

Department of Analytical Biotechnology: Publications 2024

1. Kráľovič D.P., Cifraničová K., Švajdlenková H., Tóthová D., Šauša O., Kalinay P., Kavetsky T., Ostrauskaite J., Smutok O., Gonchar M., Soloviev V., Kiv A. Effect of aromatic rings in AESO-VDM biopolymers on the local free volume and diffusion properties of polymer matrix // **J. Polymers Environ.** – 2024. – V. 32. – P. 2336–2349. <https://doi.org/10.1007/s10924-023-03097-1> (IF=5.300). Q1.
2. Stasyuk N., Gayda G., Nogala W., Demkiv O., Fayura L., Sibirny A., Gonchar M. Ammonia nanochelators in conjunction with arginine-sensitive enzymes in amperometric biosensors for arginine assay // **Microchim. Acta.** – 2024. - 191:47. [doi: 10.1007/s00604-023-06114-1](https://doi.org/10.1007/s00604-023-06114-1). (IF=6.408). Q1.
3. Demkiv O., Nogala W., Stasyuk N., Klepach H., Danysh T., Gonchar M. Highly sensitive amperometric sensors based on laccase-mimetic nanozymes for the detection of dopamine // **RCS Advances.** – 2024. – V. 14. – P. 5472-5478. [DOI: 10.1039/d3ra07587g](https://doi.org/10.1039/d3ra07587g). (IF=4.036). Q2.
4. Kavetsky T., Smutok O., Goździuk-Gontarz M., Zgardzińska B., Kukhazh Y., Zubrytska K., Hoivanovych N., Šauša O., Demkiv O., Stasyuk N., Gonchar M., Ostrauskaite J., Kiv A., Katz E. Impact of chemical composition of soybean oil and vanillin-based photocross-linked polymers on parameters of electrochemical biosensors // **Microchem. J.** - V. 201, 110618. <https://doi.org/10.1016/j.microc.2024.110618>. (IF=5.304). Q1
5. Stasyuk N., Zakalskiy A., Nogala W., Holdynski M., Gawinkowski S., Zakalska O., Demkiv O., Salyha Y., Gonchar M. Genetically engineered yeast cells enriched with nanocomposites containing a natural enzyme and nanozyme for the construction of microbial sensors // **Electrochimica Acta.** – 2024. – V. 497, 144605. <https://doi.org/10.1016/j.electacta.2024.144605>. (IF=5.50). Q1
6. Kaniewska K., Mackiewicz M., Smutok O., Gonchar M., Katz E., Karbarz M. Enzymatically triggered drug release from microgels controlled by glucose concentration // **ACS Biomaterials Science & Engineering.** – 2024. – V. 10 (10). - P. 6415-6424. [DOI: 10.1021/acsbiomaterials.4c01721](https://doi.org/10.1021/acsbiomaterials.4c01721) (IF=5.40). Q1.
7. Kausaite-Minkstimiene A., Kaminskas A., Gayda G., Ramanaviciene A. Towards a Self-Powered Amperometric Glucose Biosensor Based on a Single-Enzyme Biofuel Cell // **Biosensors.** – 2024. – V. 14, 138. <https://doi.org/10.3390/bios14030138>. (IF=4.90). Q1
8. Demkiv O., Nogala W., Stasyuk N., Holdynski M., Dimcheva N., Danysh T., Asztemborska M., Gonchar M. Laccase mimetics as sensing elements for amperometric assay of 5-Hydroxyindoleacetic acid in urine // **Bioelectrochemistry.** – 2024. – V. 161. 108839. <https://doi.org/10.1016/j.bioelechem.2024.108839> (IF=4.80). Q2.
9. Stasyuk N., Zakalskiy A., Nogala W., Holdynski M., Demkiv O., Gonchar M. Genetically engineered bacterial cells enriched with creatinine deiminase and N-

methyldihydroxyacetone-sensitive bionanocomposites for self-powered creatinine-selective biosensors // **Sensors and Actuators B: Chem.** – 2024 (available online 22 November 2024, 136971). <https://doi.org/10.1016/j.snb.2024.136971> (IF=8.00). Q1.

10. Gayda G., Demkiv O., Stasyuk N., Boretsky Y., Gonchar M., Nisnevitch M. Peroxidase-like nanoparticles of noble metals stimulate increasing sensitivity of flavocytochrome *b₂*-based L-lactate biosensors // **Biosensors.** – 2024. – V. 14,. <https://doi.org/10.3390/bios14110562>. (IF=4.90). Q1.

11. Demkiv O. M., Stasyuk N. Y., Grynchyshyn N. M., Klepach H. M., Gonchar M. V. Nanoparticles of Prussian blue analogues as peroxidase mimetics // **Biopolymers and Cell.** - 2024. - V. 40. N 2. - P 96–108. <http://dx.doi.org/10.7124/bc.000AB0>. (Scopus).

12. Kavetsky T., Kukhazh Y., Hoivanovych N., Pankiv L., Nykolaishyn O., Mushynska O., Zubrytska O., Demkiv O., Dyachok D., Vinkovskaya A., Kiv A. Про кореляцію сіткових властивостей полімерних матриць із параметрами електрохімічних біосенсорів // **Acta Carpathica.** – 2024 . - V. 1. - 105-116. <https://doi.org/10.32782/2450-8640.2024.1.11>.