

**2021**

1. Demkiv O., Stasyuk N., Serkiz R., Gayda G., Nisnevitch M., Gonchar M. Peroxidase-like metal-based nanozymes: synthesis, catalytic properties, and analytical application // *Appl. Sci.* – 2021. – 11, 777 (14 p.). <https://doi.org/10.3390/app11020777>. (IF=2.679). Q2.
2. Gayda G.Z., Demkiv O.M., Gurianov Y., Serkiz R.Y., Klepach H.M., Gonchar M.V., Nisnevitch M. “Green” Prussian Blue Analogues as Peroxidase Mimetics for Amperometric Sensing and Biosensing // *Biosensors.* – 2021. – V. 11, 193. <https://doi.org/10.3390/bios11060193> (IF=5.519). Q1.
3. Klepach H.M., Zakalskiy A.E., Zakalska O.M., Gayda G.Z., Smutok O.V., Gonchar M.V. Alcohol Oxidase from the Methylophilic Yeast *Ogataea polymorpha*: Isolation, Purification, and Bioanalytical Application // *Methods Mol. Biol. In Book: Flavins and Flavoproteins.* – 2021. – 2280. – P. 231-248. ISSN 1064-3745 and 1940-6029 (el. version); ISBN 978-1-0716-1286-6 (eBook). [10.1007/978-1-0716-1286-6\\_15](https://doi.org/10.1007/978-1-0716-1286-6_15).
4. Smutok O., Kavetskiy T., Prokopiv T., Serkiz R., Wojnarowska-Nowak R., Šauša O., Novák I., Berek D., Melman A., Gonchar M. New micro/nanocomposite with peroxidase-like activity in construction of oxidases based amperometric biosensors for ethanol and glucose analysis // *Anal. Chim. Acta.* – 2021. – V. 1143. – P. 201-209. <https://doi.org/10.1016/j.aca.2020.11.052>. (IF = 6.558). Q1.
5. Smutok O., Kavetskiy T., Gonchar M., Katz E. Microbial L- and D-Lactate Selective Oxidoreductases as a Very Prospective but Still Uncommon Tool in Commercial Biosensors // *ChemElectroChem.* – 2021. – V. 8, P. 1–8. [doi.org/10.1002/celec.202101149](https://doi.org/10.1002/celec.202101149) (IF=4.590). Q1.
6. Smutok O., Dmytruk K., Kavetskiy T., Sibirny A., Gonchar M. Flavocytochrome b2 of the Methylophilic Yeast *Ogataea polymorpha*: Construction of Overproducers, Purification, and Bioanalytical Application // *Methods Mol. Biol. In Book: Flavins and Flavoproteins.* – 2021. – 2280. – P. 249-260. ISSN 1064-3745: and 1940-6029 (el. version); ISBN 978-1-0716-1286-6 (eBook). DOI: [10.1007/978-1-0716-1286-6\\_16](https://doi.org/10.1007/978-1-0716-1286-6_16).
7. Stasyuk N., Gayda G., Demkiv O., Darmohray L., Gonchar M., Nisnevitch M. Amperometric biosensors for L-arginine determination based on L-arginine oxidase and peroxidase-like nanozymes // *Appl. Sci.* – 2021. – 11(15), 7024 <https://doi.org/10.3390/app11157024> (IF = 2.679) Q2.
8. Stasyuk N.Ye., Gayda G.Z., Zakalskiy A.E., Fayura L.R., Zakalska O.M., Sibirny A.A., Nisnevitch M., Gonchar M.V. Amperometric biosensors for L-arginine and creatinine assay based on recombinant deiminases and ammonium-sensitive Cu/Zn(Hg) S nanoparticles // *Talanta.* – 2022. – V. 238, 122996, <https://doi.org/10.1016/j.talanta.2021.122996>; available online 22 October 2021 (IF=6.057). Q1.
9. Demkiv O., Stasyuk N., Gayda G., Gonchar M. Highly sensitive amperometric sensor based on laccase-mimicking metal-based hybrid nanozymes for adrenaline analysis in pharmaceuticals // *Catalysts.* – 2021. – V. 11 (12), 1510; <https://doi.org/10.3390/catal11121510>. (IF=4.146). Q2.

