020), 202, 1597-1615. doi: 10.1007/s00203-020-01898-9
4. Nandy, G., M. Chakraborti, A. Shee, G. Aditya, K. Acharya: Gut microbiota from lower groups of animals: An upcoming source for cellulolytic enzymes with industrial potentials. Biointerface Research in Applied Chemistry. (2021), 11, 13614-13637. doi: 10.33263/BRIAC115.1361413637
5. Sobolczyk-Bednarek, J., A. Choińska-Pulit, W. Łaba: Biosolubilization of low-rank coal by the newly isolated strain Streptomyces fulvissimus K59. Fuel. (2021), 301. doi: 10.1016/j.fuel.2021.121082
6. Srivastava, S., N.A. Dafale, S.J. Jakhesara, C.G. Joshi, N.V. Patil, H.J. Purohit: Unraveling the camel rumen microbiome through metaculturomics approach for agriculture waste hydrolytic potential. Archives of Microbiology. (2021), 203, 107-123. doi: 10.1007/s00203-020-02010-x

Ivanovska A., Asanović K., Jankoska M., **Mihajlovski K.,** Pavun L., Kostić M., Multifunctional jute fabrics obtained by different chemical modifications, *Cellulose*, (2020), 27, 8485–8502. (ISSN 0969-0239; IF(2020)=4.210; Materials Science, Textiles 2/24). *Broj heterocitata* = 1.
https://doi.org/10.1007/s10570-020-03360-x

1. Chang, L., W. Duan, S. Huang, A. Chen, J. Li, H. Tang, G. Pan, Y. Deng, L. Zhao, D. Li: Improved antibacterial activity of hemp fibre by covalent grafting of quaternary ammonium groups. Royal Society Open Science. (2021), 8. doi: 10.1098/rsos.201904

Mihajlovski K., Rajilić-Stojanović M., Dimitrijević Branković S., Enzymatic hydrolysis of waste bread by newly isolated *Hymenobacter* sp. CKS3: Statistical optimization and bioethanol production, *Renewable Energy*, (2020), 152, 627-633. (ISSN 0960-1481; IF(2020)=8,001; Energy and Fuels 16/114). *Broj heterocitata* = 3.
https://doi.org/10.1016/j.renene.2020.01.101

1. Bhatt, B., V. Prajapati, K. Patel, U. Trivedi: Kitchen waste for economical amylase production using Bacillus amyloliquefaciens KCP2. Biocatalysis and Agricultural Biotechnology. (2020), 26. doi: 10.1016/j.bcab.2020.101654
2. Sayin Kul, B.,M. Ciniviz: An evaluation based on energy and exergy analyses in SI engine fueled with waste bread bioethanol-gasoline blends. Fuel. (2021), 286. doi: 10.1016/j.fuel.2020.119375
3. Sukaryani, S., E.A. Yakin, Y.W. Harinta, Z. Vinceviča-Gaile, E.D. Purbajanti. *Lignin and cellulose content of fermented rice straw with aspergillus niger (van Tieghem) and trichoderma mutan AA1*. in *E3S Web of Conferences*. 2021.

Korica M., Persin Z., Trifunovic S., **Mihajlovski K.**, Nikolic T., Maletic S., Fras-Zemljic L. , Kostic M., Influence of Different Pretreatments on the Antibacterial Properties of Chitosan Functionalized Viscose Fabric: TEMPO Oxidation and Coating with TEMPO Oxidized Cellulose Nanofibrils, *Materials*, (2019), 12, 3144. (ISSN 1996-1944; IF(2019)=3,057; Materials Science, Multidisciplinary 132/314). *Broj heterocitata* = 3.
https://doi.org/10.3390/ma12193144

1. Grgac, S.F., A. Tarbuk, T. Dekanic, W. Sujka, Z. Draczynski: The chitosan implementation into cotton and polyester/cotton blend fabrics. Materials. (2020), 13. doi: 10.3390/ma13071616
2. Mitra, D., E.T. Kang, K.G. Neoh: Polymer-Based Coatings with Integrated Antifouling and Bactericidal Properties for Targeted Biomedical Applications. ACS Applied Polymer Materials. (2021). 10.1021/acsapm.1c00125. doi: 10.1021/acsapm.1c00125
3. Zhao, Z., W. Cai, L. Song, X. Mu, Y. Hu: Comprehensive property investigation of mold inhibitor treated raw cotton and ramie fabric. Materials. (2020), 13. doi: 10.3390/ma13051105

Buntić A., Milić M., Stajković-Srbinović O., Rsulić N., Delić D., **Mihajlovski K**., Cellulase production by *Sinorhizobium meliloti* strain 224 using waste tobacco as substrate, *International Journal of Environmental Science and Technology* (2019), 1-10. (ISSN 1735-1472, IF(2019)=2,540; Environmental Sciences 125/265). *Broj heterocitata* = 5.
https://doi.org/10.1007/s13762-019-02230-9

1. Darwesh, O.M., S.H. El-Maraghy, H.M. Abdel-Rahman, R.A. Zaghloul: Improvement of paper wastes conversion to bioethanol using novel cellulose degrading fungal isolate. Fuel. (2020), 262. doi: 10.1016/j.fuel.2019.116518
2. Poddar, B.J., S.P. Nakhate, R.K. Gupta, A.R. Chavan, A.K. Singh, A.A. Khardenavis, H.J. Purohit: A comprehensive review on the pretreatment of lignocellulosic wastes for improved biogas production by anaerobic digestion. International Journal of Environmental Science and Technology. (2021). 10.1007/s13762-021-03248-8. doi: 10.1007/s13762-021-03248-8
3. Treichel, H., G. Fongaro, T. Scapini, A. Frumi Camargo, F. Spitza Stefanski, B. Venturin, *Biotechnology Application of Pretreated Biomass*, in *Green Energy and Technology*. 2020. p. 67-81.
4. Verma, N., V. Kumar, M.C. Bansal: Valorization of Waste Biomass in Fermentative Production of Cellulases: A Review. Waste and Biomass Valorization. (2021), 12, 613-640. doi: 10.1007/s12649-020-01048-8
5. Xiang, J., X. Wang, T. Sang: Cellulase production from Trichoderma reesei RUT C30 induced by continuous feeding of steam-exploded Miscanthus lutarioriparius. Industrial Crops and Products. (2021), 160. doi: 10.1016/j.indcrop.2020.113129

Lazić V., **Mihajlovski K.,** Mraković A., Illes E., Stoljković M., Ahrenkiel S and Nedeljkovic J., Antimicrobial activity of silver nanoparticles supported by magnetite, *Chemistry Select*, (2019), 4, 4018-4024. (ISSN 2365-6549; IF(2019)=1,811; Chemistry, Multidisciplinary 111/177). *Broj heterocitata* = 2.
https://doi.org/10.1002/slct.201900628

1. Rahdar, A., H. Beyzaei, M. Saadat, X. Yu, J.F. Trant: Synthesis, physical characterization, and antifungal and antibacterial activities of oleic acid capped nanomagnetite and cobalt-doped nanomagnetite. Canadian Journal of Chemistry. (2020), 98, 34-39. doi: 10.1139/cjc-2019-0268
2. Shuaib, U., T. Hussain, R. Ahmad, M. Zakaullah, F.E. Mubarik, S.T. Muntaha, S. Ashraf: Plasma-liquid synthesis of silver nanoparticles and their antibacterial and antifungal applications. Materials Research Express. (2020), 7. doi: 10.1088/2053-1591/ab7cb6

Mihajlovski K., Radovanović Ž., Carević M., Dimitrijević- Branković S., Valorization of damaged rice grains: Optimization of bioethanol production by waste brewer's yeast using an

amylolytic potential from the *Paenibacillus chitinolyticus* CKS1, *Fuel*, (2018), , 224, 591-599. (ISSN 0016-2361; IF(2018)=5,128; Energy and Fuels 20/103). *Broj heterocitata* = 7.
https://doi.org/10.1016/j.fuel.2018.03.135

1. Bibra, M., N.K. Rathinam, G.R. Johnson, R.K. Sani: Single pot biovalorization of food waste to ethanol by Geobacillus and Thermoanaerobacter spp. Renewable Energy. (2020), 155, 1032-1041. doi: 10.1016/j.renene.2020.02.093
2. Liu, Q., N. Zhao, Y. Zou, H. Ying, Y. Chen: Feasibility of ethanol production from expired rice by surface immobilization technology in a new type of packed bed pilot reactor. Renewable Energy. (2020), 149, 321-328. doi: 10.1016/j.renene.2019.12.031
3. Mosai, A.K., L. Chimuka, E.M. Cukrowska, I.A. Kotzé, H. Tutu: Removal of platinum (IV) from aqueous solutions with yeast-functionalised bentonite. Chemosphere. (2020), 239. doi: 10.1016/j.chemosphere.2019.124768
4. Naidu, K., S. Maseko, G. Kruger, J. Lin: Purification and characterization of α-amylase from Paenibacillus sp. D9 and Escherichia coli recombinants. Biocatalysis and Biotransformation. (2020), 38, 24-34. doi: 10.1080/10242422.2019.1628738
5. Olguin-Maciel, E., A. Larqué-Saavedra, P.E. Lappe-Oliveras, L.F. Barahona-Pérez, L. Alzate-Gaviria, R. Chablé-Villacis, J. Domínguez-Maldonado, D. Pacheco-Catalán, H.A. Ruíz, R. Tapia-Tussell: Consolidated bioprocess for bioethanol production from raw flour of brosimum alicastrum seeds using the native strain of trametes hirsuta bm-2. Microorganisms. (2019), 7. doi: 10.3390/microorganisms7110483
6. Sirohi, R., J.P. Pandey, R. Goel, A. Singh, U.C. Lohani, A. Kumar: Two-Stage Enzymatic Hydrolysis for Fermentable Sugars Production from Damaged Wheat Grain Starch with Sequential Process Optimization and Reaction Kinetics. Starch/Staerke. (2021), 73. doi: 10.1002/star.202000082
7. Thakur, V., V. Kumar, V. Kumar, D. Singh: Genomic Insights Driven Statistical Optimization for Production of Efficient Cellulase by Himalayan Thermophilic Bacillus sp. PCH94 Using Agricultural Waste. Waste and Biomass Valorization. (2021). 10.1007/s12649-021-01491-1. doi: 10.1007/s12649-021-01491-1

Radovanović N., Milutinović M., **Mihajlovski K.,** Jović J., Nastasijević B., Rajilić-Stojanović M., Dimitrijević-Branković S., Biocontrol and plant stimulating potential of novel strain *Bacillus* sp. PPM3 isolated from marine sediment, *Microbial Pathogenesis*, (2018),120,71-78. (ISSN 0882-4010; IF(2018)=2,581; Microbiology 79/133). *Broj heterocitata* = 5.
https://doi.org/10.1016/j.micpath.2018.04.056

1. Blandón, L., K.L. Alvarado-Campo, A.D. Patiño, E. Jiménez-Vergara, M. Quintero, M. Montoya-Giraldo, L.M. Jutinico-Shubach, M. Santos-Acevedo, J. Gómez-León: Polyhydroxyalkanoate Production from Two Species of Marine Bacteria: A Comparative Study. Journal of Polymers and the Environment. (2020), 28, 2324-2334. doi: 10.1007/s10924-020-01770-3
2. Einloft, T.C., P. Bolzan de Oliveira, L.L. Radünz, R.G. Dionello: Biocontrol capabilities of three Bacillus isolates towards aflatoxin B1 producer A. flavus in vitro and on maize grains. Food Control. (2021), 125. doi: 10.1016/j.foodcont.2021.107978
3. Peng, C., D. An, W.X. Ding, Y.X. Zhu, L. Ye, J. Li: Fungichromin production by Streptomyces sp. WP-1, an endophyte from Pinus dabeshanensis, and its antifungal activity against Fusarium oxysporum. Applied Microbiology and Biotechnology. (2020), 104, 10437-10449. doi: 10.1007/s00253-020-10996-z
4. Sun, X., Y. Xu, L. Chen, X. Jin, H. Ni: The salt-tolerant phenazine-1-carboxamide-producing bacterium Pseudomonas aeruginosa NF011 isolated from wheat rhizosphere soil in dry farmland with antagonism against Fusarium graminearum. Microbiological Research. (2021), 245. doi: 10.1016/j.micres.2020.126673
5. Vinchira-Villarraga, D.M., L. Castellanos, N. Moreno-Sarmiento, Z.R. Suarez-Moreno, F.A. Ramos: Antifungal activity of marine-derived Paenibacillus sp. PNM200 against Fusarium oxysporum f. sp. lycopersici, the causal agent of tomato vascular wilt. Biological Control. (2021), 154. doi: 10.1016/j.biocontrol.2020.104501

Lazić B., Pejić B., Kramar, A., Vukčević M., **Mihajlovski K.**, Rusmirovi, J., Kostić M., Influence of hemicelluloses and lignin content on structure and sorption properties of flax fibers (*Linum usitatissimum* L.), *Cellulose*, (2017), 25, 697-709. (ISSN 0969-0239, IF(2016)=3.147; Material Science, Textiles 2/24). *Broj heterocitata* = 13.
https://doi.org/10.1007/s10570-017-1575-4

1. Chang, L., W. Duan, S. Huang, A. Chen, J. Li, H. Tang, G. Pan, Y. Deng, L. Zhao, D. Li: Improved antibacterial activity of hemp fibre by covalent grafting of quaternary ammonium groups. Royal Society Open Science. (2021), 8. doi: 10.1098/rsos.201904
2. Chirila, L., D.V. Cosma, A. Urda, A.S. Porav, A. Turza, D. Timpu, A.O. Mateescu: UV light-shielding properties of TiO2-based materials coated flax samples. Journal of Optoelectronics and Advanced Materials. (2020), 22, 62-66. doi:
3. Dai, H., Y. Huang, H. Zhang, L. Ma, H. Huang, J. Wu, Y. Zhang: Direct fabrication of hierarchically processed pineapple peel hydrogels for efficient Congo red adsorption. Carbohydrate Polymers. (2020), 230. doi: 10.1016/j.carbpol.2019.115599
4. Hu, J., K. Zhang, R. Li, J. Lin, Y. Liu: Preparation of flax layered nano-cellulose and properties of its reinforced thermoelectric composites. Fangzhi Xuebao/Journal of Textile Research. (2021), 42, 47-52 and 59. doi: 10.13475/j.fzxb.20201005507
5. Lobo, F.C.M., A.R. Franco, E.M. Fernandes, R.L. Reis: An overview of the antimicrobial properties of lignocellulosic materials. Molecules. (2021), 26. doi: 10.3390/molecules26061749
6. Melelli, A., O. Arnould, J. Beaugrand, A. Bourmaud: The middle lamella of plant fibers used as composite reinforcement: Investigation by atomic force microscopy. Molecules. (2020), 25. doi: 10.3390/molecules25030632
7. Mladenovic, N., P. Makreski, A. Tarbuk, K. Grgic, B. Boev, D. Mirakovski, E. Toshikj, V. Dimova, D. Dimitrovski, I. Jordanov: Improved dye removal ability of modified rice husk with effluent from alkaline scouring based on the circular economy concept. Processes. (2020), 8. doi: 10.3390/PR8060653
8. Song, Y., W. Jiang, Y. Zhang, H. Ben, G. Han, A.J. Ragauskas: Isolation and characterization of cellulosic fibers from kenaf bast using steam explosion and Fenton oxidation treatment. Cellulose. (2018), 25, 4979-4992. doi: 10.1007/s10570-018-1916-y
9. Temesgen, A.G., R. Eren, Y. Aykut: Green synthesis of cellulosic nanofiber in enset woven fabric structures via enzyme treatment and mechanical hammering. Tekstil ve Konfeksiyon. (2021), 31, 63-72. doi: 10.32710/tekstilvekonfeksiyon.764976
10. Wang, L., C. He, X. Li, X. Yang: Performance analysis of ternary composites with Lignin, Eucalyptus fiber, and Polyvinyl chloride. BioResources. (2019), 13, 6510-6523. doi: 10.15376/biores.13.3.6510-6523
11. Wu, Q., M. Ren, X. Zhang, C. Li, T. Li, Z. Yang, Z. Chen, L. Wang: Comparison of Cd(II) adsorption properties onto cellulose, hemicellulose and lignin extracted from rice bran. LWT. (2021), 144. doi: 10.1016/j.lwt.2021.111230
12. Zhang, K., S. Zheng, Y. Liu, J. Lin: Isolation of hierarchical cellulose building blocks from natural flax fibers as a separation membrane barrier. International Journal of Biological Macromolecules. (2020), 155, 666-673. doi: 10.1016/j.ijbiomac.2020.03.225
13. Zhou, X., N. Huang, W. Chen, T. Xiaoling, B. Mahdavi, A. Raoofi, D. Mahdian, H. Atabati: HPLC phenolic profile and induction of apoptosis by Linum usitatissimum extract in LNCaP cells by caspase3 and Bax pathways. AMB Express. (2020), 10. doi: 10.1186/s13568-020-01138-9

Mihajlovski K., Davidović S., Veljović Đ., Carević, M., Lazić, V., Dimitrijević-Branković, S., Effective valorization of barley bran for simultaneous cellulase and β-amylase production by *Paenibacillus chitinolyticus* CKS1: Statistical optimization and enzymes application, *Journal of the Serbian Chemical Society*, (2017), 82, 1223-1236. (ISSN 0352-5139; IF (2016)= 0.822); Chemistry, Multidisciplinary 131/166). *Broj heterocitata* = 2.
https://doi.org/10.2298/JSC170514092M

1. Jovanovic, M., D. Vučurovic, B. Bajic, S. Dodic, V. Vlajkov, R. Jevtic-Mučibabic: Optimization of the simultaneous production of cellulase and xylanase by submerged and solid-state fermentation of wheat chaff. Journal of the Serbian Chemical Society. (2020), 85, 177-189. doi: 10.2298/JSC190530080J
2. Liu, C., N. Shen, J. Wu, M. Jiang, S. Shi, J. Wang, Y. Wei, L. Yang: Cloning, expression and characterization of a chitinase from Paenibacillus chitinolyticus strain UMBR 0002. PeerJ. (2020), 2020. doi: 10.7717/peerj.8964

Mihajlovski K. R., Radovanović N. R., Veljović Đ. N., Šiler-Marinković S. S., Dimitrijević-Branković S. D.: Improved β-amylase production on molasses and sugar beet pulp by a novel strain *Paenibacillus chitinolyticus* CKS1, *Industrial Crops and Products*, (2016), 80, 115-122. (ISSN 0926-6690; IF(2014) = 2,837; Agricultural Engineering 3/12). *Broj heterocitata* = 11.
https://doi.org/10.1016/j.indcrop.2015.11.025

1. Bharathiraja, S., J. Suriya, M. Krishnan, P. Manivasagan, S.K. Kim, *Production of Enzymes From Agricultural Wastes and Their Potential Industrial Applications*, in *Advances in Food and Nutrition Research*. 2017. p. 125-148.

