

Lista de Lucrari

Subsemnatul **Szilveszter Gaspar**, candidat pentru ocuparea postului de cercetator stiintific gradul II la Centrul International de Biodinamica, sunt autor sau co-autor la urmatoarele lucrari:

- Teza de doctorat (1):

1. Microsisteme bazate pe biosenzori amperometrici pentru detectia compusilor cu importanta biomedicala, Lund, Suedia, 2004; Volumul publicat pe baza tezei de doctorat se identifica prin: ISBN: 91-89627-23-7; ISRN LUTKDH/TKBT—04/1076—SE

- Capitole de carti (3):

1. E. Csöregi, S. Gáspár, M. Niculescu, B. Mattiasson, W. Schuhmann, "Amperometric enzyme-based biosensors for application in food beverage industry" in „Physics and chemistry basis of biotechnology”, Focus on Biotechnology” series, Eds.: M. de Cyper and J.W.M. Bulte, Kluwer Academic Publishers, Dordrecht, The Netherlands, vol. 7, 2001, 105-129.

2. S. Gáspár, I. Bontidean, A. Collins, M. Niculescu, C. Nistor, V. Sukharev, A. D. Ryabov, E. Csöregi, "Design and development of third generation biosensors and their practical application" in "Recent Research Developments in Analytical Chemistry", Ed.: S. G. Pandalai, Transworld Research Network, Kerala, India, 2002, 33-59.

3. S. Gáspár, J. Castillo, E. Csöregi, "Amperometric biosensor-based microsystems for biomedical applications", in "Encyclopedia of Sensors", Ed.: C. A. Grimes, E. C. Dickey, and M.V. Pishko, American Scientific Publishers, CA, USA, 2006, Vol. 1 A-C, 105-118.

- Articole de cercetare (15 din care 14 in reviste cotate ISI):

1. S. Gáspár, L. Muresan, A. Patrut, I. C. Popescu, "PFEW11 - doped polymer film modified electrodes and their electrocatalytic activity for H₂O₂ reduction" Anal. Chim. Acta, 385 (1999) 111 - 117.

2. S. Gáspár, I. C. Popescu, I. G. Gazaryan, A. G. Bautista, I. Y. Sakharov, B. Mattiasson, E. Csöregi, "Biosensors based on novel plant peroxidases; a comparative study", Electrochim. Acta, 2000, 46 (2-3), 255-264.

3. S. Gáspár, K. Habermüller, E. Csöregi, W. Schuhmann, "Hydrogen peroxide sensitive biosensor based on plant peroxidases entrapped in Os-modified polypyrrole films", Sensors and Actuators B, 2001, 72 (1). 63-68.

4. S. Gáspár, H. Zimmerman, E. Csöregi, W. Schuhmann, "Hydrogen peroxide sensitive biosensor based on direct electron transfer from plant peroxidase immobilized on selfassembled monolayer modified gold electrodes", Electroanalysis, 2001, 13 (4), 284-288.

5. S. Gáspár, M. Mosbach, L. Wallman, T. Laurell, E. Csöregi, W. Schuhmann, „A method for the design and study of enzyme microstructures formed by means of a flow-through microdispenser“, Anal. Chem., 2001, 73(17) 4254-4261.

6. I.C. Popescu, D. Gligor, V. Rosca, S. Gáspár, L. Muresan, Electrochemical interfaces for amperometric detection of some analytes interesting for biotechnological and environmental applications, Scientific Bulletin - University "Politehnica" of Bucharest, Series B: Chemistry and Materials Science (2001), 63(3), 7-18

7. J. Castillo, S. Gáspár, I. Sakharov, E. Csöregi, „Bienzyme biosensors for glucose, ethanol and putrescine built on oxidase and sweet potato peroxidase“, Biosens.& Bioelectron., 2003, 18(5-6), 705-714.

8. M. Niculescu, S. Gáspár, A. Schulte, E. Csöregi, W. Schuhmann, "Visualization of micropatterned complex biosensor sensing chemistries by means of scanning electrochemical microscopy", *Biosens. Bioelectron.*, 2004, 19(10), 1175-1184.
9. S. Gáspár, X. Wang, H. Suzuki, E. Csöregi, Amperometric biosensor- based flow-through microdetector for microdialysis applications, *Anal. Chim. Acta*, 2004, 525(1), 75-82.
10. K. Zór, S. Gáspár, M. Hashimoto, H. Suzuki, E. Csöregi, High temporal resolution monitoring of fermentations using an on-line amperometric flow-through microdetector, *Electroanalysis*, 2007, 19(1), 43-48.
11. O.M. Schuvailo, S. Gáspár, A.P. Soldatkin, E. Csöregi, Ultramicrobiosensor for the selective detection of glutamate, *Electroanalysis*, 2007, 19(1), 71-78.
12. M. Hedström, C.E. Grey, S. Gáspár, B. Mattiasson, Miniaturized on-line digestion system for the sequential identification and characterization of protein analytes, *J. Chromatography A*, 2007, 1146(1), 17-22.
13. E. Saatci, M. Nistor, S. Gáspár, E. Csöregi, M. Iscan, Comparison of two glutathione Stransferases used in capacitive biosensors for detection of heavy metals, *International Journal of Environmental Analytical Chemistry*, 2007, 87(10-11), 745-754.
14. L. Muresan, M. Nistor, S. Gáspár, I.C. Popescu, E. Csöregi, Multianalyte monitoring using enzyme microstructures and Scanning Electrochemical Microscopy, *Bioelectrochemistry* (2009), 76(1-2), 81-86.
15. S. Gáspár, C. Niculițe, D. Cucu, I. Marcu, Effect of calcium oxalate on renal cells as revealed by real-time measurement of extracellular oxidative burst, *Biosensors and Bioelectronics* (2010), 25, 1729–1734.

- **Articole de sinteza (2 din care 2 in revista cotate ISI):**

1. S. Gáspár, W. Schuhmann, T. Laurell, E. Csöregi, „Design, visualization, and utilization of enzyme microstructures built on solid surfaces“, *Rev. Anal. Chem.*, 2002, 21(4), 245-266.
2. J. Castillo, S. Gáspár, S. Leth, M. Niculescu, A. Mortari, I. Bontidean, V. Soukharev, S. A. Dorneanu, A. D. Ryabov, E. Csöregi, "Biosensors for life quality: Design, development and applications", *Sensors and Actuators B*, 2004, 102(2), 179-194.

- **Proiecte de cercetare-dezvoltare elaborate si apoi coordonate ca si director (2):**

1. „Effective biosensing platform for rapid detection of environmental pollutants”, 2007-2009, 25 000 EUR, NATO Programme Security through Science (Reintegration grant)
2. „Platforma duala optico-electrochimica pentru monitorizarea simultana intra- si extracelulara a speciilor reactive oxigenate”, 2007-2008, 100 000 RON/an, Grant de tip AT de la Consiliul National al Cercetarii Stiintifice din Invatamantul Superior

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