Mihaela Gheorghiu, PhD. Habil.

(Selected) Publications List

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1. Tudor, D.A.; David, S.; Gheorghiu, M.; Gáspár, S. The Impact of Physical Form on the Biocompatibility of Poly(3-hexylthiophene-2,5-diyl), *Materials* (**2025**), 18(20), 4671; https://doi.org/10.3390/ma18204671
2. David, S.*, Tudor, D.A.*, Ftodiev, A.I., Bala, C., Gheorghiu, M.*, A Concise Review of the Control and Assessment of Magnetic Affinity Particle Assembly for Live Cell Analyses: State of the Art and Challenges *Materials* (**2025)**, *18*(10), 2264; https://doi.org/10.3390/ma18102264
3. Vasilescu A., Gáspár S., Gheorghiu M., Polonschii C., Banciu R.M., David S., Gheorghiu E., Marty J-L. Promising solutions to address the non-specific adsorption in biosensors based on coupled electrochemical-surface plasmon resonance detection, *Chemosensors* (**2025**), 13(3), 92; https://doi.org/10.3390/chemosensors13030092 IF 3.7
4. David S., Cârtoc (Munteanu) R-E, Petcu I-C, Polonschii C., Petran A., Turcu R., Bratu D., Gheorghiu M., Gheorghiu E. In situ detection and viability assessment of target microorganisms *Biosens.Bioelectron.* (**2024**), vol 245, 115821 doi.org/10.1016/j.bios.2023.115821 IF 12.6
5. David, S., R.-E. Munteanu, A-M. Țițoiu, I.-C. Petcu, I.-C. Cernat, C. Leancu, M. Gheorghiu*, and E. Gheorghiu* Direct, Rapid Detection of Pathogens from Urine Samples. *Materials* (**2022**), 15(21), 7640; https://doi.org/10.3390/ma15217640 IF 3.623
6. David S.*, Gheorghiu M.*, Daakour S., Munteanu R.-E., Polonschii C., Gáspár S., Barboiu M., Gheorghiu E. Real Time SPR Assessment of the Structural Changes of Adaptive Dynamic Constitutional Frameworks as a New Route for Sensing, *Materials* (**2022)**, 15(2), 483; https://doi.org/10.3390/ma15020483 IF 3.623
7. C. Polonschii, M. Gheorghiu, S. David, S. Gáspár, S. Melinte, H. Majeed, M. E. Kandel, G. Popescu, E. Gheorghiu High-resolution impedance mapping using electrically activated quantitative phase imaging, *Light Sci Appl* 10, (**2021**) 20 doi.org/10.1038/s41377-020-00461-x IF 17.78
8. M. Gheorghiu, C. Polonschii, O. Popescu, E. Gheorghiu Advanced Optogenetic-Based Biosensing and Related Biomaterials, *Materials* (**2021**), 14, 4151 doi.org/10.3390/ma14154151 IF 3.623
9. Gheorghiu, M.; Stanica, L; Polonschii, C; David, S; Ruckenstein, A; Popescu, O.; Badea, T.; Gheorghiu, E., "Modulation of cellular reactivity for enhanced cell-based biosensing", *Anal. Chem*, (**2020**), 92, 1, 806-814; DOI: 10.1021/acs.analchem.9b03217 IF 6.350
10. Gheorghiu, M.; Stanica L; Ghinia Tegla, M.G; Polonschii, C; Bratu, D; Popescu, O.; Badea, T.; Gheorghiu, E., "Cellular sensing platform with enhanced sensitivity based on optogenetic modulation of cell homeostasis", *Biosens.Bioelectron.*, (**2020)**, Vol 154, 112003 DOI: 10.1016/j.bios.2019.112003 IF 9.518
11. Munteanu R.E., Ye R., Polonschii C., Ruff A, Gheorghiu M, Gheorghiu E, Boukherroub R, Schuhmann W, Melinte S, Gaspar S., "High spatial resolution electrochemical biosensing using reflected light microscopy", *Scientific Reports* (**2019**), 9:15196 IF 4.011

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15. L. Stanica*, M. Gheorghiu*, M. Stan, C. Polonschii, S. David, D. Bratu, A. Dinischiotu, C. T. Supuran, E. Gheorghiu Quantitative assessment of specific carbonic anhydrase inhibitors effect on hypoxic cells using electrical impedance assays *J. Enzyme Inhib Med Chem.* Vol 32, Iss1 (**2017**): 1079-1090 IF 4.29
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22. C. Polonschii, S. David, S. Gaspar, M. Gheorghiu, M. Rosu-Hamzescu, E. Gheorghiu, Complementarity of EIS and SPR to Reveal Specific and Nonspecific Binding When Interrogating a Model Bioaffinity Sensor; Perspective Offered by Plasmonic Based EIS, *Anal. Chem.*, (**2014**), 86 (17), 8553–8562, IF 5.83
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49. C. Polonschii, M. Gheorghiu, S. David, E. Gheorghiu Label-free electro-optical imaging of nanopatterned surfaces and biological cells by electrically actuated quantitative phase microscopy *Proc. of SPIE Vol. 12852*, 1285203, Quantitative Phase Imaging X, edited by Yang Liu, YongKeun Park, (**2024**) 1605-7422 doi: 10.1117/12.3002179

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*the authors have equally contributed; ⇧corresponding author

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