2. Das, R.,A.M. Kayastha, *β-Amylase: General properties, mechanism and panorama of applications by immobilization on nano-structures*, in *Biocatalysis: Enzymatic Basics and Applications*. 2019. p. 17-38. DOI: 10.1007/978-3-030-25023-2_2.
3. Duan, X., Z. Shen, X. Zhang, Y. Wang, Y. Huang: Production of recombinant beta-amylase of Bacillus aryabhattai. Preparative Biochemistry and Biotechnology. (2019), 49, 88-94. doi: 10.1080/10826068.2018.1536987
4. Guo, X., X. Guo, H. Meng, B. Zhang, S. Yu: Using the high temperature resistant pH electrode to auxiliarily study the sugar beet pectin extraction under different extraction conditions. Food Hydrocolloids. (2017), 70, 105-113. doi: 10.1016/j.foodhyd.2017.03.032
5. Liang, X., W. Zhang, J. Ran, J. Sun, L. Jiao, L. Feng, B. Liu: Chemical Modification of Sweet Potato β-amylase by Mal-mPEG to Improve Its Enzymatic Characteristics. Molecules. (2018), 23. doi: 10.3390/molecules23112754
6. Liang, X., W. Zhang, Y. Wang, J. Sun, R. Zhao, J. Ran, H. He: Purification and characterization of β-amylase from sweet potato (Baizhengshu 2) tuberous roots. Research Journal of Biotechnology. (2018), 13, 84-91. doi:
7. Mazzucco, M.B., M.A. Ganga, M.P. Sangorrín: Production of a novel killer toxin from Saccharomyces eubayanus using agro-industrial waste and its application against wine spoilage yeasts. Antonie van Leeuwenhoek, International Journal of General and Molecular Microbiology. (2019), 112, 965-973. doi: 10.1007/s10482-019-01231-5
8. Puligundla, P.,C. Mok: Valorization of sugar beet pulp through biotechnological approaches: recent developments. Biotechnology Letters. (2021). 10.1007/s10529-021-03146-6. doi: 10.1007/s10529-021-03146-6
9. Shad, Z., H. Mirhosseini, A.S.M. Hussin, B. Forghani, M. Motshakeri, M.Y.A. Manap: Aqueous two-phase purification of α-Amylase from white pitaya (Hylocereus undatus) peel in polyethylene glycol /citrate system: Optimization by response surface methodology. Biocatalysis and Agricultural Biotechnology. (2018), 14, 305-313. doi: 10.1016/j.bcab.2018.01.014
10. Vaikundamoorthy, R., R. Rajendran, A. Selvaraju, K. Moorthy, S. Perumal: Development of thermostable amylase enzyme from Bacillus cereus for potential antibiofilm activity. Bioorganic Chemistry. (2018), 77, 494-506. doi: 10.1016/j.bioorg.2018.02.014
11. Zhang, S., J. Wang, H. Jiang: Microbial production of value-added bioproducts and enzymes from molasses, a by-product of sugar industry. Food Chemistry. (2021), 346. doi: 10.1016/j.foodchem.2020.128860

Milanović J., **Mihajlovski K.,** Nikolić T., Kostić M., (2016), Antimicrobial cotton fibers prepared by tempo-mediated oxidation and subsequent silver deposition, *Cellulose Chemistry and Technology*, 50, 905-914. (ISSN 0576-9787; IF (2016)=0,763; Materials Science, Paper and Wood 11/21). *Broj heterocitata*=4.

1. Biliuta, G., D. Suteu, T. Malutan, A.I. Chirculescu, I. Nica, S. Coseri: Valorization of tempo-oxidized cellulosic fractions for efficient dye removal from wastewaters. Cellulose Chemistry and Technology. (2018), 52, 609-618. doi:
2. Kim, J.U., M.S. Gong, J.G. Kim: Preparation of Ag/ZnO-coated cotton fabrics with UV-blocking and antibacterial properties. Cellulose Chemistry and Technology. (2018), 52, 475-484. doi:
3. Morena, A.G., M.B. Roncero, S.V. Valenzuela, C. Valls, T. Vidal, F.I.J. Pastor, P. Diaz, J. Martínez: Laccase/TEMPO-mediated bacterial cellulose functionalization: production of paper-silver nanoparticles composite with antimicrobial activity. Cellulose. (2019), 26, 8655-8668. doi: 10.1007/s10570-019-02678-5
4. Scacchetti, F.A.P.,G.M.B. Soares: Chemical characterization and thermal comfort properties of cotton finished with phase change materials and antimicrobial agents. Cellulose Chemistry and Technology. (2019), 53, 363-371. doi: 10.35812/cellulosechemtechnol.2019.53.37

Mihajlovski K., Davidović S., Carević M., Radovanović N., Šiler-Marinković S., Rajilić-Stojanović M., Dimitrijević-Branković S., Carboxymethyl cellulase production from a *Paenibacillus* sp., *Hemijska Industrija*, (2016), 70, 329-338 (ISSN 0367-598X; IF(2016) =0.364; Engineering Chemical 125/135). *Broj heterocitata* = 5.
https://doi.org/10.2298/HEMIND150222038M

1. Fallahzadeh-Mamaghani, V., S. Golchin, A. Shirzad, H. Mohammadi, F. Mohamadivand: Characterization of Paenibacillus polymixa N179 as a robust and multifunctional biocontrol agent. Biological Control. (2021), 154. doi: 10.1016/j.biocontrol.2020.104505
2. Frediansyah, A.,M. Kurniadi. *Michaelis kinetic analysis of extracellular cellulase and amylase excreted by Lactobacillus plantarum during cassava fermentation*. in *AIP Conference Proceedings*. 2017.
3. Mostafa, Y.S., S.A. Alamri, M. Hashem, N.A. Nafady, K.A.M. Abo-Elyousr, Z.A. Mohamed: Thermostable cellulase biosynthesis from Paenibacillus alvei and its utilization in lactic acid production by simultaneous saccharification and fermentation. Open Life Sciences. (2020), 15, 185-197. doi: 10.1515/biol-2020-0019

4. Yadav, S., A.K. Pandey, S.K. Dubey: Molecular modeling, docking and simulation dynamics of β-glucosidase reveals high-efficiency, thermo-stable, glucose tolerant enzyme in Paenibacillus lautus BHU3 strain. International Journal of Biological Macromolecules. (2021), 168, 371-382. doi: 10.1016/j.ijbiomac.2020.12.059
5. Zulaika, E., N. Wahyuningsih, N.H. Alami, N.D. Kuswytasari, M. Shovitri, N.E. Mochtar: Cellulase activity of cellulolytic bacteria isolated from palangkaraya peat, central kalimantan. International Journal of Civil Engineering and Technology. (2018), 9, 887-893. doi:

Mihajlovski K., Carević M., Dević M., Šiler-Marinković S., Rajilić-Stojanović M., Dimitrijević-Branković S., Lignocellulosic waste material as substrate for Avicelase production by a new strain of *Paenibacillus chitinolyticus* CKS1, *International Biodeterioration & Biodegradation*, (2015), 104, 426-434. (ISSN 0964-8305; IF (2014) = 2,131; Biotechnology and Applied Microbiology 81/163). *Broj heterocitata* = 7.
https://doi.org/10.1016/j.ibiod.2015.07.012

1. Cerda, A., T. Gea, M.C. Vargas-García, A. Sánchez: Towards a competitive solid state fermentation: Cellulases production from coffee husk by sequential batch operation and role of microbial diversity. Science of the Total Environment. (2017), 589, 56-65. doi: 10.1016/j.scitotenv.2017.02.184
2. Grady, E.N., J. MacDonald, L. Liu, A. Richman, Z.C. Yuan: Current knowledge and perspectives of Paenibacillus: A review. Microbial Cell Factories. (2016), 15. doi: 10.1186/s12934-016-0603-7
3. López-Mondéjar, R., C. Algora, P. Baldrian: Lignocellulolytic systems of soil bacteria: A vast and diverse toolbox for biotechnological conversion processes. Biotechnology Advances. (2019), 37. doi: 10.1016/j.biotechadv.2019.03.013
4. López-Mondéjar, R., D. Zühlke, T. Větrovský, D. Becher, K. Riedel, P. Baldrian: Decoding the complete arsenal for cellulose and hemicellulose deconstruction in the highly efficient cellulose decomposer Paenibacillus O199. Biotechnology for Biofuels. (2016), 9. doi: 10.1186/s13068-016-0518-x
5. Ma, L., Y. Lu, H. Yan, X. Wang, Y. Yi, Y. Shan, B. Liu, Y. Zhou, X. Lü: Screening of cellulolytic bacteria from rotten wood of Qinling (China) for biomass degradation and cloning of cellulases from Bacillus methylotrophicus. BMC Biotechnology. (2020), 20. doi: 10.1186/s12896-019-0593-8
6. Salazar, L.N., V. Astolfi, T.A. Ogimbosvski, N.A. Daronch, J. Zeni, A. Junges, R.L. Cansian, G.T. Backes: Newly isolated Penicillium sp. for cellulolytic enzyme production in soybean hull residue. Brazilian Archives of Biology and Technology. (2020), 63. doi: 10.1590/1678-4324-2020170710
7. Xue, L., P. Zhang, H. Shu, C.C. Chang, R. Wang, S. Zhang: Agricultural waste. Water Environment Research. (2016), 88, 1334-1373. doi: 10.2175/106143016X14696400495019

Pavlović M. D., Buntić A. V., **Mihajlovski K.** R., Šiler-Marinković S. S., Antonović D. G., Radovanović Ž., Dimitrijević-Branković S. I., Rapid cationic dye adsorption on polyphenol-extracted coffee grounds—A response surface methodology approach. *Journal Of The Taiwan Institute Of Chemical Engineers*, (2014), 45, 1691-1699. (ISSN 1876-1070; IF (2014) = 3,00; Engineering, Chemical 19/135). *Broj heterocitata* = 37.
https://doi.org/10.1016/j.jtice.2013.12.018

1. Agarwal, S., I. Tyagi, V.K. Gupta, A.R. Bagheri, M. Ghaedi, A. Asfaram, S. Hajati, A.A. Bazrafshan: Rapid adsorption of ternary dye pollutants onto copper (I) oxide nanoparticle loaded on activated carbon: Experimental optimization via response surface methodology. Journal of Environmental Chemical Engineering. (2016), 4, 1769-1779. doi: 10.1016/j.jece.2016.03.002
2. Anastopoulos, I., M. Karamesouti, A.C. Mitropoulos, G.Z. Kyzas: A review for coffee adsorbents. Journal of Molecular Liquids. (2017), 229, 555-565. doi: 10.1016/j.molliq.2016.12.096
3. Asfaram, A., M. Ghaedi, S. Hajati, M. Rezaeinejad, A. Goudarzi, M.K. Purkait: Rapid removal of Auramine-O and Methylene blue by ZnS: Cu nanoparticles loaded on activated carbon: A response surface methodology approach. Journal of the Taiwan Institute of Chemical Engineers. (2015), 53, 80-91. doi: 10.1016/j.jtice.2015.02.026
4. Atayat, A., L. Mergola, N. Mzoughi, R. Del Sole: Response surface methodology approach for the preparation of a molecularly imprinted polymer for solid-phase extraction of fenoxycarb pesticide in mussels. Journal of Separation Science. (2019), 42, 3023-3032. doi: 10.1002/jssc.201900344
5. Azzaz, A.A., S. Jellali, H. Akrout, A.A. Assadi, L. Bousselmi: Optimization of a cationic dye removal by a chemically modified agriculture by-product using response surface methodology: biomasses characterization and adsorption properties. Environmental Science and Pollution Research. (2017), 24, 9831-9846. doi: 10.1007/s11356-016-7698-6

6. Bagheri, S.: Application of response surface methodology to modeling and optimization of removal of Bismarck Brown and Thymol Blue by Mn-Fe2O4-NPs-AC: (Kinetics and thermodynamic studies). Oriental Journal of Chemistry. (2016), 32, 549-565. doi: 10.13005/ojc/320163
7. Caponi, N., G.C. Collazzo, J. Da Silveira Salla, S.L. Jahn, G.L. Dotto, E.L. Foletto: Optimisation of crystal violet removal onto raw kaolin using response surface methodology. International Journal of Environmental Technology and Management. (2019), 22, 85-100. doi: 10.1504/IJETM.2019.102197
8. Castellar-Ortega, G.C., M.M. Cely-Bautista, B.M. Cardozo-Arrieta, E.R. Angulo-Mercado, E. de Jesús Mendoza-Colina, A.M. Zambrano-Arevalo, J.E. Jaramillo-Colpas, C.L. Rosales-Díaz: Removal of the direct navy-blue dye on modified coffee bean. Tecnologia y Ciencias del Agua. (2020), 11, 1-26. doi: 10.24850/j-tyca-2020-04-01
9. Darvishi Cheshmeh Soltani, R., A.R. Khataee, H. Godini, M. Safari, M.J. Ghanadzadeh, M.S. Rajaei: Response surface methodological evaluation of the adsorption of textile dye onto biosilica/alginate nanobiocomposite: thermodynamic, kinetic, and isotherm studies. Desalination and Water Treatment. (2015), 56, 1389-1402. doi: 10.1080/19443994.2014.950344
10. Dastkhoon, M., M. Ghaedi, A. Asfaram, M.H. Ahmadi Azqhandi, M.K. Purkait: Simultaneous removal of dyes onto nanowires adsorbent use of ultrasound assisted adsorption to clean waste water: Chemometrics for modeling and optimization, multicomponent adsorption and kinetic study. Chemical Engineering Research and Design. (2017), 124, 222-237. doi: 10.1016/j.cherd.2017.06.011
11. El Messaoudi, N., M. El Khomri, S. Bentahar, A. Dbik, A. Lacherai, B. Bakiz: Evaluation of performance of chemically treated date stones: Application for the removal of cationic dyes from aqueous solutions. Journal of the Taiwan Institute of Chemical Engineers. (2016), 67, 244-253. doi: 10.1016/j.jtice.2016.07.024
12. Fooladgar, S., A. Teimouri, S. Ghanavati Nasab: Highly Efficient Removal of Lead Ions from Aqueous Solutions Using Chitosan/Rice Husk Ash/Nano Alumina with a Focus on Optimization by Response Surface Methodology: Isotherm, Kinetic, and Thermodynamic Studies. Journal of Polymers and the Environment. (2019), 27, 1025-1042. doi: 10.1007/s10924-019-01385-3
13. Gomes, C.S., J.S. Piccin, M. Gutterres: Optimizing adsorption parameters in tannery-dye-containing effluent treatment with leather shaving waste. Process Safety and Environmental Protection. (2016), 99, 98-106. doi: 10.1016/j.psep.2015.10.013
14. Hao, L., P. Wang, S. Valiyaveettil: Successive extraction of As(V), Cu(II) and P(V) ions from water using spent coffee powder as renewable bioadsorbents. Scientific Reports. (2017), 7. doi: 10.1038/srep42881
15. Jawad, A.H., K. Ismail, M.A.M. Ishak, L.D. Wilson: Conversion of Malaysian low-rank coal to mesoporous activated carbon: Structure characterization and adsorption properties. Chinese Journal of Chemical Engineering. (2019), 27, 1716-1727. doi: 10.1016/j.cjche.2018.12.006
16. Jawad, A.H., Z.S. Mehdi, M.A.M. Ishak, K. Ismail: Large surface area activated carbon from low-rank coal via microwave-assisted KOH activation for methylene blue adsorption. Desalination and Water Treatment. (2018), 110, 239-249. doi: 10.5004/dwt.2018.22226
17. Jawad, A.H., R.A. Rashid, K. Ismail, S. Sabar: High surface area mesoporous activated carbon developed from coconut leaf by chemical activation with H3PO4 for adsorption of methylene blue. Desalination and Water Treatment. (2017), 74, 326-335. doi: 10.5004/dwt.2017.20571
18. Jawad, A.H., S. Sabar, M.A.M. Ishak, L.D. Wilson, S.S. Ahmad Norrahma, M.K. Talari, A.M. Farhan: Microwave-assisted preparation of mesoporous-activated carbon from coconut (Cocos nucifera) leaf by H3PO4 activation for methylene blue adsorption. Chemical Engineering Communications. (2017), 204, 1143-1156. doi: 10.1080/00986445.2017.1347565
19. Jawad, A.H., M.H. Sauodi, M.S. Mastuli, M.A. Aouda, K.A. Radzun: Pomegranate peels collected from fresh juice shop as a renewable precursor for high surface area activated carbon with potential application for methylene blue adsorption. Desalination and Water Treatment. (2018), 124, 287-296. doi: 10.5004/dwt.2018.22725
20. Lim, J.W., K.Y. Lam, M.J.K. Bashir, Y.F. Yeong, M.K. Lam, Y.C. Ho. *Spent coffee grounds-based activated carbon preparation for sequestering of malachite green*. in *AIP Conference Proceedings*. 2016.
21. López, L., A.P. Ramirez, S. Giraldo, E. Flórez, N.Y. Acelas. *Removal of dyes from aqueous solutions by adsorbent prepared from coffee residues*. in *Journal of Physics: Conference Series*. 2019.
22. Massaya, J., A. Prates Pereira, B. Mills-Lamptey, J. Benjamin, C.J. Chuck: Conceptualization of a spent coffee grounds biorefinery: A review of existing valorisation approaches. Food and Bioproducts Processing. (2019), 118, 149-166. doi: 10.1016/j.fbp.2019.08.010
23. Mazaheri, H., M. Ghaedi, A. Asfaram, S. Hajati: Performance of CuS nanoparticle loaded on activated carbon in the adsorption of methylene blue and bromophenol blue dyes in binary aqueous solutions: Using ultrasound power and optimization by central composite design. Journal of Molecular Liquids. (2016), 219, 667-676. doi: 10.1016/j.molliq.2016.03.050
24. Minju, N., G. Jobin, S. Savithri, S. Ananthakumar: Double-Silicate Derived Hybrid Foams for High-Capacity Adsorption of Textile Dye Effluent: Statistical Optimization and Adsorption Studies. Langmuir. (2019), 35, 9382-9395. doi: 10.1021/acs.langmuir.9b00898
25. Muthukkumaran, A.,K. Aravamudan: Combined Homogeneous Surface Diffusion Model – Design of experiments approach to optimize dye adsorption considering both equilibrium and kinetic aspects. Journal of Environmental Management. (2017), 204, 424-435. doi: 10.1016/j.jenvman.2017.09.010