**2020**

1. Kavetskiy T., Kukhazh Y., Zubrytska K., Smutok O., Demkiv O., Gonchar M., Šauša O., Švajdlenková H., Kasetaitė S., Ostrauskaite J., Boev V., Ilcheva V., Petkova T. Controlling the network properties of polymer matrixes for improvement of amperometric enzyme biosensors: Contribution of positron annihilation // *Acta Physica Polonica A.* - 2020.- V. 137. - P. 246-249. (IF = 0.545). DOI: [10.12693/APhysPolA.137.246](https://doi.org/10.12693/APhysPolA.137.246).
2. Kavetskiy T., Demkiv O., Smutok O., Maťko I., Švajdlenková H., Šauša O., Novák I., Berek D., Čechová K., Pecz M., Nykolaishyn-Dytso O., Wojnarowska-Nowak R., Broda D., Gonchar M. Microporous carbon fibers as electroconductive immobilization matrixes: Effect of their structure on operational parameters of laccase-based amperometric biosensor // *Material Sciences and Engineering C.* - 2020. - V. 109. - 110570. (IF = 4.959). <https://doi.org/10.1016/j.msec.2019.110570>.
3. Zakalskiy A., Stasyuk N., Zakalska O., Boretsky Y., Gonchar M. Overexpression and one-step renaturation-purification of the tagged creatinine deiminase of *Corynebacterium glutamicum* in *Escherichia coli* cells // *Cell Biol. Intern.* - 2020. - V. 44(5). - P. 1204-1211. (IF = 2.127). doi: [10.1002/cbin.11320](https://doi.org/10.1002/cbin.11320).
4. Demkiv O.M., Gayda G.Z., Broda D., Gonchar M.V. Extracellular laccase from *Monilia fructicola*: isolation, primary characterization and application // *Cell Biol. Intern.* - 2020. (IF = 2.127). <https://doi.org/10.1002/cbin.11316>.
5. Stasyuk N., Smutok O., Demkiv O., Prokopiv T., Gayda G., Nisnevitch M., Gonchar M. Synthesis, Catalytic Properties and Application in Biosensors of Nanozymes and Electronanocatalysts: A Review // *Sensors.* – 2020. – V. 20. – 4509 (42 p.). (IF = 3.275). doi: [10.3390/s20164509](https://doi.org/10.3390/s20164509).
6. Gayda G.Z., Demkiv O.M., Gurianov Y., Serkiz R.Ya., Gonchar M.V., Nisnevitch M. “Green” nanozymes: synthesis, characterization and application in amperometric (bio)sensors // *Proceedings.* – 2020. – 60. - P. 58-74. doi: [10.3390/IECB2020-07072](https://doi.org/10.3390/IECB2020-07072).
7. Smutok O., Kavetskiy T., Prokopiv T., Serkiz R., Wojnarowska-Nowak R., Šauša O., Novák I., Berek

- D., Melman A., Gonchar M. New micro/nanocomposite with peroxidase-like activity in construction of oxidases based amperometric biosensors for ethanol and glucose analysis // *Analytica Chimica Acta*. - 2021. - V. 1143. - P. 201-209. (IF = 5.990). <https://doi.org/10.1016/j.aca.2020.11.052>.
8. Demkiv O., Stasyuk N., Serkiz R., Gayda G., Nisnevitch M., Gonchar M. Peroxidase-like metal-based nanozymes: synthesis, catalytic properties, and analytical application // *Appl. Sci.* - 2021. - 11, 777 (14 p.). <https://doi.org/10.3390/app11020777>. (IF=2.474).

## 2019

9. Zakalskiy A., Stasyuk N., Gonchar M. Creatinine Deiminase: Characterization, Using in Enzymatic Creatinine Assay, and Production of the Enzyme // *Current Protein & Peptide Science* - 2019. - V. 20, N 5. - P. 465-470 (IF = 2.696). DOI: 10.2174/1389203720666181114111731.
10. Gayda G.Z., Demkiv O.M., Stasyuk N.Ye., Serkiz R.Y., Gonchar M.V., Nisnevitch M. Metallic nanoparticles obtained via "green" synthesis as a platform for biosensor construction // *Appl. Sci.* - 2019. - V.9. - P. 720-735. DOI: 10.3390/app9040720 (IF=2.217).
11. Kavetskiy T., Smutok O., Demkiv O., Kasetaitė S., Ostrauskaite J., Švajdlenková H., Šauša O., Zubrytska K., Hoivanovych N., Gonchar M. Dependence of operational parameters of laccase-based biosensors on structure of photocross-linked polymers as holding matrixes // *European Polymer Journal*. - 2019. - V. 115. - P. 391-398 (IF = 3.621). <https://doi.org/10.1016/j.eurpolymj.2019.03.056>.
12. Kavetskiy T.S., Stasyuk N., Smutok O.V., Demkiv O., Kukhazh Y., Hoivanovych N., Boev V.I., Ilcheva V.G., Petkova T., Gonchar M. Improvement of amperometric laccase biosensor using enzyme-immobilized gold nanoparticles coupling with ureasil polymer as a host matrix // *Gold Bulletin*. - 2019. - V. 52. - P. 79-85 (IF = 2.279). DOI:10.1007/s13404-019-00255-z.
13. Smutok O., Karkovska M., Prokopiv T., Kavetskiy T., Sibirnyj W., Gonchar M. D-lactate-selective amperometric biosensor based on the mitochondrial fraction of *Ogataea (Hansenula) polymorpha* recombinant cells // *Yeast*. - 2019. - V. 36, N 5. - P. 341-348 (IF = 2.395). DOI: 10.1002/yea.3372.
14. Stasyuk N.Ye., Gayda G.Z., Zakalskiy A.E., Zakalska O.M., Serkiz R.Y., Gonchar M.V. Amperometric biosensors based on oxidases and Pt/Ru nanoparticles as artificial peroxidase // *Food Chemistry*. - 2019. - V. 285. - P. 213-220 (IF = 5.399). <https://doi.org/10.1016/j.foodchem.2019.01.117>.
15. Gayda G.Z., Demkiv O.M., Klepach H.M., Gonchar M.V., Nisnevitch M. Effective Technologies for Isolating Yeast Oxidoreductases of Analytical Importance // In Book: *Non-conventional Yeasts: from Basic Research to Application* (Ed. A. Sibirny). - Springer Nature Switzerland AG, 2019. - P. 119-151. ISBN 978-3-030-21109-7; <https://doi.org/10.1007/978-3-030-21110-3>.

