(Selected) Publications List

Book Chapters top international publishing houses

1. M. Gheorghiu, A. Vasilescu *Surface Plasmon Resonance modified graphene oxide surfaces for whole cell based sensing, in Graphene Bioelectronics, chapter 7, A. Tiwari Ed., Elsevier, ISBN 978-0-12-813349-1* **(2017):** 151-171
2. S. David, C. Polonschii, M. Gheorghiu, D. Bratu, E. Gheorghiu, *Biosensing Based on Magneto-Optical Surface Plasmon Resonance, in MiMB series, Biosensors and Biodetection: Methods and Protocols, IInd Ed., A. Rasooly & B. Prickril Eds., Springer, (**2017**) ISBN: 978-1-4939-6846-6*
3. M. Gheorghiu, C. Polonschii, S. David, A. Olaru, E. Gheorghiu, *SPR Bioanalytical platform to appraise the interaction between antimicrobial peptides and lipid membranes, In Optical Nano- and Microsystems for Bioanalytics, Series Chemo- and Biosensors 10 (Series Editor Gerald Urban), Springer (**2012**) pp 183-210*
4. S. Andreescu, M. Gheorghiu, R. E. Ozel, K. Wallace *Methodologies for Toxicity Monitoring and Nanotechnology Risk Assessment, chapter 7 in ACS books series "Biotechnology and Nanotechnology Risk Assessment: Minding and Managing the Potential Threats around Us" Editor(s) Steven Ripp and Theodore B. Henry, Vol 1079 Publication Date (Web) October 18, (**2011**) DOI: 10.1021/bk-2011-1079*
5. E. Gheorghiu, M. Gheorghiu, S. David, C. Polonschii, *"Biodynsensing: sensing through dynamics of hybrid affinity / cellular platforms; towards appraisal of Environmental and Biological Risks of Nanobiotechnology" in Silicon Versus Carbon Fundamental Nanoprocesses, Nanobiotechnology and Risks Assessment, Series: NATO Science for Peace and Security Series, Magarshak, Y.; Kozyrev, S.; Vaseashta, A. K. (Eds.) (**2009**)*

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6. 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
7. 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", *Biosensors Bioelectronics*, (**2019)**, DOI: 10.1016/j.bios.2019.112003 IF 9.518
8. 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
9. R.-E. Munteanu, L. Stanica, M. Gheorghiu, S. Gaspar Measurement of the extracellular pH of adherently growing mammalian cells with high spatial resolution using a voltammetric pH microsensor *Anal. Chem.* 90, 11, (**2018**) 6899-6905 IF 6.350
10. R.-E. Munteanu, L. Stanica, M. Gheorghiu, S. Gaspar Water electrolysis carried out on microelectrodes as way to obtain new insights into the regulation of cytosolic pH *ChemElectroChem* (**2019**) DOI: 10.1002/celc.201801558R2 IF 4.446
11. V. Dinca, D. Zaharie-Butucel, L. Stanica, S. Brajnicov, V. Marascu, A. Bonciu, A. Cristocea, L. Gaman, M. Gheorghiu, A. Vasilescu Functional Micrococcus lysodeikticus

layers deposited by laser technique for the optical sensing of lysozyme, *Colloids and Surfaces B: Biointerfaces*, 168 (**2017**) 10.1016/j.colsurfb.2017.11.058 IF 3.89

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13. L. Stanica*, M. Rosu-Hamzescu*, M. Gheorghiu, M. Stan, L. Antonescu, C. Polonschii, E. Gheorghiu, Electric cell-substrate impedance sensing of cellular effects under hypoxic conditions and carbonic anhydrase inhibition, *Journal of Sensors* **(2017)** Art No: 9290478 DOI: 10.1155/2017/9290478 IF 1.704
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16. A. Vasilescu, C. Purcarea, E. Popa, M. Zamfir, I. Mihai, S. Litescu, S. David, S. Gaspar, M. Gheorghiu, J-L. Marty, Versatile SPR aptasensor for detection of lysozyme dimer in oligomeric and aggregated mixtures, *Biosens. Bioelectron.* (**2016)**, 83, 353-360 IF 7.603
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21. Stanica, L.; Gheorghiu M. Evaluation of cellular dynamics of optogenetically modified cells by electro-optical methods *FEBS J.* (**2014**) Vol: 281 SI 526
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23. S. David, C. Polonschii, M. Gheorghiu, D. Bratu, A. Dobre, E. Gheorghiu, Assessment of pathogenic bacteria using periodic actuation, *Lab Chip*, (**2013**), Aug 21;13(16):3192-8 IF 5.748 – front cover
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37. Stanica, L., Gheorghiu M., Gheorghiu E. Cellular sensing platform design using non-excitable optogenetically modified cells *Eur. Biophys J. Biophys Lett.* (**2015**) Vol: 44, S83
38. M. Gheorghiu, S. David, C. Polonschii, E. Gheorghiu "Sensing at nanoscale via structured interfaces" *Eur Biophys J.* (**2007**) 36 S157
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1. M. Gheorghiu "Carbonic anhydrases: hematologic relevance and a biosensing perspective", *APJBG* (**2020**)
2. A. Vasilescu, S. Gaspar, S. David, M. Gheorghiu, R. Boukherroub, S. Szunerits, "Lysozyme detection with graphene oxide–coated plasmonic interfaces: specificity brought by aptamer and cells for biorecognition", in *Series in Micro and Nanoengineering*, vol 26, (**2018**), "Nanotechnologies and nanomaterials for various applications", editors: Maria Zaharescu, Marius Enachescu and Dan Dascalu, editura Academiei Romane, ISBN: 978-973-27-2954-8, p 88-105
3. High Performance Low Cost Impedance Spectrometer for Biosensing, M. Rosu-Hamzescu, S. Oprea, C. Polonschii, E. Gheorghiu, M. Gheorghiu, *CSCS21 Proceedings*, (2017) DOI: 10.1109/CSCS.2017.16
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*the authors have equally contributed; ⇧corresponding author