26. Raoufi, F., M. Monajjemi, H. Aghaie: Adsorption of Thymol Blue and Erythrosine-B on MWCNTs functionalized by N-(3-nitrobenzylidene)-N'-trimethoxysilylpropyl-ethane-1,2-diamine equilibrium, kinetics and thermodynamic study. Oriental Journal of Chemistry. (2017), 33, 2542-2550. doi: 10.13005/ojc/330550
27. Sabah, H., T. Thouraya, H. Melek, M. Nadia: Application of Response Surface Methodology for Optimization of Cadmium Ion Removal from an Aqueous Solution by Eggshell Powder. Chemical Research in Chinese Universities. (2018), 34, 302-310. doi: 10.1007/s40242-018-7163-9
28. Sabah, H., T. Thouraya, H. Melek, M. Nadia: Application of Response Surface Methodology for Optimization of Cadmium Ion Removal from an Aqueous Solution by Eggshell Powder. Chemical Research in Chinese Universities. (2020). 10.1007/s40242-015-7163-9. doi: 10.1007/s40242-015-7163-9
29. Selen, V.,Ö. Güler: Modeling of Congo Red Adsorption onto Multi-walled Carbon Nanotubes Using Response Surface Methodology: Kinetic, Isotherm and Thermodynamic Studies. Arabian Journal for Science and Engineering. (2021). 10.1007/s13369-020-05304-w. doi: 10.1007/s13369-020-05304-w
30. Sharifpour, E., H. Haddadi, M. Ghaedi, A. Asfaram, S. Wang: Simultaneous and rapid dye removal in the presence of ultrasound waves and a nano structured material: Experimental design methodology, equilibrium and kinetics. RSC Advances. (2016), 6, 66311-66319. doi: 10.1039/c6ra13286c
31. Sivashankar, R., A. Thirunavukkarasu, R. Nithya, J. Kanimozhi, A.B. Sathya, V. Sivasubramanian: Sequestration of methylene blue dye from aqueous solution by magnetic biocomposite: Three level Box–Behnken experimental design optimization and kinetic studies. Separation Science and Technology (Philadelphia). (2020), 55, 1752-1765. doi: 10.1080/01496395.2019.1607382
32. Tepe, O.: Adsorption of remazol brillant green 6b (Rbg 6b) on chitin: Process optimization using response surface methodology. Global Nest Journal. (2018), 20, 257-268. doi: 10.30955/gnj.002507
33. Torgut, G., M. Tanyol, F. Biryan, G. Pihtili, K. Demirelli: Application of response surface methodology for optimization of Remazol Brilliant Blue R removal onto a novel polymeric adsorbent. Journal of the Taiwan Institute of Chemical Engineers. (2017), 80, 406-414. doi: 10.1016/j.jtice.2017.07.030
34. Torğut, G., M. Tanyol, Z. Meşe: Modeling and optimization of indigo carmine adsorption from aqueous solutions using a novel polymer adsorbent: RSM-CCD. Chemical Engineering Communications. (2020), 207, 1157-1170. doi: 10.1080/00986445.2020.1731480
35. Wang, Y., L. Zhu, X. Wang, W. Zheng, C. Hao, C. Jiang, J. Wu: Synthesis of aminated calcium lignosulfonate and its adsorption properties for azo dyes. Journal of Industrial and Engineering Chemistry. (2018), 61, 321-330. doi: 10.1016/j.jiec.2017.12.030
36. Yang, S., Y. Wu, Y. Wu, L. Zhu: Optimizing decolorization of Acid Fuchsin and Acid Orange II solution by MnO2 loaded MCM-41. Journal of the Taiwan Institute of Chemical Engineers. (2015), 50, 205-214. doi: 10.1016/j.jtice.2014.12.023
37. Zhou, Y., L. Zhang, Z. Cheng: Removal of organic pollutants from aqueous solution using agricultural wastes: A review. Journal of Molecular Liquids. (2015), 212, 739-762. doi: 10.1016/j.molliq.2015.10.023

Kostić M., Milanović J., Baljak M., **Mihajlovski** K.**,** Kramar A., Preparation and characterization of silver-loaded hemp fibers with antimicrobial activity, *Fibers and Polymers*, (2014), 15, 57-64. (ISSN 1229-9197; IF(2014) = 0,881; Material Science, Textiles 7/22). *Broj heterocitata* = 8. https://doi.org/10.1007/s12221-014-0057-7

1. Chang, L., W. Duan, A. Chen, J. Li, S. Huang, H. Tang, G. Pan, Y. Deng, L. Zhao, D. Li, L. Zhao: Preparation of polyacrylonitrile-based fibres with chelated Ag ions for antibacterial applications: Preparation of Antibacterial Fibres. Royal Society Open Science. (2020), 7. doi: 10.1098/rsos.200324rsos200324
2. Goda, E.S., M.H. Abu Elella, M. Sohail, B.S. Singu, B. Pandit, A.M. El Shafey, A.M. Aboraia, H. Gamal, S.E. Hong, K.R. Yoon: N-methylene phosphonic acid chitosan/graphene sheets decorated with silver nanoparticles as green antimicrobial agents. International Journal of Biological Macromolecules. (2021), 182, 680-688. doi: 10.1016/j.ijbiomac.2021.04.024
3. Liu, M., A. Thygesen, J. Summerscales, A.S. Meyer: Targeted pre-treatment of hemp bast fibres for optimal performance in biocomposite materials: A review. Industrial Crops and Products. (2017), 108, 660-683. doi: 10.1016/j.indcrop.2017.07.027
4. Ma, Z., M. Yin, M. Zhang, Z. Qi, X. Ren, T.S. Huang: Durable N-halamine Antibacterial Cellulose Based on Thiol-ene Click Chemistry. Fibers and Polymers. (2019), 20, 244-249. doi: 10.1007/s12221-019-8940-x
5. Qiu, Q., S. Chen, Y. Li, Y. Yang, H. Zhang, Z. Quan, X. Qin, R. Wang, J. Yu: Functional nanofibers embedded into textiles for durable antibacterial properties. Chemical Engineering Journal. (2020), 384. doi: 10.1016/j.cej.2019.123241
6. Shen, H., Y. Li, W. Yao, S. Yang, L. Yang, F. Pan, Z. Chen, X. Yin: Solvent-free cellulose nanocrystal fluids for simultaneous enhancement of mechanical properties, thermal conductivity, moisture permeability and antibacterial properties of polylactic acid fibrous membrane. Composites Part B: Engineering. (2021), 222. doi: 10.1016/j.compositesb.2021.109042

7. Wu, L., A. Liu, Z. Li: Effect of N-halamine siloxane precursors on antimicrobial activity and durability of cotton fibers. Fibers and Polymers. (2015), 16, 550-559. doi: 10.1007/s12221-015-0550-7
8. Yu, W., X. Li, J. He, Y. Chen, L. Qi, P. Yuan, K. Ou, F. Liu, Y. Zhou, X. Qin: Graphene oxide-silver nanocomposites embedded nanofiber core-spun yarns for durable antibacterial textiles. Journal of Colloid and Interface Science. (2021), 584, 164-173. doi: 10.1016/j.jcis.2020.09.092

Buntić A., Pavlović M., **Mihajlovski K.**, Ranđelović M., Rajić N., Antonović D., Šiler Marinković S., Dimitrijević-Branković S., Removal of a cationic dye from aqueous solution by microwave activated clinoptilolite - Response surface methodology approach,*Water, Air and Soil Pollution*, (2014), 255, 1816. (ISSN 0049-6979), IF(2014)=1,554; Environmental Sciences 120/223). *Broj heterocitata*= 7.
https://doi.org/10.1007/s11270-013-1816-6

1. Beyki, M.H., M. Bayat, F. Shemirani: Fabrication of core-shell structured magnetic nanocellulose base polymeric ionic liquid for effective biosorption of Congo red dye. Bioresource Technology. (2016), 218, 326-334. doi: 10.1016/j.biortech.2016.06.069
2. Ghanbarian, M., R. Nabizadeh, S. Nasseri, F. Shemirani, A.H. Mahvi, M.H. Beyki, A. Mesdaghinia: Potential of amino-riched nano-structured MnFe2O4@cellulose for biosorption of toxic Cr (VI): Modeling, kinetic, equilibrium and comparing studies. International Journal of Biological Macromolecules. (2017), 104, 465-480. doi: 10.1016/j.ijbiomac.2017.06.060
3. Li, L.Q., S. Liu, X. Liang, Z. Liu: Adsorption of 1,2-dichloroethane onto activated carbon with microwave modification. Hunan Daxue Xuebao/Journal of Hunan University Natural Sciences. (2015), 42, 90-95. doi:
4. Salehi, K., B. Shahmoradi, A. Bahmani, M. Pirsaheb, H.P. Shivaraju: Optimization of reactive black 5 degradation using hydrothermally synthesized NiO/TiO2 nanocomposite under natural sunlight irradiation. Desalination and Water Treatment. (2016), 57, 25256-25266. doi: 10.1080/19443994.2016.1149890
5. Shirkavand, F., M.H. Beyki, F. Shemirani: Enhanced naproxen removal over magnetic quaternized dextrin ionomer: Response surface optimization, kinetics, isotherm and comparing study. Desalination and Water Treatment. (2019), 143, 333-351. doi: 10.5004/dwt.2019.23324
6. Yadaei, H., M.H. Beyki, F. Shemirani, S. Nouroozi: Ferrofluid mediated chitosan@mesoporous carbon nanohybrid for green adsorption/preconcentration of toxic Cd(II): Modeling, kinetic and isotherm study. Reactive and Functional Polymers. (2018), 122, 85-97. doi: 10.1016/j.reactfunctpolym.2017.10.011
7. Yang, K., J. Zhang, T. Yang, H. Wang: Investigation of equilibrium and kinetics of Cr(VI) adsorption by dried Bacillus cereus using response surface methodology. Water Science and Technology. (2016), 73, 617-627. doi: 10.2166/wst.2015.522

Kramar A., Prysiazhnyi V., Dojčinović B., **Mihajlovski K.,** Obradović B.M., Kuraica M.M., Kostić M., Antimicrobial viscose fabric prepared by treatment in DBD and subsequent deposition of silver and copper ions—Investigation of plasma aging effect, *Surface and Coatings Technology*, (2013), 234, 92–99. (ISSN: 0257-8972; IF (2013) = 2,199; Material Science, Coatings & Films 4/18). *Broj heterocitata* = 19.
https://doi.org/10.1016/j.surfcoat.2013.03.030

1. Emam, H.E., H.B. Ahmed, T. Bechtold: In-situ deposition of Cu2O micro-needles for biologically active textiles and their release properties. Carbohydrate Polymers. (2017), 165, 255-265. doi: 10.1016/j.carbpol.2017.02.044
2. Emam, H.E., A.P. Manian, B. Široká, H. Duelli, P. Merschak, B. Redl, T. Bechtold: Copper(I)oxide surface modified cellulose fibers-Synthesis, characterization and antimicrobial properties. Surface and Coatings Technology. (2014), 254, 344-351. doi: 10.1016/j.surfcoat.2014.06.036
3. Heliopoulos, N.S., G.N. Kouzilos, A.I. Giarmenitis, S.K. Papageorgiou, K. Stamatakis, F.K. Katsaros: Viscose Fabric Functionalized with Copper and Copper Alginate Treatment Toward Antibacterial and UV Blocking Properties. Fibers and Polymers. (2020), 21, 1238-1250. doi: 10.1007/s12221-020-9578-4
4. Hubbe, M.A., O.J. Rojas, L.A. Lucia: Green modification of surface characteristics of cellulosic materials at the molecular or nano scale: A review. BioResources. (2015), 10, 6095-6206. doi: 10.15376/biores.10.3.Hubbe
5. Jelil, R.A.: A review of low-temperature plasma treatment of textile materials. Journal of Materials Science. (2015), 50, 5913-5943. doi: 10.1007/s10853-015-9152-4

6. Karthikeyan, N., K.A. Vijayalakshmi, K. Vignesh: Effect of glow discharge oxygen plasma treated surface and antimicrobial properties of viscose fabric. Materials Technology. (2016), 31, 166-175. doi: 10.1179/1753555715Y.0000000037
7. Kratochvíl, J., A. Kuzminova, O. Kylián: State-of-the-art, and perspectives of, silver/plasma polymer antibacterial nanocomposites. Antibiotics. (2018), 7. doi: 10.3390/antibiotics7030078
8. Li, H.,H. Yu. *Multifunctional modification of viscose fiber using plant extracts formulations*. in *IOP Conference Series: Materials Science and Engineering*. 2020.
9. Nikiforov, A., X. Deng, Q. Xiong, U. Cvelbar, N. Degeyter, R. Morent, C. Leys: Non-thermal plasma technology for the development of antimicrobial surfaces: A review. Journal of Physics D: Applied Physics. (2016), 49. doi: 10.1088/0022-3727/49/20/204002
10. Peran, J.,S. Ercegović Ražić: Application of atmospheric pressure plasma technology for textile surface modification. Textile Research Journal. (2020), 90, 1174-1197. doi: 10.1177/0040517519883954
11. Popescu, M.C., C. Ungureanu, E. Buse, F. Nastase, V. Tucureanu, M. Suchea, S. Draga, M.A. Popescu: Antibacterial efficiency of cellulose-based fibers covered with ZnO and Al 2 O 3 by Atomic Layer Deposition. Applied Surface Science. (2019), 481, 1287-1298. doi: 10.1016/j.apsusc.2019.03.268
12. Rani, K.V., B. Sarma, A. Sarma: Plasma sputtering process of copper on polyester/silk blended fabrics for preparation of multifunctional properties. Vacuum. (2017), 146, 206-215. doi: 10.1016/j.vacuum.2017.09.036
13. Saleem, M., N. Kousar, B. Shoukat, M. Shoaib-Ur-Rehman, F. Batool, M.Y. Naz, A. Ghaffar. *Plasma-fabric interaction for surface activation and functionalization: A review*. in *IOP Conference Series: Materials Science and Engineering*. 2020.
14. Shin, Y.S., M. Park, H.Y. Kim, F.L. Jin, S.J. Park: Synthesis of silver-doped silica-complex nanoparticles for antibacterial materials. Bulletin of the Korean Chemical Society. (2014), 35, 2979-2984. doi: 10.5012/bkcs.2014.35.10.2979
15. Sousa, S., C. Gaiolas, A.P. Costa, C. Baptista, M.E. Amaral: Cold plasma treatment of cotton and viscose fabrics impregnated with essential oils of Lavandula angustifolia and Melaleuca alternifolia. Cellulose Chemistry and Technology. (2016), 50, 711-719. doi:
16. Tan, L.Y., L.T. Sin, S.T. Bee, C.T. Ratnam, K.K. Woo, T.T. Tee, A.R. Rahmat: A review of antimicrobial fabric containing nanostructures metal-based compound. Journal of Vinyl and Additive Technology. (2019), 25, E3-E27. doi: 10.1002/vnl.21606
17. Turalija, M., P. Merschak, B. Redl, U. Griesser, H. Duelli, T. Bechtold: Copper(i)oxide microparticles-synthesis and antimicrobial finishing of textiles. Journal of Materials Chemistry B. (2015), 3, 5886-5892. doi: 10.1039/c5tb01049g
18. Wang, L., H. Wang, C. Liu, Y. Xu, S. Ma, Y. Zhuang, Q. Zhang, H. Yang, W. Xu: Bioinspired cellulose membrane with hierarchically porous structure for highly efficient solar steam generation. Cellulose. (2020), 27, 8255-8267. doi: 10.1007/s10570-020-03359-4
19. Zhang, L.S., H.L. Liu, W.D. Yu: Effect of air plasma treatment on the dyeing of Tencel fabric with C.I. Reactive Black 5. Applied Surface Science. (2015), 328, 501-508. doi: 10.1016/j.apsusc.2014.12.073

