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Maribor, 23rd November 2020

Editor of Acta Chimica Slovenica

Dear Editor,

We kindly ask you to consider our manuscript entitled »Model electrochemical biosensor for the detection of methanol in aqueous solutions with yeast cells« by Zala Štukovnik, prof. dr. Urban Bren and Martin Rozman for publication in Acta Chimica Slovenica – special issue for 26th Annual Meeting of the Slovenian Chemical Society.

The manuscript is innovative and describes a new type of biosensor, that uses yeast Saccharomyces cerevisiae as the active component on stainless steel surface, that can be optionally modified with WO3 thin film. Developed biosensor device can detect presence of methanol which is due to reaction of yeast and detachment from electrode surface. Presented model of biosensor serves as a proof-of-concept for other biosensors that use live material such as human tissue cells and can be used in environment monitoring or clinical diagnostics. Different electrochemical and microscopical techniques were used to investigate behavior and operational parameters of assembled biosensor devices.

The manuscript, or its contents, has not been published previously by any of the authors and is not under consideration for publication in another journal at the time of submission.

We suggest the following referees, who are experts in some (or all) topics covered within our work:

Milorad Tomić, PhD Professor University of East Sarajevo Technical faculty of Zvornik Karakaj b.b. 75400 Zvornik, Bosnia and Herzegovina

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Field of expertise: Electrochemistry, Materials science,

- V. M. Maksimović Lj. J. Pavlović M. G. Pavlović M. V. Tomić, Characterization of copper powder particles obtained by electrodeposition as function of different current densities, J Appl Electrochem (2009) 39:2545–2552 https://doi.org/10.1007/s10800-009-9950-y
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Field of expertise: Materials science, Thin films

 N.G. Chorianopoulos, D.S. Tsoukleris, E.Z. Panagou, P. Falaras, G.J.E. Nychas. Use of titanium dioxide (TiO2) photocatalysts as alternative means for Listeria monocytogenes biofilm disinfection in food processing, Food Microbiology, 28 (2011) 164-170. https://doi.org/10.1016/j.fm.2010.07.025

Han, C., Doepke, A., Cho, W., Likodimos, V., de la Cruz, A.A., Back, T., Heineman, W.R., Halsall, H.B., Shanov, V.N., Schulz, M.J., Falaras, P. and Dionysiou, D.D. (2013). A Multiwalled-Carbon-Nanotube-Based Biosensor for Monitoring Microcystin-LR in Sources of Drinking Water Supplies. Adv. Funct. Mater., 23: 1807-1816.
https://doi.org/10.1002/adfm.201201920

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Field of expertise: Electrochemistry, Thin films

- D. Raptis, A. K. Seferlis, V. Mylona, C. Politis, P. Lianos, Electrochemical hydrogen and electricity production by using anodes made of commercial aluminum, International Journal of Hydrogen Energy 44 (3), 1359-1365, 2019, https://doi.org/10.1016/j.ijhydene.2018.11.202
- V. Bekiari, P. Judeinstein, P. Lianos, A sensitive fluorescent sensor of lanthanide ions, Journal of luminescence 104 (1-2), 13-15, 2003, https://doi.org/10.1016/S0022-2313(02)00575-6

Thank you for your careful reading. We await your response once the review process is complete.

Sincerely, Martin Rozman