## 2018

16. Stasyuk N., Gayda G., Zakalskiy A., Zakalska O., Errachid A., Gonchar M. Highly selective apo-arginase based method for sensitive enzymatic assay of manganese (II) and cobalt (II) ions // *Spectrochim. Acta Part A: Molecular and Biomolecular Spectroscopy*. - 2018. - V. 193. - P. 349-356 (IF = 2.88).
17. Kavetskiy T., Smutok O., Gonchar M., Sausa O., Kukhazh Y., Svajdlenkova H., Petkova T., Boev V., Ilcheva V. Ureasil-Based Polymer Matrices As Sensitive Layers for the Construction of Amperometric Biosensors / In the Book: *Advanced Nanotechnologies for Detection and Defence against CBRN Agents (NATO Science for Peace and Security Series B Physics and Biophysics)*. - Chapter 30. - Springer, 2018. - P. 309-316.

## 2017

18. Gonchar M., Smutok O., Karkovska M., Stasyuk N. Yeast-based biosensors for clinical diagnostics and food control // In the Book *"Biotechnology of Yeasts and Filamentous Fungi"* (Ed. A.A. Sibirny). - Springer, 2017. - P. 392-400.
19. Gayda G., Gonchar M., Sibirny A. Yeast-based systems for environmental control // In the Book *"Biotechnology of Yeasts and Filamentous Fungi"* (Ed. A.A. Sibirny). - Springer, 2017. - P. 373-386.
20. Smutok O., Karkovska M., Serkiz Ya., Vus B., Čenas N., Gonchar M. Development of a new mediatorless biosensor based on flavocytochrome b2 immobilized onto gold nanolayer for non-invasive L-lactate analysis of human liquids // *Sensor & Actuators B*. - 2017. - V. 250. - P. 469-475, DOI: /10.1016/j.snb.2017.04.192) (IF = 5.401).
21. Demkiv O., Smutok O., Gonchar M., Nisnevitch M. Reagentless amperometric formaldehyde-selective chemosensor based on using platinumized gold electrode // *Materials*. - 2017. - V. 10, N. 5. - P. 503 (1-11), DOI: 10.3390/ma10050503 (IF = 2.728).
22. Kavetskiy T., Šauša O., Čechová K., Švajdlenková H., Maťko I., Petkova T., Boev V., Ilcheva V., Smutok O., Kukhazh Y., Gonchar M. Network properties of ureasil-based polymer matrixes for construction of amperometric biosensors as probed by PALS and swelling experiments // *Acta Physica Polonica A*. - 2017. - V. 132. - P. 1515-1519. (IF = 0.545). DOI: 10.12693/APhysPolA.132.1515.
23. Kavetskiy T., Smutok O., Gonchar M., Demkiv O., Klepach H., Kukhazh Y., Šauša O., Petkova T., Boev V., Ilcheva V., Petkov P., Stepanov A.L. Laccase-based functional biosensors with host organic-inorganic ureasil-based polymer matrix // *J. Appl. Polymer Sc.* - 2017. - V. 134, Nr 36. - P. 45278 (1-7), DOI: 10.1002/app.45278 (IF = 1.866).

24. Stasyuk N., Gayda G., Yepremyan H., Gonchar M. Simultaneous fluorometric arginase/urease-based assay of L-arginine, urea and ammonium // *Spectrochimica Acta. Part A.* – 2017 – V. 170. – P. 184-190 (IF = 2.653).
25. Stepien A.E., Zebrowski J., Piszczyk L., Boyko V.V., Riabov S.V., Dmitrieva T., Bornitskiy V.I., Gonchar M., Wojnarowska-Nowak R., Ryszkowska J. Assessment of the impact of bacteria *Pseudomonas denitrificans*, *Pseudomonas fluorescens*, *Bacillus subtilis* and yeast *Yarrowia lipolytica* on commercial poly(ether urethanes) // *Polymer Testing.* – 2017. – V. 63. - P. 484-493 (<https://doi.org/10.1016/j.polymertesting.2017.08.038>) (IF = 2.464).
26. Zhybak M.T., Fayura L.Y., Boretsky Y.R., Gonchar M.V., Sibirny A.A., Dempsey E., Turner A.P.F. Amperometric L-arginine biosensor based on a novel recombinant arginine deiminase // *Microchim. Acta.* – 2017. – V. 184, Nr 8. – P. 2679–2686. (<https://doi.org/10.1007/s00604-017-2290-4>) (IF = 4.580).
- June 2022