Milutinović M. D., Šiler-Marinković S. S., Antonović D. G., **Mihajlovski K**. R., Pavlović M. D., Dimitrijević Branković S. I., Antioksidativna svojstva sušenih ekstrakata iz otpadne espreso kafe. *Hemijska Industrija*, (2013), 67, 261-267. (ISSN 0367-598X, IF(2013) = 0,562; Engineering Chemical 103/133). *Broj heterocitata* = 3.
https://doi.org/10.2298/HEMIND120410074M

1. Jakovetić Tanasković, S., N. Luković, S. Grbavčić, A. Stefanović, J. Jovanović, B. Bugarski, Z. Knežević-Jugović: Production of egg white protein hydrolysates with improved antioxidant capacity in a continuous enzymatic membrane reactor: optimization of operating parameters by statistical design. Journal of Food Science and Technology. (2018), 55, 128-137. doi: 10.1007/s13197-017-2848-5
2. Stojiljković, D., I. Arsić, V. Tadić: Extracts of wild apple fruit (Malus sylvestris (L.) Mill., Rosaceae) as a source of antioxidant substances for use in production of nutraceuticals and cosmeceuticals. Industrial Crops and Products. (2016), 80, 165-176. doi: 10.1016/j.indcrop.2015.11.023
3. Zugic, A., I. Jeremic, A. Isakovic, I. Arsic, S. Savic, V. Tadic: Evaluation of anticancer and antioxidant activity of a commercially available CO2 supercritical extract of old man's beard (Usnea barbata). PLoS ONE. (2016), 11. doi: 10.1371/journal.pone.0146342

Djukić-Vuković A., Mojović Lj., Nikolić S., Pejin J., Kocić-Tanackov S., **Mihajlovski K.,** Distillery Stillage as a New Substrate for Lactic Acid Production in Batch and Fed-batch Fermentation, 7 Th Conference On Sustainable Development Of Energy, Water And Environment Systems (SDEWES), (2013), 34, 97-102, ISBN: 978-88-95608-25-9

Broj heterocitata = 8.
https://doi.org/10.3303/CET1334017

1. Choonut, A., N. Paichid, T. Yunu, K. Sangkharak. *The statistic optimization for lactic acid production by Lactobacillus Plantarum using ethanol stillage as sole carbon source*. in *AIP Conference Proceedings*. 2016.
2. Cizeikiene, D., G. Juodeikiene, J. Damasius: Use of wheat straw biomass in production of L-lactic acid applying biocatalysis and combined lactic acid bacteria strains belonging to the genus Lactobacillus. Biocatalysis and Agricultural Biotechnology. (2018), 15, 185-191. doi: 10.1016/j.bcab.2018.06.015
3. Espinel-Ríos, S., D.M. Palmerín-Carreño, A.L. Hernández-Orihuela, A. Martínez-Antonio: A plackett-burman design for substituting mrs medium components with avocado seed hydrolysate for growth and lactic acid production by lactobacillus sp. Revista Mexicana de Ingeniera Quimica. (2019), 18, 131-141. doi: 10.24275/UAM/IZT/DCBI/REVMEXINGQUIM/2019V18N1/ESPINEL
4. Juodeikiene, G., D. Klupsaite, D. Zadeike, D. Cizeikiene, I. Vidziunaite, E. Bartkiene, D. Cernauskas: Bioconversion of agro-industrial by-products to lactic acid using Lactobacillus sakei and two Pediococcus spp. strains. International Journal of Food Science and Technology. (2016), 51, 2682-2691. doi: 10.1111/ijfs.13258
5. Kumar, A., A. Thakur, P.S. Panesar: Lactic acid and its separation and purification techniques: A review. Reviews in Environmental Science and Biotechnology. (2019), 18, 823-853. doi: 10.1007/s11157-019-09517-w
6. Kurniawan, E., Ishak, Suryani. *Utilization of Cocopeat and Goat of Dirt in Marking of Solid Organic Fertilizer to Quality Macro Nutrient (NPK)*. in *IOP Conference Series: Materials Science and Engineering*. 2019.
7. Ming, L.C., M. Halim, R.A. Rahim, H.Y. Wan, A.B. Ariff: Strategies in fed-batch cultivation on the production performance of Lactobacillus salivarius I 24 viable cells. Food Science and Biotechnology. (2016), 25, 1393-1398. doi: 10.1007/s10068-016-0217-1
8. Varbanov, P.S.,N. Duič: Editorial: Strategic supply, security and efficiency of energy systems using renewables, waste and pollution minimisation. Chemical Engineering Transactions. (2013), 34, 1-6. doi: 10.3303/CET1334001

Milanović J., Mihailović T., **Mihajlovski K,** Kostić M., (2012) Antimicrobial TEMPO-oxidized hemp fibers with incorporated silver particles, *Journal of the Serbian Chemical Society*, (2012), 77, 1759-1773. (ISSN 1820-742; IF(2012) = 0,912; Chemistry Multidisciplinary 95/152). *Broj heterocitata* = 1.
https://doi.org/10.2298/JSC121018143M

1. Liu, M., A. Thygesen, J. Summerscales, A.S. Meyer: Targeted pre-treatment of hemp bast fibres for optimal performance in biocomposite materials: A review. Industrial Crops and Products. (2017), 108, 660-683. doi: 10.1016/j.indcrop.2017.07.027

Janjić S., Kostić M., Vučinić M., Dimitrijević S., **Mihajlovski K.,** Ristić M, Škundrić P.,(2009), Biologically active fibers based on chitosan-coated lyocell fibers, *Carbohydrate Polymers*, 78, 240-246. (ISSN 0144-8617), IF(2009)=3.167; Chemistry Applied, 5/63). *Broj heterocitata*=33.
https://doi.org/10.1016/j.carbpol.2009.03.033

1. Antony, R., T. Arun, S.T.D. Manickam: A review on applications of chitosan-based Schiff bases. International Journal of Biological Macromolecules. (2019), 129, 615-633. doi: 10.1016/j.ijbiomac.2019.02.047
2. Borsa, J., *Antimicrobial natural fibres*, in *Handbook of Natural Fibres*. 2012. p. 428-466. DOI: 10.1016/B978-1-84569-698-6.50014-0.
3. Borsa, J., *Antimicrobial natural fibres*, in *Handbook of Natural Fibres: Volume 2: Processing and Applications*. 2020. p. 653-687. DOI: 10.1016/B978-0-12-818782-1.00020-1.
4. Costa, E.M., S. Silva, M. Veiga, F.K. Tavaria, M.M. Pintado: Chitosan's biological activity upon skin-related microorganisms and its potential textile applications. World Journal of Microbiology and Biotechnology. (2018), 34. doi: 10.1007/s11274-018-2471-2
5. Edgar, K.J.,H. Zhang: Antibacterial modification of Lyocell fiber: A review. Carbohydrate Polymers. (2020), 250. doi: 10.1016/j.carbpol.2020.116932
6. Elshaarawy, R.F.M., G.A. Seif, M.E. El-Naggar, T.B. Mostafa, E.A. El-Sawi: In-situ and ex-situ synthesis of poly-(imidazolium vanillyl)-grafted chitosan/silver nanobiocomposites for safe antibacterial finishing of cotton fabrics. European Polymer Journal. (2019), 116, 210-221. doi: 10.1016/j.eurpolymj.2019.04.013

7. Grinshpan, D.D., A.N. Gonchar, T.A. Savitskaya, N.G. Tsygankova, S.E. Makarevich: Rheological properties of cellulose-chitosan-phosphoric acid systems in different phase states. Polymer Science - Series A. (2014), 56, 137-145. doi: 10.1134/S0965545X14020059
8. He, J., F. Wang, Y. Wu, Y. Huang, H. Zhang: Preparation of the water-soluble chitosan-coated oxidized regenerated cellulose gauze. Cellulose. (2011), 18, 1651-1659. doi: 10.1007/s10570-011-9582-3
9. He, J.M., Y.D. Wu, F.W. Wang, W.L. Cheng, Y.D. Huang, B. Fu: Hemostatic, antibacterial and degradable performance of the water-soluble chitosan-coated oxidized regenerated cellulose gauze. Fibers and Polymers. (2014), 15, 504-509. doi: 10.1007/s12221-014-0504-5
10. He, X., Y. Li, L. Zhang, R. Du, Y. Dai, Z. Tan: Preparation of 2,3-dialdehyde microcrystalline cellulose particles crosslinked with ε-poly-L-lysine and their antibacterial activity. Cellulose. (2021), 28, 2833-2847. doi: 10.1007/s10570-021-03692-2
11. He, X., R. Tao, T. Zhou, C. Wang, K. Xie: Structure and properties of cotton fabrics treated with functionalized dialdehyde chitosan. Carbohydrate Polymers. (2014), 103, 558-565. doi: 10.1016/j.carbpol.2013.12.076
12. Ho, K.M., W.Y. Li, C.H. Wong, P. Li: Amphiphilic polymeric particles with core-shell nanostructures: Emulsion-based syntheses and potential applications. Colloid and Polymer Science. (2010), 288, 1503-1523. doi: 10.1007/s00396-010-2276-9
13. Ibrahim, N.A., B.M. Eid, E.A. El-Aziz, T.M.A. Elmaaty, S.M. Ramadan: Loading of chitosan – Nano metal oxide hybrids onto cotton/polyester fabrics to impart permanent and effective multifunctions. International Journal of Biological Macromolecules. (2017), 105, 769-776. doi: 10.1016/j.ijbiomac.2017.07.099
14. Kang, X., L. Deng, L. Yi, C.Q. Ruan, K. Zeng: A facile method for preparation of green and antibacterial hydrogel based on chitosan and water-soluble 2,3-dialdehyde cellulose. Cellulose. (2021). 10.1007/s10570-021-03879-7. doi: 10.1007/s10570-021-03879-7
15. Liu, K., Y. Xu, X. Lin, L. Chen, L. Huang, S. Cao, J. Li: Synergistic effects of guanidine-grafted CMC on enhancing antimicrobial activity and dry strength of paper. Carbohydrate Polymers. (2014), 110, 382-387. doi: 10.1016/j.carbpol.2014.03.086
16. Long, Z., M. Wu, P. Wang, L. Dai, D. Zhang, H. Xiao, C. Dong: Synthesis & characterization of dialdehyde carboxymethyl chitosan. Journal of Polymer Materials. (2017), 34, 207-221. doi:
17. Romainor, A.N.B., S.F. Chin, S.C. Pang, L.M. Bilung: Preparation and characterization of chitosan nanoparticles-doped cellulose films with antimicrobial property. Journal of Nanomaterials. (2014), 2014. doi: 10.1155/2014/710459
18. Russler, A., P. Miethe, F. Liebner, A. Potthast, T. Rosenau. *Modification of bacterial cellulose aerogels*. in *16th International Symposium on Wood, Fiber and Pulping Chemistry - Proceedings, ISWFPC*. 2011.
19. Savitskaya, T.A., N.G. Tsygankova, S.E. Makarevich, D.D. Grinshpan, O.A. Ivashkevich: Thermal properties of cellulose–chitosan composite fibers. Proceedings of the National Academy of Sciences of Belarus, Chemical Series. (2020), 56, 473-481. doi: 10.29235/1561-8331-2020-56-4-473-481
20. Shahid ul, I.,B.S. Butola: Recent advances in chitosan polysaccharide and its derivatives in antimicrobial modification of textile materials. International Journal of Biological Macromolecules. (2019), 121, 905-912. doi: 10.1016/j.ijbiomac.2018.10.102
21. Shahid Ul, I., M. Shahid, F. Mohammad: Green chemistry approaches to develop antimicrobial textiles based on sustainable biopolymers - A review. Industrial and Engineering Chemistry Research. (2013), 52, 5245-5260. doi: 10.1021/ie303627x
22. Shen, K., Q. Hu, Z. Wang, J. Qu: Effect of 60Co irradiation on the properties of chitosan rod. Materials Science and Engineering C. (2011), 31, 866-872. doi: 10.1016/j.msec.2011.02.002
23. Song, Z., G. Li, F. Guan, W. Liu: Application of chitin/chitosan and their derivatives in the papermaking industry. Polymers. (2018), 10. doi: 10.3390/polym10040389
24. Tang, X.,X. Yan: Dip-coating for fibrous materials: mechanism, methods and applications. Journal of Sol-Gel Science and Technology. (2017), 81, 378-404. doi: 10.1007/s10971-016-4197-7
25. Tarbuk, A., K. Grgić, E. Toshikj, D. Domović, D. Dimitrovski, V. Dimova, I. Jordanov: Monitoring of cellulose oxidation level by electrokinetic phenomena and numeric prediction model. Cellulose. (2020), 27, 3107-3119. doi: 10.1007/s10570-020-03028-6
26. Toshikj, E., A. Tarbuk, K. Grgić, B. Mangovska, I. Jordanov: Influence of different oxidizing systems on cellulose oxidation level: introduced groups versus degradation model. Cellulose. (2019), 26, 777-794. doi: 10.1007/s10570-018-2133-4
27. Wang, Y., Q. Wang, Y. Zhu, Y. Shen, S. Cheng, H. Zheng, Y. Xu: Structure and properties of oxycellulose fabric crosslinked with soy protein. Carbohydrate Polymers. (2021), 257. doi: 10.1016/j.carbpol.2020.117548
28. Wu, R., B.H. He, G.L. Zhao, L.Y. Qian, X.F. Li: Immobilization of pectinase on oxidized pulp fiber and its application in whitewater treatment. Carbohydrate Polymers. (2013), 97, 523-529. doi: 10.1016/j.carbpol.2013.05.019
29. Xu, Y., C. Huang, X. Wang: Characterization and controlled release aloe extract of collagen protein modified cotton fiber. Carbohydrate Polymers. (2013), 92, 982-988. doi: 10.1016/j.carbpol.2012.10.042
30. Yu, Y., Q. Wang, J. Yuan, X. Fan, P. Wang, L. Cui: Hydrophobic modification of cotton fabric with octadecylamine via laccase/TEMPO mediated grafting. Carbohydrate Polymers. (2016), 137, 549-555. doi: 10.1016/j.carbpol.2015.11.026
31. Zhang, Y., Y. Li, Q. Hu: Colorless antibacterial cotton fabrics based on silver nanoparticles and chitosan complexes. International Journal of Clothing Science and Technology. (2012), 24, 118-128. doi: 10.1108/09556221211205568

32. Zhang, Y.F., Y.L. Li, Y. Yao, W.Y. Li, Q.L. Hu: Stabiliby of chitosan-stablized nanosilver solutions and its application for antibacterial durability of cotton fabrics. Gaodeng Xuexiao Huaxue Xuebao/Chemical Journal of Chinese Universities. (2012), 33, 1860-1865. doi: 10.3969/j.issn.0251-0790.2012.08.040
33. Zhou, Y., M. Fan, X. Luo, L. Huang, L. Chen: Acidic ionic liquid catalyzed crosslinking of oxycellulose with chitosan for advanced biocomposites. Carbohydrate Polymers. (2014), 113, 108-114. doi: 10.1016/j.carbpol.2014.06.081

Dimitrijević S., **Mihajlovski K.,** Antonović D., A study of the synergistic antilisterial effects of a sub-lethal dose of lactic acid and essential oils from *Thymus vulgaris* L., *Rosmarinus officinalis* L. and *Origanum vulgare* L., (2007), *Food Chemistry*, 104, 774-782. (ISSN 0308-8146; IF(2007)=3,052, Food Science and Technology 4/103). *Broj heterocitata*= 68. https://doi.org/10.1016/j.foodchem.2006.12.028

1. Abu-Lafi, S., I. Odeh, H. Dewik, M. Qabajah, L.O. Hanuš, V.M. Dembitsky: Thymol and carvacrol production from leaves of wild Palestinian Majorana syriaca. Bioresource Technology. (2008), 99, 3914-3918. doi: 10.1016/j.biortech.2007.07.042
2. Al-Abdalall, A.H.A.,E.J. Al Talib: Frustration of mycotoxins with spices used for coffee spicing. American Journal of Food Technology. (2013), 8, 149-161. doi: 10.3923/ajft.2013.149.161
3. Alçiçek, Z.: The effects of thyme (Thymus vulgaris L.) oil concentration on liquid-smoked vacuum-packed rainbow trout (Oncorhynchus mykiss Walbaum, 1792) fillets during chilled storage. Food Chemistry. (2011), 128, 683-688. doi: 10.1016/j.foodchem.2011.03.087
4. Alvarez, M.V., M.R. Moreira, S.I. Roura, J.F. Ayala-Zavala, G.A. González-Aguilar, *Using natural antimicrobials to enhance the safety and quality of fresh and processed fruits and vegetables: Types of antimicrobials*, in *Handbook of Natural Antimicrobials for Food Safety and Quality*. 2015. p. 287-313. DOI: 10.1016/B978-1-78242-034-7.00013-X.
5. Alves De Azerêdo, G., T.L.M. Stamford, R.C.B. Queiroz De Figueiredo, E. Leite De Souza: The cytotoxic effect of essential oils from Origanum vulgare L. and/or Rosmarinus officinalis L. on Aeromonas hydrophila. Foodborne Pathogens and Disease. (2012), 9, 298-304. doi: 10.1089/fpd.2011.1047
6. Bajpai, V.K.,S.C. Kang: Potential role of leaf essential oil and extracts of metasequoia glyptostroboides miki ex hu to inhibit the growth of listeria monocytogenes spp. Journal of Food Biochemistry. (2011), 35, 289-302. doi: 10.1111/j.1745-4514.2010.00382.x
7. Barreto, H.M., I.S. de Lima, K.M.R.N. Coelho, L.R. Osório, R. de Almeida Mourão, B.H.C.D. Santos, H.D.M. Coutinho, A.P.L. de Abreu, M.D.G.F. de Medeiros, A.M.D.G.L. Citó, J.A.D. Lopes: Effect of Lippia origanoides H.B.K. essential oil in the resistance to aminoglycosides in methicillin resistant Staphylococcus aureus. European Journal of Integrative Medicine. (2014), 6, 560-564. doi: 10.1016/j.eujim.2014.03.011
8. Barreto, H.M., E.C. Silva Filho, E.D.O. Lima, H.D.M. Coutinho, M.F.B. Morais-Braga, C.C.A. Tavares, S.R. Tintino, J.V. Rego, A.P.L. De Abreu, M.D.C.G. Lustosa, R.W.G. Oliveira, A.M.G.L. Citó, J.A.D. Lopes: Chemical composition and possible use as adjuvant of the antibiotic therapy of the essential oil of Rosmarinus officinalis L. Industrial Crops and Products. (2014), 59, 290-294. doi: 10.1016/j.indcrop.2014.05.026
9. Bassolé, I.H.N.,H.R. Juliani: Essential oils in combination and their antimicrobial properties. Molecules. (2012), 17, 3989-4006. doi: 10.3390/molecules17043989
10. Ben-Fadhel, Y., S. Saltaji, M.A. Khlifi, S. Salmieri, K. Dang Vu, M. Lacroix: Active edible coating and γ-irradiation as cold combined treatments to assure the safety of broccoli florets (Brassica oleracea L.). International Journal of Food Microbiology. (2017), 241, 30-38. doi: 10.1016/j.ijfoodmicro.2016.10.010
11. Bound, D.J., P.S. Murthy, P. Srinivas: Synthesis and antibacterial properties of 2,3-dideoxyglucosides of terpene alcohols and phenols. Food Chemistry. (2015), 185, 192-199. doi: 10.1016/j.foodchem.2015.03.078
12. Ćavar Zeljković, S.,M. Maksimović: Chemical composition and bioactivity of essential oil from Thymus species in Balkan Peninsula. Phytochemistry Reviews. (2015), 14, 335-352. doi: 10.1007/s11101-014-9378-9
13. Chaftar, N., M. Girardot, N. Quellard, J. Labanowski, T. Ghrairi, K. Hani, J. Frère, C. Imbert: Activity of Six Essential Oils Extracted from Tunisian Plants against Legionella pneumophila. Chemistry and Biodiversity. (2015), 12, 1565-1574. doi: 10.1002/cbdv.201400343
14. De Azerêdo, G.A., R.C.B.Q. De Figueiredo, E.L. De Souza, T.L.M. Stamford: Changes in listeria monocytogenes induced by origanum vulgare L. and rosmarinus officinalis L. Essential oils alone and combined at subinhibitory amounts. Journal of Food Safety. (2012), 32, 226-235. doi: 10.1111/j.1745-4565.2012.00372.x
15. de Barros, J.C., M.L. da Conceição, N.J.G. Neto, A.C.V. da Costa, E.L. de Souza: Combination of Origanum vulgare L. essential oil and lactic acid to inhibit Staphylococcus aureus in meat broth and meat model. Brazilian Journal of Microbiology. (2012), 43, 1120-1127. doi: 10.1590/S1517-83822012000300039
16. de Oliveira, C.E.V., T.L.M. Stamford, N.J.G. Neto, E.L. de Souza: Inhibition of Staphylococcus aureus in broth and meat broth using synergies of phenolics and organic acids. International Journal of Food Microbiology. (2010), 137, 312-316. doi: 10.1016/j.ijfoodmicro.2009.11.019

17. de Oliveira, M.M.M., D.F. Brugnera, R.H. Piccoli: Essential oils of thyme and Rosemary in the control of Listeria monocytogenes in raw beef. Brazilian Journal of Microbiology. (2013), 44, 1181-1188. doi: 10.1590/S1517-83822013000400022
18. De Oliveira, T.L.C., M.G. Cardoso, R.A. Soares, E.M. Ramos, R.H. Piccoli, V.M.R. Tebaldi: Inhibitory activity of Syzygium aromaticum and Cymbopogon citratus (DC.) Stapf. essential oils against Listeria monocytogenes inoculated in bovine ground meat. Brazilian Journal of Microbiology. (2013), 44, 357-365. doi: 10.1590/S1517-83822013005000040
19. De Sousa, J.P., G.A. De Azerêdo, R. De Araújo Torres, M.A. Da Silva Vasconcelos, M.L. Da Conceição, E.L. De Souza: Synergies of carvacrol and 1,8-cineole to inhibit bacteria associated with minimally processed vegetables. International Journal of Food Microbiology. (2012), 154, 145-151. doi: 10.1016/j.ijfoodmicro.2011.12.026
20. de Souza, E.L., J.C. de Barros, M.L. da Conceição, N.J.G. Neto, A.C.V. da Costa: Combined application of Origanum vulgare l. essential oil and acetic acid for controlling the growth of Staphylococcus aureus in foods. Brazilian Journal of Microbiology. (2009), 40, 387-393. doi: 10.1590/s1517-83822009000200032
21. Duman, M., O. Emir Çoban, E. Özpolat: The determination of the effect to shelf life of marinated crayfish (Astacus leptodactylus Esch., 1823) with rosemary and thyme essential oils additive. Kafkas Universitesi Veteriner Fakultesi Dergisi. (2012), 18, 745-751. doi:
22. Emir Çoban, Ö.,B. Patir: Antimicrobial and antioxidant effects of clove oil on sliced smoked Oncorhynchus mykiss. Journal fur Verbraucherschutz und Lebensmittelsicherheit. (2013), 8, 195-199. doi: 10.1007/s00003-013-0823-2
23. Esteban, M.,A. Palop: Nisin, carvacrol and their combinations against the growth of heat-treated Listeria monocytogenes cells. Food Technology and Biotechnology. (2011), 49, 89-95. doi:
24. Fadil, M., K. Fikri-Benbrahim, S. Rachiq, B. Ihssane, S. Lebrazi, M. Chraibi, T. Haloui, A. Farah: Combined treatment of Thymus vulgaris L., Rosmarinus officinalis L. and Myrtus communis L. essential oils against Salmonella typhimurium: Optimization of antibacterial activity by mixture design methodology. European Journal of Pharmaceutics and Biopharmaceutics. (2018), 126, 211-220. doi: 10.1016/j.ejpb.2017.06.002
25. Friedly, E.C., P.G. Crandall, S.C. Ricke, M. Roman, C. O'Bryan, V.I. Chalova: In vitro antilisterial effects of citrus oil fractions in combination with organic acids. Journal of Food Science. (2009), 74, M67-M72. doi: 10.1111/j.1750-3841.2009.01056.x
26. Giarratana, F., D. Muscolino, C. Ragonese, C. Beninati, D. Sciarrone, G. Ziino, L. Mondello, A. Giuffrida, A. Panebianco: Antimicrobial activity of combined thyme and rosemary essential oils against Listeria monocytogens in Italian mortadella packaged in modified atmosphere: Thyme & Rosemary EOs vs L. monocytogenes. Journal of Essential Oil Research. (2016), 28, 467-474. doi: 10.1080/10412905.2016.1165744
27. Gonelimali, F.D., J. Lin, W. Miao, J. Xuan, F. Charles, M. Chen, S.R. Hatab: Antimicrobial properties and mechanism of action of some plant extracts against food pathogens and spoilage microorganisms. Frontiers in Microbiology. (2018), 9. doi: 10.3389/fmicb.2018.01639
28. Goñi, M.G., S.I. Roura, A.G. Ponce, M.R. Moreira, *Clove (Syzygium aromaticum) oils*, in *Essential Oils in Food Preservation, Flavor and Safety*. 2016. p. 349-357. DOI: 10.1016/B978-0-12-416641-7.00039-0.
29. Habtemariam, S.: The Therapeutic Potential of Rosemary (Rosmarinus officinalis) Diterpenes for Alzheimer's Disease. Evidence-based Complementary and Alternative Medicine. (2016), 2016. doi: 10.1155/2016/2680409
30. Hać-Szymanczuk, E., A. Cegiełka, E. Lipinska, K. Piwowarek: Application of rosemary for the prolongation of microbial and oxidative stability in mechanically deboned poultry meat from chickens. Italian Journal of Food Science. (2017), 29, 329-342. doi:
31. Hammer, K.A.,C.F. Carson, *Antibacterial and Antifungal Activities of Essential Oils*, in *Lipids and Essential Oils as Antimicrobial Agents*. 2010. p. 255-306. DOI: 10.1002/9780470976623.ch11.
32. Han, J.H., D. Patel, J.E. Kim, S.C. Min: Retardation of listeria monocytogenes growth in mozzarella cheese using antimicrobial sachets containing rosemary oil and thyme oil. Journal of Food Science. (2014), 79, E2272-E2278. doi: 10.1111/1750-3841.12659
33. Hendel, N., E. Napoli, M. Sarri, A. Saija, M. Cristani, A. Nostro, G. Ginestra, G. Ruberto: Essential Oil from Aerial Parts of Wild Algerian Rosemary: Screening of Chemical Composition, Antimicrobial and Antioxidant Activities. Journal of Essential Oil-Bearing Plants. (2019), 22, 1-17. doi: 10.1080/0972060X.2019.1590246
34. Hmiri, S., H. Harhar, M. Rahouti: Antifungal activity of essential oils of two plants containing 1,8-cineole as major component: Myrtus communis and Rosmarinus officinalis. Journal of Materials and Environmental Science. (2015), 6, 2967-2974. doi:
35. Hulánková, R.,G. Bořilová: In vitro combined effect of oregano essential oil and caprylic acid against salmonella serovars, escherichia coli O157:H7, staphylococcus aureus and listeria monocytogenes. Acta Veterinaria Brno. (2011), 80, 343-348. doi: 10.2754/avb201180040343
36. Ivanovic, J., D. Misic, I. Zizovic, M. Ristic: In vitro control of multiplication of some food-associated bacteria by thyme, rosemary and sage isolates. Food Control. (2012), 25, 110-116. doi: 10.1016/j.foodcont.2011.10.019
37. Jadhav, S., V. Gulati, M. Bhave, E.A. Palombo, *Prevalence and control of listeria monocytogenes in food processing environments*, in *Listeria Monocytogenes: Food Sources, Prevalence and Management Strategies*. 2014. p. 167-190.
38. Jalali-Heravi, M., R.S. Moazeni, H. Sereshti: Analysis of Iranian rosemary essential oil: Application of gas chromatography-mass spectrometry combined with chemometrics. Journal of Chromatography A. (2011), 1218, 2569-2576. doi: 10.1016/j.chroma.2011.02.048

39. Kahraman, T., G. Issa, S.S. Altunatmaz, B.B. Kahraman, F. Aksu, A. Aydin, H. Aksu: Effects of oregano essential oil, grapefruit seed extract and their combination on the growth and survival of Salmonella Typhimurium and Listeria monocytogenes in poultry fillets under modified atmosphere packaging. Slovenian Veterinary Research. (2016), 53, 5-12. doi:
40. Kahraman, T., G. Issa, E.B. Bingol, B.B. Kahraman, E. Dumen: Effect of rosemary essential oil and modified-atmosphere packaging (MAP) on meat quality and survival of pathogens in poultry fillets. Brazilian Journal of Microbiology. (2015), 46, 591-599. doi: 10.1590/S1517-838246220131201
41. Kintzios, S.E., *Oregano*, in *Handbook of Herbs and Spices: Second Edition*. 2012. p. 417-436. DOI: 10.1533/9780857095688.417.
42. Kiyanpour, V., A.R. Fakhari, R. Alizadeh, B. Asghari, M. Jalali-Heravi: Multivariate optimization of hydrodistillation-headspace solvent microextraction of thymol and carvacrol from Thymus transcaspicus. Talanta. (2009), 79, 695-699. doi: 10.1016/j.talanta.2009.04.068
43. Leja, K.B.,K. Czaczyk: The industrial potential of herbs and spices - A mini review. Acta Scientiarum Polonorum, Technologia Alimentaria. (2016), 15, 353-365. doi: 10.17306/J.AFS.2016.4.34
44. Miguel, M.G., M.D. Antunes, S.A. Dandlen, *Rosmarinus Officinalis L.: An aromatic plant with interesting biological properties*, in *Spices: Types, Uses and Health Benefits*. 2012. p. 85-112.
45. Millezi, A.F., D.S. Caixeta, D.F. Rossoni, M. das Graças Cardoso, R.H. Piccoli: In vitro antimicrobial properties of plant essential oils thymus vulgaris, cymbopogon citratus and laurus nobilis against five important foodborne pathogens. Ciencia e Tecnologia de Alimentos. (2012), 32, 167-172. doi: 10.1590/S0101-20612012005000021
46. Mitchell, T.C., T.L.M. Stamford, E.L. de Souza, E.O. Lima, E.S. Carmo: Origanum vulgare L. essential oil as inhibitor of potentially toxigenic Aspergilli. Ciencia e Tecnologia de Alimentos. (2010), 30, 755-760. doi: 10.1590/S0101-20612010000300029
47. Montassir, D.E., E. Said, A. Gérald, B. Hafida, T. Moha: Essential oil composition and andmicrobialacdvity of rosmarinus tournefortii de noe., an endemic species in Morocco. Journal of Essential Oil-Bearing Plants. (2010), 13, 336-339. doi: 10.1080/0972060X.2010.10643831
48. Okukawa, M., Y. Yoshizaki, M. Tanaka, S. Yano, Y. Nonomura: Antibacterial activity of the mixed systems containing 1, 2-dodecanediol against Staphylococcus aureus and Staphylococcus epidermidis. Journal of Oleo Science. (2021), 70, 787-797. doi: 10.5650/jos.ess20362
49. Oliveira, J.L.D., E.V.R. Campos, A.E.S. Pereira, T. Pasquoto, R. Lima, R. Grillo, D.J.D. Andrade, F.A.D. Santos, L.F. Fraceto: Zein Nanoparticles as Eco-Friendly Carrier Systems for Botanical Repellents Aiming Sustainable Agriculture. Journal of Agricultural and Food Chemistry. (2018), 66, 1330-1340. doi: 10.1021/acs.jafc.7b05552
50. Ortega-Ramirez, L.A., I. Rodriguez-Garcia, B.A. Silva-Espinoza, J.F. Ayala-Zavala, *Oregano (Origanum spp.) oils*, in *Essential Oils in Food Preservation, Flavor and Safety*. 2016. p. 625-631. DOI: 10.1016/B978-0-12-416641-7.00071-7.
51. Oussaid, S., K. Madani, K. Houali, M. Rendueles, M. Diaz: Optimized microwave-assisted extraction of phenolic compounds from Scirpus holoschoenus and its antipseudomonal efficacy, alone or in combination with Thymus fontanesii essential oil and lactic acid. Food and Bioproducts Processing. (2018), 110, 85-95. doi: 10.1016/j.fbp.2018.04.008
52. Pavli, F., A.A. Argyri, P. Skandamis, G.J. Nychas, C. Tassou, N. Chorianopoulos: Antimicrobial activity of oregano essential oil incorporated in sodium alginate edible films: Control of Listeria monocytogenes and spoilage in ham slices treated with high pressure processing. Materials. (2019), 12. doi: 10.3390/ma12223726
53. Ponce, A., S.I. Roura, M.D.R. Moreira: Essential Oils as Biopreservatives: Different Methods for the Technological Application in Lettuce Leaves. Journal of Food Science. (2011), 76, M34-M40. doi: 10.1111/j.1750-3841.2010.01880.x
54. Regnier, T., S. Combrinck, W. Du Plooy, *Essential Oils and Other Plant Extracts as Food Preservatives*, in *Progress in Food Preservation*. 2012. p. 539-579. DOI: 10.1002/9781119962045.ch26.
55. Rodriguez-Garcia, I., B.A. Silva-Espinoza, L.A. Ortega-Ramirez, J.M. Leyva, M.W. Siddiqui, M.R. Cruz-Valenzuela, G.A. Gonzalez-Aguilar, J.F. Ayala-Zavala: Oregano Essential Oil as an Antimicrobial and Antioxidant Additive in Food Products. Critical Reviews in Food Science and Nutrition. (2016), 56, 1717-1727. doi: 10.1080/10408398.2013.800832
56. Rokaityte, A., G. Zaborskiene, I. Macioniene, I. Rokaitis, D. Sekmokiene: Combined effect of lactic acid, bioactive components and modified atmosphere packaging on the quality of minced meat. Czech Journal of Food Sciences. (2016), 34, 52-60. doi: 10.17221/291/2015-CJFS
57. Rokaityte, A., G. Zaborskiene, S. Orentaite-Gustiene, J. Šiupiniene: Effect of different types of packaging on the quality of minced pork meat with bioactive components and lactic acid. Veterinarija ir Zootechnika. (2016), 74, 48-54. doi:
58. Sandasi, M., C.M. Leonard, A.M. Viljoen: The effect of five common essential oil components on Listeria monocytogenes biofilms. Food Control. (2008), 19, 1070-1075. doi: 10.1016/j.foodcont.2007.11.006
59. Satyal, P., B.L. Murray, R.L. McFeeters, W.N. Setzer: Essential oil characterization of thymus vulgaris from various geographical locations. Foods. (2016), 5, 1-12. doi: 10.3390/foods5040070
60. Souza, N.A.B., E. de Oliveira Lima, D.N. Guedes, F. de Oliveira Pereira, E.L. de Souza, F.B. de Sousa: Efficacy of Origanum essential oils for inhibition of potentially pathogenic fungi. Brazilian Journal of Pharmaceutical Sciences. (2010), 46, 499-508. doi: 10.1590/s1984-82502010000300013
61. Tahri, M., B. Imelouane, H. Amhamdi, M.L. Fauconnier, A. Elbachiri: The chemical compositions and the antioxidant and antimicrobial activities of the essential oil of Rosemary leaves from eastern Morocco. Journal of Materials and Environmental Science. (2015), 6, 666-672. doi:

62. Tawiah, B., W. Badoe, S. Fu: Advances in the development of antimicrobial agents for textiles: The quest for natural products. Review. Fibres and Textiles in Eastern Europe. (2016), 24, 136-149. doi: 10.5604/12303666.1196624
63. Tornuk, F., M.T. Yilmaz, I. Ozturk, O. Sagdic, M. Arici, M.Z. Durak, M. Bayram: Multiple response optimization of the effect of Thyme essential oil against Listeria monocytogenes in ground meat at different times and temperatures. Medycyna Weterynaryjna. (2016), 72, 435-447. doi: 10.21521/mw.5533
64. Van Vuuren, S.,A. Viljoen: Plant-based antimicrobial studies methods and approaches to study the interaction between natural products. Planta Medica. (2011), 77, 1168-1182. doi: 10.1055/s-0030-1250736
65. Van Vuuren, S.F., S. Suliman, A.M. Viljoen: The antimicrobial activity of four commercial essential oils in combination with conventional antimicrobials. Letters in Applied Microbiology. (2009), 48, 440-446. doi: 10.1111/j.1472-765X.2008.02548.x
66. Viuda-Martos, M., A.E.N.G.S. El Gendy, E. Sendra, J. Fernández-López, K.A.A. El Razik, E.A. Omer, J.A. Pérez-Alvarezj: Chemical composition and antioxidant and anti-Listeria activities of essential oils obtained from some Egyptian plants. Journal of Agricultural and Food Chemistry. (2010), 58, 9063-9070. doi: 10.1021/jf101620c
67. Winward, G.P., L.M. Avery, T. Stephenson, B. Jefferson: Essential oils for the disinfection of grey water. Water Research. (2008), 42, 2260-2268. doi: 10.1016/j.watres.2007.12.004
68. Xiang, H., L. Zhang, Z. Yang, F. Chen, X. Zheng, X. Liu: Chemical compositions, antioxidative, antimicrobial, anti-inflammatory and antitumor activities of Curcuma aromatica Salisb. essential oils. Industrial Crops and Products. (2017), 108, 6-16. doi: 10.1016/j.indcrop.2017.05.058

Rakin M., Mojović Lj., Dimitrijević S. **Mihajlovski K**., Šiler-Marinković S., (2007), Investigation of antimicrobial activity of encapsulated essential oils, *Materials Science Forum*, 555, 429-434. (ISSN 0255-5476; IF(2005)=0,399; Materials Science, Multidisciplinary 137/178). https://doi.org/10.4028/www.scientific.net/MSF.555.429

1. Golja, B., B. Šumiga, P. Forte Tavčer: Fragrant finishing of cotton with microcapsules: Comparison between printing and impregnation. Coloration Technology. (2013), 129, 338-346. doi: 10.1111/cote.12044
2. Gulyayev, D.K., Y.I. Yakovleva, P.S. Mashchenko, S.Y. Solodnikov, V.D. Belonogova: The antihypoxic activity of siberian fir essential oil fractions. Khimiya Rastitel'nogo Syr'ya. (2020). 10.14258/JCPRM.2020047321, 273-280. doi: 10.14258/JCPRM.2020047321

KVALITATIVNA OCENA NAUČNIH REZULTATA

3. KVALITET NAUČNIH REZULTATA

3.1 Naučni nivo, značaj i primenljivost rezultata

Dr Katarina Mihajlovski se bavi istraživanjima u oblastima iskorišćenja otpadnih sirovina, poljoprivrednog i industrijskog porekla, za proizvodnju mikrobnih enzima. U okviru ove oblasti kandidat se bavi izolacijom mikroorganizama iz različitih staništa, njihovom karakterizacijom i gajanjem na različitim otpadnim supstratima u cilju proizvodnje mikrobnih enzima kao biološki aktivnih jedinjenja. Poseban interes u naučno istraživačkom radu odnosi se na iskorišćenje otpadnih supstrata, u oviru principa cirkularne energije, kao i na primenu mikrobnih enzima u hidrolizi otpadnih sirovina u cilju proizvodnje biogoriva bioetanola. Osim toga, tokom svog istraživačkog rada, dr Katarina Mihajlovski se bavi proučavanjem i ispitivanjem antioksidativnog potencijala ekstrakata otpadne kafe pre i nakon fermentacije mikroorganizmima, valorizacijom otpadne kafe kao adsorbenta za uspešno uklanjanje boja iz otpadnih vodau kao i ispitivanjem antimikrobnog delovanja različitih tekstilnih vlakana, materijala i supstanci sa širokim spektrom primene u medicini.

U svom dosadašnjem naučno istraživačkom radu (od 2007 godine do sada), objavila je ukupno **35** naučnih radova kategorije M20 od kojih su **6** radova u vrhunskom međunarodnom časopisu izuzetnih vrednosti (M21a) (**4** rada nakon prethodnog izbora u zvanje), **10** radova u vrhunskom međunarodnom časopisu (M21) (**6** radova nakon prethodnog izbora u zvanje), **9** radova u istaknutom međunarodnom časopisu (M22) (**5** radova nakon prethodnog izbora u zvanje), **10** radova u časopisu međunarodnog značaja (M23) (**5** nakon prethodnog izbora u zvanje), **4** saopštenja sa međunarodnog skupa štampanih u celini (M33); **2** rada u vodećem časopisu nacionalnog značaja (M51) (**1** rad nakon prethodnog izbora u zvanje),**7** saopštenja sa međunarodnog skupa štampanih u izvodu (M34); **1** saopštenje sa skupa nacionalnog značaja štampanog u celini (M63); **1** magistarske teze; **1** doktorska disertacija (M70); **1** tehničkog rešenja (M82) i **1** objavljenog patenta na nacionalnom nivou (M94), sa ukupnim zbirom impakt faktora **91,224** od čega je **65,52** nakon prethodnog izbora u zvanje. Prema bazi Scopus, do 26.07.2021. radovi su ukupno citirani **344** puta, odnosno **267** puta, bez autocitata svih autora, što ukazuje na njihov naučni nivo i uticajnost u ovoj istraživačkoj oblasti i potvrđuje njihov visok kvalitet. Od radova koji su objavljeni posle izbora u prethodno zvanje najveći impakt faktor **8,001** ima rad kategorije M21 2.2/5 sa 3 heterocitata gde je dr Katarina Mihajlovski prvi i koresponding autor. U radu kategorije M21 2.2/3 sa impakt faktorom **5,128**, koji ima 7 heterocitata, gde je dr Katarina Mihajlovski takođe prvi i koresponding autor, kandidatkinja je dala značajan doprinos iskorišćenju otpadnih supstrata, proizvodnji mikrobnih enzima, definisanju uslova enzimske hidrolize i fermentacije otpadnim pivskim kvascem za proizvodnju biogoriva bioetanola. Veliki broj puta (**13,** broj heterocitata) citiran je i rad kategorije M21 2.1/1 gde je kandidatkinja dala poseban doprinos u razvoju antimikrobnih lanenih vlakana medicinske namene. Od poslednjeg izbora u zvanje dr Katarina Mihajlovski je koautor jednog tehničkog rešenja koje je Matični odbor za Biotehnologiju i poljoprivredu prihvatio u kategoriji M82. (2.2/27) Pored tehničkog rešenja, kandidatkinja je prvi autor objavljenog patenta na nacionalnom nivou u kategoriji M94. (2.2/28)

3.2 Uticajnost, citiranost i parametri kvaliteta časopisa

U svom dosadašnjem naučno istraživačkom radu dr Katarina Mihajlovski je bila autor/koautor ukupno **54** bibliografske jedinice i to: **35** naučnih radova iz kategorije M20 (od kojih u međunarodnom časopisu časopisu izuzetnih vrednosti (M21a) 6 radova, u vrhunskom međunarodnom časopisu (M21) 10 radova, u istaknutom međunarodnom časopisu (M22) 9 radova i u međunarodnom časopisu (M23) 10 radova); **2** rada objavljena u vrhunskom domaćim časopisima nacionalnog značaja (M51); **4** saopštenja sa međunarodnog skupa štampanih u celini (M33); **7** saopštenja sa međunarodnog skupa štampanih u izvodu (M34); **1** saopštenje sa skupa nacionalnog značaja štampanog u celini (M63); **1** magistarske teze; **1** doktorska disertacija (M70); **1** tehničkog rešenja (M82) i **1** objavljenog patenta na nacionalnom nivou (M94). Jedan rad je objavljen u časopisu sa impakt faktorom većim od 8, tri rada u časopisu sa impakt faktorom većim od 5, 2 rada u časopisu sa impakt faktorom većim od 4, 10 radova u časopisu sa impakt faktorom većim od 3, 6 radova u časopisu sa impakt faktorom većim od 2, 5 radova u časopisu sa impakt faktorom većim od 1 i 8 radova u časopisu sa impakt faktorom manjim od 1. Ukupan zbir impakt faktora objavljenih naučnih radova je **91,224**. Najcitiraniji rad ima 68 heterocitata i pripada kategoriji M21a (Dimitrijević S., **Mihajlovski K.,** Antonović D., A study of the synergistic antilisterial effects of a sub-lethal dose of lactic acid and essential oils from *Thymus vulgaris* L., *Rosmarinus officinalis* L. and *Origanum vulgare* L., (2007), *Food Chemistry*, 104, 774-782. (ISSN 0308-8146; IF(2007)=3,052, Food Science and Technology 4/103; https://doi.org/10.1016/j.foodchem.2006.12.028) prema Scopus bazi podataka na dan 26.07.2021.

Posle izbora u prethodno zvanje, kandidat je autor/koautor **28** bibliografskih jedinica i to: **20** naučnih radova iz kategorije M20 (od kojih u međunarodnom časopisu izuzetnih vrednosti (M21a) 4 rada, u vrhunskom međunarodnom časopisu (M21) 6 radova, u istaknutom međunarodnom časopisu (M22) 5 radova i u međunarodnom časopisu (M23) 5 radova); **1** saopštenja sa međunarodnog skupa štampanih u celini (M33); **4** saopštenja sa međunarodnog skupa štampanih u izvodu (M34); **1** rada objavljena u vrhunskom časopisu nacionalnog značaja (M51); **1** tehničkog rešenja (M82) i **1** objavljenog patenta na nacionalnom nivou (M94). Jedan rad je objavljen u časopisu sa impakt faktorom većim od 8, tri rada u časopisu sa impakt faktorom većim od 5, 2 rada u časopisu sa impakt faktorom većim od 4, 5 radova u časopisu sa impakt faktorom većim od 3, 4 rada u časopisu sa impakt faktorom većim od 2, 4 rada u časopisu sa impakt faktorom većim od 1 i 1 rad u časopisu sa impakt faktorom manjim od 1. Ukupan zbir impakt faktora objavljenih naučnih radova (posle prethodnog izbora u naučnog saradnika) je **65,52.** Najcitiraniji rad iz perioda koji se uzima za evaluaciju pri izboru u zvanje viši naučni saradnik ima **13** heterocitata prema Scopus bazi podataka na dan 26.07.2021. (Lazić B., Pejić B., Kramar, A., Vukčević M., **Mihajlovski K.**, Rusmirović, J., Kostić M., Influence of hemicelluloses and lignin content on structure and sorption properties of flax fibers (*Linum usitatissimum* L.), *Cellulose*, (2017), 25, 697-709. (ISSN 0969-0239, IF(2016)=3.147; Material Science, Textiles 2/24).https://doi.org/10.1007/s10570-017-1575-4

Međunarodni časopisi iz kategorije **M20** u kojima su objavljeni radovi dr Katarine Mihajlovski pre izbora u prethodno zvanje su: ***Food Chemistry*** (**M21a**, IF(2007)=3,052, Food Science and Technology 4/103), ***Carbohydrate Polymers*** (**M21a**, IF(2009)=3.167; Chemistry Applied, 5/63), ***Surface and Coatings Technology*** (**M21**, IF (2013) = 2,199; Material Science, Coatings & Films 4/18), ***Journal Of The Taiwan Institute Of Chemical Engineers*** (**M21**, IF (2014) = 3,00; Engineering, Chemical 19/135), ***RSC Advances*** (**M21**, IF (2014 =3,840; Chemistry, Multidisciplinary 37/157), ***Industrial Crops and Products*** (**M21**, IF(2016)=3,181; Agricultural Engineering 3/14), ***Water, Air and Soil Pollution*** (M22, IF(2014)=1,554; Environmental Sciences 120/223), ***International Biodeterioration & Biodegradation*** (**M22**, IF (2014)=2,131; Biotechnology and Applied Microbiology 81/163), ***Cellulose Chemistry and Technology*** (**M22**, IF (2016)=0,763; Materials Science, Paper and Wood 11/21), ***Chemical Industry*** (**M23**, IF(2016)=0,364, Engineering Chemical 125/132).

Međunarodni časopisi iz kategorije **M20** u kojima su objavljeni radovi dr Katarine Mihajlovski posle izbora u prethodno zvanje a do pisanja Izveštaja za izbor u zvanje viši naučni saradnik su: ***Cellulose*** (**M21a**, IF(2020)=5,044; Material Science, Textiles 2/25), ***Fuel*** (**M21a,** IF(2018)=5,128; Energy and Fuels 20/103), ***Holzforschung*** (**M21a**, IF(2018)=2,579; Materials Science, Paper and Wood 2/21), ***Fibers and Polymers*** (**M21**, IF(2020)=2,153; Material Science, Textiles 6/25), ***Journal of the Serbian Chemical Society*** (M 23, IF(2020)=1,240; Chemistry, Multidisciplinary 141/178), ***Renewable Energy*** (**M21**, IF(2020)=8,001; Energy and Fuels 16/114), ***Microbial Pathogenesis*** (M22, IF(2018)=2,581; Microbiology 79/133), ***Materials*** (M22, IF(2019)=3,057; Materials Science, Multidisciplinary 132/314), ***International Journal of Environmental Science and Technology*** (**M22**, IF(2019)=2,540; Environmental Sciences 125/265), ***Waste and Biomass Valorization*** (**M22**, IF(2020)=3,703; Environmental Sciences 108/274), ***Environmental Technology and Innovation*** (**M21**, IF(2020)=5,263; Biotechnology and Applied Microbiology 31/159), ***Rhizosphere*** (**M21**, IF(2020)=3,129; Plant Science 69/235),

Biomass Conversion and Biorefinery (**M21**, IF(2020)=4,987; Engineering Chemical 31/143, ***Chemistry Select*** (**M23**, IF(2019)=1,811; Chemistry, Multidisciplinary 111/177).

Citiranost radova prema Scopus bazi podataka (na dan 26.07.2021.) iznosi ukupno **344** (sa autocitatima), odnosno **267 (**bez autocitata svih autora).

Tabela 1. Citiranost radova prema Scopus bazi podataka na dan 26.07.2021. (bez autocitata)

Rad	Kategorija	Godina publikovanja	Citiranost bez autocitata
2.1/1	M21a	2007	68
2.1/11	M23	2007	2
2.1/2	M21a	2009	33
2.1/12	M23	2012	1
2.1/16	M33	2013	8
2.1/13	M23	2013	3
2.1/3	M21	2013	19
2.1/8	M22	2014	7
2.1/7	M22	2014	8
2.1/4	M21	2014	37
2.1/14	M23	2014	7
2.1/9	M22	2015	7
2.1/15	M23	2016	5
2.1/10	M22	2016	4
2.1/6	M21	2016	11
2.2/16	M23	2017	2
2.2/1	M21a	2018	13
2.2/11	M22	2018	5
2.2/2	M21	2018	7
2.2/17	M23	2019	2
2.2/13	M22	2019	5
2.2/12	M22	2019	3
2.2/5	M21	2020	3
2.2/4	M21	2020	1
2.2/14	M22	2020	6

Radovi kandidatkinje su citirani međunarodnim časopisima sa SCI liste iz različitih oblasti: *Chemistry* (16,5%), *Materials Science* (15,7%), *Agricultural and Biological Sciences* (10,8%), *Chemical Engineering* (10,8%), *Biochemistry, Genetics and Molecular Biology* (10,7%), *Environmental Sciences* (7,8%), *Immunology and Microbiology* (5,5%), *Engineering* (5,3%), *Energy* (4,4%), *Physics and Astronomy* (3,1%) and *Other* (9,4%) (*Pharmacology, Toxicology and Pharmaceutics, Economics, Econometrics and Finance, Medicine, Multidisciplinary, Veterinary, Business, Management and Accounting, Earth and Planetary Sciences, Health Professions, Neuroscience and Social Sciences*). (Prilog 13)

Radovi kandidatkinje su citirani u respektabilnim međunarodnim časopisima **kategorije M21a:** Cellulose IF=5,044, Carbohydrate Polymers IF=9,381, Fuel IF=6,609; Bioresource Technology IF=9,642, Food Chemistry IF=7,514, Journal Of Agricultural And Food Chemistry IF=5,279, Biotechnology Advances IF=14,277, Chemical Engineering Journal IF=13,273, Composites: Part B: Engineering IF=9,078, Critical Reviews in Food Science and Nutrition IF=11,176, Environmental Pollution IF=8,071, Food Hydrocolloids IF=9,147, Food Research International IF=6,475, Phytochemistry Reviews IF=5,374; Journal Of Natural Fibers IF=5,323,
kategorije M21: Renewable Energy IF= 8,001, Microorganisms IF=4,128, Frontiers In Microbiology IF=5,640, International Journal Of Biological Macromolecules IF=6,953, Fibers and Polymers IF=2,153, Industrial Crops and Products IF=5, Journal Of The Taiwan Institute Of Chemical Engineers IF=5,876, Biotechnology for Biofuels IF=6,040, LWT IF=4.952, Bioresources IF=1,409, Food Control IF=5,548, International Journal Of Food Microbiology IF=5,277, Applied Microbiology And Biotechnology IF=4,813, Journal Of Molecular Liquids IF=6,165, Applied Surface Science IF=6,707, Food and Bioproducts Processing IF=4,481, Polymers IF=4,329, Antibiotics IF=4,639, Bioorganic Chemistry IF=5,275, Advanced Powder Technology IF=4,833, Chemosphere IF=7,086, European Polymer Journal IF=4,598, European Journal of Pharmaceutics and Biopharmaceutics IF=5,571, Journal of Cleaner Production IF=9,297, Journal of Colloid and Interface Science IF= 8,128, Journal of Environmental Chemical Engineering IF=5,909, Journal of Environmental Management IF=6,789, Journal of Industrial and Engineering Chemistry IF=6,064, Journal of Materials Chemistry. B IF=6,331, Reactive and Functional Polymers IF=3,975, Process Safety and Environmental Protection IF=6,158, Microbial Cell Factories IF=5,328, Planta Medica IF=3,352, Materials Science and Engineering. C: Materials for Biological Applications IF=7,328, Journal of Physics. D: Applied Physics IF=3,207;
kategorije M22:
Molecules IF=4,411, Desalination and Water Treatment IF=1,254, RSC Advances IF=3.840, Environmental Science and Pollution Research IF=4,223, Waste And Biomass Valorization IF=3,703, Materials IF=3,057, Journal Of Food Science IF=3,167, Biological Control IF=2,754, Chemical Engineering Communications IF=1,802, Plos One IF=2,740, Journal of Polymers and the Environment IF=2,572, Chemical Engineering Research and Design IF=3,350, Chemistry And Biodiversity IF=2,039, Chinese Journal of Chemical Engineering IF=2,627, AMB Express IF=2,499, ACS Biomaterials Science and Engineering IF=4,152, PeerJ IF=2,739, Microbiological Research IF=3,970, Industrial and Engineering Chemistry Research IF=3,573, International Journal of Environmental Science and Technology IF=2,540, International Journal of Food Science and Technology IF=2,773, Journal of Applied Microbiology IF=3,066, Journal of Food Science and Technology IF=1,946, Langmuir IF=3,557, Journal of Vinyl and Additive Technology IF=5,550, Journal of Sol-gel Science and Technology IF=2,008, Journal of Applied Microbiologu IF=3,066, Journal of Materials Science IF=3, Royal Society Open Science IF=2,646,
kategorije M23:
Brazilian Journal of Microbiology M23 IF=2,428, Journal Of The Serbian Chemical Society IF=1,097, Hemijska Industrija IF=0,407, Archives Of Microbiology IF=1,884, Water Science And Technology IF=1,638, Biocatalysis and Biotransformation IF=1,863, Biotechnology Letters IF=1,977, Journal of Essential Oil Bearing Plants IF=0,824, Brazilian Archives Of Biology and Technology IF=0,579, Arabian Journal For Science And Engineering IF=1,711, Brazilian Journal Of Pharmaceutical Sciences IF=0,714, Bulletin Of The Korean Chemical Society IF=0,611, Colloid and Polymer Science IF=1,53

6, Acta Veterinaria Brno IF=0,566, Chemical Research in Chinese Universities IF=1,0693, Open Life Sciences IF=0,690, European Journal of Integrative Medicine IF=0,974, Food Science and Biotechnology IF=1,513, Food Technology and Biotechnology IF=2,115, Fibres and Textiles in Eastern Europe IF=0,775, Evidence-based Complementary and Alternative Medicine IF=1,813, Global Nest Journal IF=0,983, International Journal of Clothing Science and Technology IF=0,589, Italian Journal of Food Science IF=0,855, Journal of Essential Oil Research IF=1,148, Journal of Food Biochemistry IF=1,662, Preparative Biochemistry and Biotechnology IF=1,415, Polymer Science. Series A IF=0,968, Medycyna Weterynaryjna IF=0,281, Materials Technology IF=1,738, Materials Research Express IF=1,929, Letters in Applied Microbiology IF=2,173, Kafkas Universitesi Veteriner Fakultesi Dergisi IF=0,489, Journal of Polymer Materials IF=0,320, Journal of Optoelectronics and Advanced Materials IF=0,631, Journal of Oleo Science IF=1,304, Journal of Nanomaterials IF=1,980, Ciencia e Tecnologia de Alimentos IF=1,443
Od ukupnog broja časopisa iz kategorije M20 u kojima su radovi kandidatkinje citirani, 11,97% pripada kategoriji M21a, 31,0% kategoriji M21, 23,93% kategoriji M22 i 32,47 % kategoriji M23.

Slika 1. Rasprostranjenost citiranosti kandidata u svetu (Izvor: Publons)

3.3 Ocena samostalnosti kandidatkinje

U toku dosadašnjeg dosadašnjeg naučno-istraživačkog rada Dr Katarina Mihajlovski pokazala visok stepen samostalnosti u idejama, kreiranju i realizaciji eksperimenata, interpretaciji rezultata, statističkoj obradi rezultata, optimizaciji procesa, kao i u osmišljavanju i pisanju naučnih publikacija. Uspešno je pokazala sposobnost u ispitivanjima u novim naučnim oblastima i razvoju saradnje u zemlji i inostranstvu. Dr Katarina Mihajlovski je pokazala kreativnost i originalnost

kroz multidisciplinarne oblasti istraživanja. Dobijeni rezultati se objavljuju u visokorangiranim međunarodnim časopisima.

U svom dosadašnjem naučno istraživačkom radu dr Katarina Mihajlovski je bila autor/koautor ukupno **54** bibliografske jedinice. Od **35** naučnih radova iz kategorije **M20** kandidatkinja je **prvi autor na 10** (od kojih: 1 rad M21a, 4 rada M21, 2 rada M22 i 3 rada M23) radova, **drugi autor na 4** (od kojih: 1 rad M21a, 1 rad M22, 2 rada M23) rada, **pretposlednji autor na 4** (od kojih: 1 rad M21, 1 rad M22, 2 rada M23) rada, **poslednji autor na 1** (od kojih: 1 rad M22) radu, **koresponding autor na 10** (od kojih 1 rad M21a, 4 rada M21, 2 rada M22 i 3 rada M23) radova. Od 2 rada objavljena u domaćim časopisima **(M51)** kandidatkinja je **poslednji autor na 1 i pretposlednji autor na 1 radu**. Na **1 saopštenju štampanom u celini (M33)** kandidatkinja je **prvi** autor, na **2 saopštenja štampana u izvodu (M34)** kandidatkinja je **prvi** autor dok je na **jednom međunarodnom saopštenju štampanom u celini (M33**) kandidatkinja **poslednji** autor. Na **1 tehničkom rešenju kateforije M82** kandidatkinja je **pretposlednji** autor dok je na **1 objavljenom patentu na** nacionalnom nivou kategorije M94 kandidatkinja **prvi i koresponding autor**. Kandidatkinja je autor jedne magistarske teze i jedne doktorske disertacije (M70).

Prikazana raspodela učešća potvrđuje da je kandidatkinja aktivno učestvovala kako u osmišljavanju i izvođenju eksperimenata, tako i u pisanju i objavljivanju naučnih radova, saopštenja sa skupova i tehničkih rešenja. Najveći deo objavljenih radova je proistekao iz anganžmana na projektima finansiranim od strane Ministarstva prosvete, nauke i tehnološkog razvoja Republike Srbije. Iz spiska referenci vidi se da su najsnažniji pravci angažovanja u oblasti naučnoistraživačkog rada ostvareni pre svega u iskorišćenju otpadnih sirovina, izolaciji novih mikroorganizama, optimizaciji procesa proizvodnje biološki vrednih proizvoda i biogoriva bioetanola.

Dr Katarina Mihajlovski **je rukovodilac međunarodnog projekta bilateralne saradnje** sa Republikom Hrvatskom pod nazivom "*Primena lignocelulozne biomase za dobijanje biogoriva*" Ministarstva prosvete, nauke i tehnološkog razvoja Republike Srbije (broj projekta 337-22-205/2019-09/35) za period 2019-2021 godine. (Prilog 4)

Od oktobra 2020. godine dr Katarina Mihajlovski **je rukovodilac projekta**, u oviru programa Dokaz koncepta finansiranog od strane Fonda za Inovacionu delatnost Republike Srbije, pod brojem **PoC5634** i nazivom "*Green biocatalyst for decolorization and degradation of azo dyes from industrial wastewater: a white-rot fungal laccase immobilized on recycled agro-industrial waste*". (Prilog 5)

Dr Katarina Mihajlovski je uspostavila saradnju sa Prof. Dr Maja Leitgeb sa Univerziteta u Mariboru, Slovenija, Fakultet za hemiju i hemijsko inženjerstvo, u okviru Erasmus+ programa studentske razmene za 2020/2021 godinu (odobrene su 2 mobilnosti za studente doktorskih studija za zimski semestar 2020/2021 godine). (Prilog 7) Takođe, dr Katarina Mihajlovski je od 2019. godine član COST Akcije u okviru radne grupe WG7 pod nazivom "*SOURDOugh biotechnology network towards novel, healthier and sustainable food and bIoproCesseS*" (CA18101)". (Prilog 6)

Potvrda samostalnosti dr Katarine Mihajlovski se ogleda i u učestvovanju u radu Komisija na Tehnološko-metalurškom fakultetu Univerziteta u Beogradu. Uz saglasnost Nastavno-naučnog veća Tehnološko-metalurškog fakulteta, dr Katarine Mihajlovski je imenovana za člana Komisije za ocenu i odbranu doktorske disertacije kandidata Slađane Davidović, master inženjera, za člana Komisije za ocenu i odbranu doktorske disertacije kandidata Matee Korice, broj indeksa 4006/2013, za člana Komisije za podnošenje izveštaja – referata o ispunjenosti uslova za izbor u zvanje Istraživač pripravnik kandidata Jelene Milošević, diplomiranog inženjera, za člana Komisije

za podnošenje izveštaja – referata o ispunjenosti uslova za izbor u zvanje Naučni saradnik kandidata dr Slađane Davidović, dipl. biohemičara, za člana Komisije za odbranu master rada kandidata Đurđine Simić i za člana Komisije za odbranu master rada kandidata Andreja Kukučke.(Odluke, Prilog 8)
Takođe, kandidatkinja je učestvovala je u izradi završnih radova, diplomskih radova koji su urađeni u okviru projekta TR31035 i odbranjeni na Tehnološko-metalurškom fakultetu Univerziteta u Beogradu. (Zahvalnice, Prilog 9)
Uz saglasnost Nastavno-naučnog veća Tehnološko-metalurškog fakulteta, dr Katarina Mihajlovski je kao saradnik u nastavi angažovana na izvođenju vežbi i to:
Od školske 2004/2005. godine, Katarina Mihajlovski je u čestvovala je u izvođenju vežbi na osnovnim studijama iz sledećih predmeta: *Ekološka mikrobiologija* (zimski semestar školske 2004/2005, 2005/2006, 2006/2007, 2007/2008 i 2008/2009), *Tehnologija mikrobnih metabolita* (letnji i zimski semestar 2004/2005 i 2008/2009) na Katedri za Biohemijsko inženjerstvo i biotehnologiju.
Uz saglasnost Nastavno-naučnog veća Tehnološko-metalurškog fakulteta, dr Katarina Mihajlovski je angažovana na izvođenju vežbi na master akademskim studijama iz predmeta *Mikrobiologija i mikrobiološka analitika hrane* za školsku 2017/2018 godinu (odluka broj 35/499 od 30.11.2017.), 2018/2019 (odluka broj 35/444 od 01.11.2018.), 2019/2020, (odluka broj 35/368 od 31.10.2019.), 2020/2021 (odluka broj 35/369 od 24.12.2020.) Za potrebe akreditacije studijskih programa Tehnološko-metalurškog fakulteta, dr Katarina Mihajlovski ima saglasnost za angažovanje prilikom izvođenja vežbi iz predmeta *Mikrobiologija i mikrobiološka analitika hrane* u zimskom semestru školske 2021/2022 godine (odluka broj 35/154 od 28. 05.2020.). (Prilog 10)

Veliki broj urađenih recenzija **29** u časopisima kategorije M20 (24) u prethodnom periodu takođe potvrđuje samostalnost kandidatkinje, (Prilog 11). Takođe, dr Katarina Mihajlovski aktivno učestvuje u promociji fakulteta na sajmovima u Beogradu, kao i promociji Tehnološko-metalurškog fakulteta srednjoškolcima kroz tehnološku studiju slučaja "Tech Case Study" kao i direktnim posetama srednjim školama.

3.4 Angažovanost u formiranju naučnih kadrova

Pored naučno-istraživačkog rada, dr Katarina Mihajlovski je dala značajan doprinos u formiranju naučnih kadrova učestvovanjem u izvođenju nastave, pripremi materijala za nastavu, realizaciji završnih, diplomskih, master i doktorskih radova.
Uz saglasnost Nastavno-naučnog veća Tehnološko-metalurškog fakulteta, dr Katarina Mihajlovski je angažovana na izvodjenju laboratorijskih vežbi na osnovnim studijama iz sledećih predmeta: *Ekološka mikrobiologija* (zimski semestar školske 2004/2005, 2005/2006, 2006/2007, 2007/2008 i 2008/2009), *Tehnologija mikrobnih metabolita* (letnji i zimski semestar 2004/2005 i 2008/2009) na Katedri za Biohemijsko inženjerstvo i biotehnologiju.
Uz saglasnost Nastavno-naučnog veća Tehnološko-metalurškog fakulteta, dr Katarina Mihajlovski je angažovana na izvođenju vežbi na master studijama iz predmeta *Mikrobiologija i mikrobiološka analitika hrane* za školsku 2017/2018 godinu (odluka broj 35/499 od 30.11.2017.), 2018/2019 (odluka broj 35/444 od 01.11.2018.), 2019/2020, (odluka broj 35/368 od 31.10.2019.), 2020/2021 (odluka broj 5/369 od 24.12.2020.) Za potrebe akreditacije studijskih programa Tehnološko-metalurškog fakulteta, dr Katarina Mihajlovski ima saglasnost za angažovanje prilikom izvođenja

vežbi iz predmeta *Mikrobiologija i mikrobiološka analitika hrane* u zimskom semestru školske 2021/2022 godine (odluka broj 35/154 od 28.05.2020.). (Prilog 10)
Tokom svog dosadašnjeg rada dr Katarina Mihajlovski je učestvovala u izradi više završnih radova, master radova, naučnih i nekoliko doktorskih radova koji su rađeni na Tehnološko-metalurškom fakultetu u Beogardu. (Zahvalnice, Prilog 9). Od 2019. godine kandidatkinja je bila član dve Komisije za ocenu i odbranu doktorske disertacije kao i 2 master rada koji se realizovani na Tehnološko-metalurškom fakultetu u Beogradu. Takođe, dr Katarina Mihajlovski je bila i član Komisije za izbor u zvanja (Prilog 8). Od 2019. godine odlukom Tehnološko-metalurškog fakulteta bila je član komisije za popis imovine na Katedri za Biohemijsko inženjerstvo i biotehnologiju. (Prilog 12)

Potvrda o učestvovanju u formiranju naučnih kadrova dr Katarine Mihajlovski je i učestvovanje u radu Komisija na Tehnološko-metalurškom fakultetu Univerziteta u Beogardu i to:

Komisija za ocenu i odbranu doktorske disertacije (Prilog 8)

1. Prema odluci Nastavno-naučnog veća Tehnološko-metalurškog fakulteta br. 35/282 od 29.08.2019 godine, dr Katarina Mihajlovski je imenovana za člana Komisije za ocenu i odbranu doktorske disertacije kandidata Slađane Davidović, master inženjera, pod nazivom "Primena dekstrana iz bakterija mlečne kiseline za sintezu nanočestica srebra u proizvodnji jestivih filmova".
2. Prema odluci Nastavno-naučnog veća Tehnološko-metalurškog fakulteta br. 35/246 od 03.09.2020 godine dr Katarina Mihajlovski je imenovana za člana Komisije za ocenu i odbranu doktorske disertacije kandidata Matee Korice, broj indeksa 4006/2013, pod nazivom, Dobijanje bioaktivnih nanostrukturnih materijala na bazi celuloze i hitozana".

Komisija za podnošenje izveštaja- referata o ispunjenosti uslova za izbor u zvanje (Prilog 8)

3. Prema Odluci Nastavno-naučnog veća Tehnološko-metalurškog fakulteta br. 35/290 od 19.09.2019 godine, dr Katarina Mihajlovski je imenovana za člana Komisije za podnošenje izveštaja – referata o ispunjenosti uslova za izbor u zvanje Istraživač pripravnik kandidata Jelene Milošević, diplomiranog inženjera.
4. Prema Odluci Nastavno-naučnog veća Tehnološko-metalurškog fakulteta br.35/398 od 24.12. 2019 godine, dr Katarina Mihajlovski je imenovana za člana Komisije za podnošenje izveštaja – referata o ispunjenosti uslova za izbor u zvanje Naučni saradnik kandidata dr Slađane Davidović, dipl. biohemičara.

Komisija za odbranu master rada (Prilog 8)

5. Prema Odluci Nastavno-naučnog veća Tehnološkog fakulteta br. 17/582 od 05.11.2020 godine, dr Katarina Mihajlovski je imenovana za člana Komisije za odbranu master rada kandidata Đurđine Simić, broj indeksa 2018/3150.
6. Prema Odluci Nastavno-naučnog veća Tehnološkog fakulteta br. 17/717 od 10.11.2020 godine, dr Katarina Mihajlovski je imenovana za člana Komisije za odbranu master rada kandidata Andreja Kukučke, broj indeksa 2018/3132.

3.5 Normiranje broja poena prema broju koautora

Prema kriterijumima Pravilnika o sticanju istraživačkih i naučnih zvanja ("Službeni glasnik RS", broj 159 od 30. decembra 2020), normiranju podleže 1 rad kategorije M21a (rad 2.2/3) (8,33 poena ima umesto 10 poena) i 2 rada kategorije M22 (rad 2.2/12 i 2.2/15) (4,17 poena umesto 5 poena i 3,47 poena umesto 5 poena), što je uzeto u obzir pri kvantitativnom iskazivanju naučno-istraživačkih rezultata kandidatkinje. U tabeli 2 su prikazani brojevi radova u periodu od 2007-2021 godine.

Tabela 2. Efektivni broj radova i broj radova normiran na osnovu broja koautora

Rad	**Broj/Od prethodnog izbora**	**Vrednost**	**Ukupno/Od prethodnog izbora**
M21a, više od 7 autora	6/4	10/8,33*	58,33/38,33
M21, do 7 autora	10/6	8/8	80/48
M22, više od 7 autora	9/5	5/4,17*/3,57*	42,74/22,74
M23, do 7 autora	10/5	3	30/15
M33, do 7 autora	5/1	1	5/1
M34, do 7 autora	7/4	0,5	3,5/2
M51, do 7 autora	2/1	2	4/2
M63, do 7 autora	1/0	0,5	0,5/0
M82, do 7 autora	1/1	6	6/6
M94, do 7 autora	1/1	7	7/7
Ukupno			**237,07/142,07**

*U skladu sa pravilnikom MPNTR normirano na broj autora po formuli K/(1+0,2(n-7)), n>7;
*U kategoriji M21a, 1 rad je normiran, umesto 10 poena ima 8,33 poena;
*U kategoriji M22, 2 rada su normirana, umesto 5 poena jedan rad ima 4,17 poena dok drugi rad ima 3,57 poena.

3.6 Rukovođenje projektima, potprojektima i projektnim zadacima

Dr Katarina Mihajlovski **je rukovodilac međunarodnog projekta bilateralne saradnje** sa Republikom Hrvatskom pod nazivom "*Primena lignocelulozne biomase za dobijanje biogoriva*" Ministarstva prosvete, nauke i tehnološkog razvoja Republike Srbije (broj projekta 337-22-205/2019-09/35) za period 2019-2021 godine. (Prilog 4)
Od oktobra 2020. godine dr Katarina Mihajlovski **je rukovodilac projekta**, u oviru programa **Dokaz koncepta** finansiranog od strane Fonda za Inovacionu delatnost Republike Srbije, pod brojem **PoC5634** i nazivom "*Green biocatalyst for decolorization and degradation of azo dyes*

from industrial wastewater: a white-rot fungal laccase immobilized on recycled agro-industrial waste". (Prilog 5)

3.7 Doprinos kandidata u realizaciji radova u naučnim centrima u zemlji i inostranstvu

Prosečan broj autora po radu za period posle izbora u prethodno zvanje iznosi **5,77** i to: za M21a prosek autora je 6,25; za M21 prosek autora je 5,67; za M22 prosek autora je 7,0; za M33 prosek autora je 6; za M34 prosek autora je 4,25; za M51 prosek autora je 7; za M82 prosek autora je 6 i za M94 prosek autora je 4.

Tabela 3. Doprinos realizaciji koautorskih radova posle izbora u prethodno zvanje (period od 2016-2021): pozicije i uloga na listi autora za objavljene radove, saopštenja, tehnička rešenja i patent

Pozicija autora	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**Uku-pno**	**Procenat (%)**	**Korespodenci-ja br.radova-(%)**
M21a	1			2			1	**4**	14,29	1- (25,0%)
M21		2	2		2			**6**	21,43	2-(33,33%)
M22	1		1	2		1		**5**	17,86	1- (20,0%)
M23	2	2			1			**5**	17,86	2- (40,0%)
M33				1				**1**	3,57	0
M34	2		1				1	**4**	14,29	2- (50,0%)
M51							1	**1**	3,57	0
M82					1			**1**	3,57	0
M94	1							**1**	3,57	1- (100%)
Ukupno	**7**	**4**	**4**	**5**	**4**	**1**	**3**	**28**	**100,0**	**9- (32,14%)**
Proce-nat (%)	**25**	**14,29**	**14,29**	**17,86**	**14,29**	**3,57**	**10,71**	**100,0**		

U svom dosadašnjem radu dr Katarina Mihajlovski ostvaruje značajnu saradnju sa sledećim institucijama u zemlji: Institut za primenu nuklerane energije (INEP) Univerziteta u Beogradu (rad 2.1/9), Visoka zdravstveno-sanitarna škola strukovnih studija (VISAN) u Beogardu (rad 2.1/14 i 2.1/23), Institut za zemljište (rad 2.2/7, 2.2/9, 2.2/13 i 2.2/14), Visoka zdravstvena škola strukovnih studija u Beogradu (rad 2.2/8, 2.2/18 i 2.2/27), Institut za nuklearne nauke Vinča u Beogradu (rad 2.2/16 i 2.2/17).

4. OSTALI POKAZATELJI USPEHA U NAUČNOM RADU

4.1 Patenti

Dr Katarina Mihajlovski je autor jednog patenta objavljenog na nacionalnom nivou kategorije M 94.
https://www.zis.gov.rs/upload/documents/pdf_sr/pdf/glasnik/GIS_2019/

4.2 Recenzije naučnih radova (Prilog 11)

Dr Katarina Mihajlovski je recenzent 15 međunarodnih časopisa iz kategorije M20, 3 međunarodna časopisa sa SCI liste bez impakt faktora i 1 međunarodne konferencije, za koje je uradila ukupno 29 recenzija nakon izbora u prethodno zvanje. Prikazani su časopisi, njihovi impakt faktori za 2020 godinu i recenzirani radovi nakon izbora u prethodno zvanje:

*Časopisi iz kategorije **M21a***

1. Environmental Pollution (IF=8,071), (1 recenzija), (Manuscript number: ENVPOL_2019_4423)

*Časopisi iz kategorije **M21***

2. Industrial Crops and Products (IF=5,645); (1 recenzija), (Manuscript Number: INDCRO-D-18-01837)
3. Journal of Environmental Chemical Engineering (IF=5,909), (6 recenzija), (Manuscript Number: JECE-D-19-01105; Manuscript Number: JECE-D-17-01485; Manuscript Number: JECE-D-17-00183; Manuscript Number: JECE-D-17-00188; Manuscript Number: JECE-D-17-00441; Manuscript Number: JECE-D-20-04654R1)
4. Biomass Conversion and Biorefinery (IF=4,987), (3 recenzije), (Manuscript number: BCAB-D-20-00921; Manuscript number: BCAB-D-21-00009; Manuscript number: BCAB-D-21-00377)

*Časopisi iz kategorije **M22***

5. Applied Biochemistry and Biotechnology (IF=2,926); (1 recenzija), (Manuscript Number: ABAB-D-19-01029)
6. Bioprocess and Biosystem Engineering (IF=3,210); (1 recenzija); (Manuscript number: BPBSE-20-0410)
7. Environmental Science and Pollution Research (IF= 4,223), (1 recenzija); (Manuscript number: ESPR-D-20-01183)
8. Waste and Biomass Valorization (IF=3,703), (1 recenzija), (Manuscript number: WAVE-D-19-00486)
9. Sustainable Chemistry and Pharmacy (IF=4,508) (1 recenzija), (Manuscript Number: SPC 2019 30)

*Časopisi iz kategorije **M23***

10. Acta Amazonica (IF=1,126), (2 recenzije), (Manuscript number:AA-2016-0151; Manuscript number: AA-2016-0237)7
11. Archives of Biological Sciences (IF=0,956), (1 recenzija)
12. Biocatalysis and Biotransformation (IF= 2,181), (1 recenzija), (Manuscript number: GBAB-20-1582)
13. Brazilian Archives of Biology and Technology (IF=0.797), (1 recenzija), (Manuscript ID: BABT-2020-0518)
14. Journal of Basic Microbiology (IF=2,281), (3 recenzije), (Manuscript Number: jobm.201800540; Manuscript ID: jobm.202000188; Manuscript ID:jobm.202100310)
15. Journal of the Serbian Chemical Society, (IF=1,240), (2 recenzije), (Manuscript Number: 8288-4538-2-RV; Manuscript Number: 7676-41644-2-RV)

Međunarodni časopisi bez IF

16. International Journal of Sustainable Energy- (1 recenzija), (Manuscript Number: Gsol-2021-0051)
17. Journal of Genetic Engineering and Biotechnology - (1 recenzija), (Manuscript number: JGEB-D-18-00119)
18. Anti Infective Agents (1 recenzija), (Manuscript number: BMS-AIA-2018-39)

Medjunarodna konferencija

19. 2018 International Conference on Energy Engineering and Environmental Protection November 19-21, 2018 in Sanya, China http://www.iceeep.org/2018 (1 recenzija), (Paper ID: EEEP24396)

[*] Kao dokaz prilozene su potvrde o recenziranju

5. KVANTITATIVNA OCENA NAUČNIH REZULTATA

Pregled ukupnih koeficijenata naučne kompetentnosti dr Katarine Mihajlovski posle izbora u naučno zvanje naučni saradnik je prikazan u Tabeli 4.

Tabela 4. Pregled broja radova i koeficijenata naučne kompetentnosti ostvarenih posle izbora u prethodno zvanje (period 2016-2021. godine)

Grupa	**Naziv grupe**	**Vrsta rezultata**	**Oznaka rezultata**	**Vred. koeficij.**	**Broj radova**	**Σ**
M20	Radovi objavljeni u naučnim časopisima međunarodnog značaja	Rad u međunarodnom časopisu izuzetnih vrednosti	M21a	10 (8,33*)	3+1*	38,33
		Rad u vrhunskom međunarodnom časopisu	M21	8	6	48
		Rad u istaknutom međunarodnom časopisu	M22	5 (4,17*/ 3,57*)	3+2*	22,74
		Rad u međunarodnom časopisu	M23	3	5	15
M30	Zbornici međunarodnih skupova	Saopštenje sa međunarodnog skupa štampano u celini	M33	1	1	1
		Saopštenje sa međunarodnog skupa štampano u izvodu	M34	4	0,5	2
M50	Radovi u časopisima nacionalnog značaja	Rad u vrhunskom časopisu nacionalnog značaja	M51	2	1	2
M80	Tehnička rešenja	Novo tehničko rešenje (metoda) primenjeno na nacionalnom nivou	M82	6	1	6

M90	Patenti	Objavljen patent na nacionalnom nivou	M94	7	1	7
Ukupno						**142,07**

*U skladu sa pravilnikom MPNTR normirano na broj autora po formuli K/(1+0,2(n-7)), n>7;
*U kategoriji M21a, 1 rad je normiran, umesto 10 poena ima 8,33 poena;
*U kategoriji M22, 2 rada su normiran, umesto 5 poena jedan rad ima 4,17 poena a drugi rad umesto 5 poena ima 3,57 poena.

Tabela 5. Minimalni kvantitativni zahtevi za sticanje naučnog zvanja viši naučni saradnik za tehničko-tehnološke i biotehničke nauke

Diferencijalni uslov- od prvog izbora u prethodno zvanje do izbora u zvanje viši naučni saradnik	**Nephodno**	**Ostvareno**
Ukupno	50	**142,07**
Obavezni (1): M10+M20+M31+M32+M33+M41+M42+M51+M80+M90+M100	40	**138,07**
Obavezni (2): M21+M22+M23+M81-85+M90-96+M101-103+M108	22	**137,07**
M21+M22+M23	11	**124,07**
M81-85+M90-96+M101-103+M108	5	**13**

6. ZAKLJUČAK

Na osnovu uvida u priloženu dokumentaciju i ostvarenih kvantitativnih i kvalitativnih rezultata kandidatkinje, Komisija za utvrđivanje naučne kompetentnosti konstatuje da rezultati naučno-istraživačkog rada Dr Katarine Mihajlovski predstavljaju značajan naučni doprinos u oblasti iskorišćenja otpadnih sirovina za proizvodnju mikrobnih enzima,izolaciji mikroorganizama iz različitih staništa, hidrolizi lignocelulozne biomase, dobijanju biogoriva bioetanola, oslanjajući se na principe cirkularne ekonomije kao i primeni i razvoju metoda za ispitivanje antimikrobnog delovanja različitih tekstilnih vlakana, materijala i supstanci sa širokim spektrom primene u medicini.

U svom dosadašnjem radu dr Katarina Mihajlovski je bila autor/koautor ukupno **54** bibliografske jedinica i to: **37** naučnih radova, **13** saopštenja, **1** tehničkog rešenja, **1** patenta, **1** magistarske disertacije i **1** doktorska disertacija. Ukupan zbir impakt faktora objavljenih naučnih radova je **91,224,** citirani su **344** puta odnosno **267** puta (bez autocitata svih autora), a Hiršov indeks (h-index) je 9, odnosno 8 bez autocitata svih autora, što ukazuje na njihovu veliku uticajnost.

Posle izbora u prethodno zvanje, kandidat je autor/koautor **28** bibliografskih jedinica i to: **20** naučnih radova iz kategorije M20 (od kojih u međunarodnom časopisu izuzetnih vrednosti (M21a) 4 rada, u vrhunskom međunarodnom časopisu (M21) 6 radova, u istaknutom međunarodnom časopisu (M22) 5 radova i u međunarodnom časopisu (M23) 5 radova); **1** saopštenja sa međunarodnog skupa štampanih u celini (M33); **4** saopštenja sa međunarodnog skupa štampanih u izvodu (M34); **1** rada objavljena u vrhunskom časopisu nacionalnog značaja (M51); **1** tehničkog rešenja (M82) i **1** objavljenog patenta na nacionalnom nivou (M94). Rezultati naučno-istraživačkog rada dr Katarine Mihajlovskipredstavljaju značajan naučni doprinos u oblastima valorizacije otpadne lignocelulozne biomase za dobijanje biolsški aktivnih jedinjenja i proizvoda sa dodatom vrednošću, oslanjajući se na principe cirkularne ekonomije, kao i primeni i razvoju metoda za ispitivanje antimikrobnog delovanja različitih tekstilnih vlakana, materijala i supstanci sa širokim spektrom primene u medicini.

Dr Katarina Mihajlovski je pokazala izuzetan nivo samostalnosti i kreativnosti u organizaciji naučnog rada, planiranju i realizaciji eksperimenata, analizi i obradi rezultata, kao i u pisanju radova. Pored angažovanja u realizaciji nacionalnog projekta, dr Katarina Mihajlovski je trenutno angažovana na realizaciji još 1 projekta Fonda za inovacionu delatnost gde je rukovodilac projekta kao i 1 međunarodnog projekta bilateralne saradnje gde je takođe rukovodilac projekta. Kandidatkinja je ostvarala i značajan doprinos u formiranju naučnih kadrova kao i radu sa studentima Tehnološko-metalurškog fakulteta. Kroz učešće u realizaciji tema završnih, diplomskih, master radova i doktorskih disertacija, kandidatkinja je pokazala sposobnost samostalnog organizovanja naučnog rada. Takođe, dr Katarina Mihajlovski se istakla u okviru različitih naučnih aktivnosti: rukovodilac projekta, učesnik Komisija za za ocenu i odbranu 2 doktorske teze, angažovanjem u formiranju naučnih kadrova, učešće u komisijama za sticanje zvanja, učešće u razvoju domaćih i međunarodnih saradnji, organizacija kao recenzent respektabilnih međunarodnih časopisa. Na osnovu detaljne analize dosadašnjeg rada i ostvarenih rezultata Komisija je zaključila da rad dr Katarine Mihajlovski predstavlja značajan naučni doprinos i da je kandidatkinja afirmisani istraživač u oblasti biotehnologije i poljoprivrede, koju uspešno unapređuje primenjujući naučna saznanja, i prenoseći nova saznanja mlađim naučnim i

stručnim kadrovima. U periodu u kom se bira, kandidatkinja ima dovoljan broj objavljenih naučnih radova i ispunjava kriterijume za sticanje zvanja Viši naučni saradnik prema aktuelnom Pravilniku o sticanju istraživačkih i naučnih zvanja ("Službeni glasnik RS", broj 159 od 30. decembra 2020.).

Imajući u vidu originalnost istraživanja i značajan doprinos naučnim saznanjima, kao i kvalitet publikovanih rezultata i sposobnost za organizaciju naučnoistraživačkog rada, Komisija smatra da su postignuti rezultati naučno-istraživačkog rada kandidatkinje značajni i da **dr Katarina Mihajlovski** ispunjava sve uslove za sticanje naučnog zvanja **VIŠI NAUČNI SARADNIK** u oblasti Tehničko-tehnoloških i biotehničkih nauka u skladu sa Pravilnikom o sticanju istraživačkih i naučnih zvanja ("Službeni glasnik RS", broj 159 od 30. decembra 2020.). Komisija predlaže Nastavno-naučnom veću Tehnološko-metalurškog fakulteta u Beogradu da ovaj izveštaj prihvati i isti uputi nadležnoj Komisiji Ministarstvu prosvete, nauke i tehnološkog razvoja Republike Srbije na konačno usvajanje.

U Beogradu, 31.08.2021. **ČLANOVI KOMISIJE:**

Dr Suzana Dimitrijević-Branković, redovni profesor

_____

Univerzitet u Beogradu, Tehnološko-metalurški fakultet
Naučna oblast Biohemojsko inženjerstvo i biotehnologija

Dr Dejan Bezbradica, redovni profesor

_____

Univerzitet u Beogradu, Tehnološko-metalurški fakultet
Naučna oblast Biohemojsko inženjerstvo i biotehnologija

Dr Vesna Lazić, viši naučni saradnik

_____

Univerzitet u Beogradu, Institut za nuklearne nauke Vinča
Naučna oblast Hemija