

# List of publications

András Kiss PhD

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## 1 Peer reviewed publications

1. **András Kiss**, László Kiss, Barna Kovács, Géza Nagy, Air Gap Microcell for Scanning Electrochemical Microscopic Imaging of Carbon Dioxide Output. Model Calculation and Gas Phase SECM Measurements for Estimation of Carbon Dioxide Producing Activity of Microbial Sources, *Electroanalysis* 23, no. 10 (2011): 2320-2326.
2. Ricardo M. Souto, Javier Izquierdo, Juan José Santana, **András Kiss**, Livia Nagy, Géza Nagy. Progress in scanning electrochemical microscopy by coupling potentiometric and amperometric measurement modes, *Current Microscopy Contributions to Advances in Science and Technology, Formatex Research Center, Badajoz* (2012): 1407-1415
3. Livia Nagy, Gergely Gyetvai, **András Kiss**, Ricardo Souto, Javier Izquierdo, Géza Nagy, Speciális célra szolgáló mikroelektrodok kifejlesztése és alkalmazása, *Magyar Kémiai Folyóirat* 119, 2-3. (2013): 104-109.
4. Ricardo M. Souto, **András Kiss**, Javier Izquierdo, Livia Nagy, István Bitter, Géza Nagy, Spatially-resolved imaging of concentration distributions on corroding magnesium-based materials exposed to aqueous environments by SECM, *Electrochemistry Communications* 26 (2013): 25-28.
5. **András Kiss**, Ricardo M. Souto, Géza Nagy, Investigation of Mg/Al alloy sacrificial anode corrosion with Scanning Electrochemical Microscopy, *Periodica Polytechnica Chemical Engineering* 57, no. 1-2 (2013): 11-14.
6. Javier Izquierdo, **András Kiss**, Juan José Santana, Livia Nagy, István Bitter, Hugh S. Isaacs, Géza Nagy, Ricardo M. Souto, Development of  $Mg^{2+}$  ion-selective microelectrodes for potentiometric scanning electrochemical microscopy monitoring of galvanic corrosion processes, *Journal of The Electrochemical Society* 160, no. 9 (2013): C451-C459.
7. **András Kiss**, Géza Nagy, New SECM scanning algorithms for improved potentiometric imaging of circularly symmetric targets, *Electrochimica Acta* 119 (2014): 169-174.
8. Zsuzsanna Öri, **András Kiss**, Anton Alexandru Ciucu, Constantin Mihailciuc, Cristian Dragos Stefanescu, Livia Nagy, Géza Nagy, Sensitivity enhancement of a „bananatrode” biosensor for dopamine based on SECM studies inside its reaction layer, *Sensors and Actuators B: Chemical* 190 (2014): 149-156.

9. **András Kiss**, Géza Nagy, Deconvolution of potentiometric SECM images recorded with high scan rate, *Electrochimica Acta* 163 (2015): 303-309.
10. **András Kiss**, Géza Nagy, Deconvolution in potentiometric SECM, *Electroanalysis* 27, no. 3 (2015): 587-590.
11. Javier Izquierdo, Bibiana M Fernández-Pérez, Dániel Filotás, Zsuzsanna Óri, **András Kiss**, Romen T Martín-Gómez, Lívia Nagy, Géza Nagy, Ricardo M Souto, Imaging of Concentration Distributions and Hydrogen Evolution on Corroding Magnesium Exposed to Aqueous Environments Using Scanning Electrochemical Microscopy, *Electroanalysis* 28, (2016): 2354-2366.
12. A. El Jaouhari, Dániel Filotás, **András Kiss**, M. Laabd, E. A. Bazzaoui, Lívia Nagy, Géza Nagy, A. Albourine, J. I. Martins, R. Wang, SECM investigation of electrochemically synthesized polypyrrole from aqueous medium, *Journal of Applied Electrochemistry* 46 (2016): 1199-1209.
13. **András Kiss**, Dániel Filotás, Ricardo M Souto, Géza Nagy, The effect of electric field on potentiometric Scanning Electrochemical Microscopic imaging, *Electrochemistry Communications* 77 (2017): 138-141.
14. D Filotás, BM Fernández-Pérez, J Izquierdo, **A Kiss**, L Nagy, G Nagy, RM Souto, Improved potentiometric SECM imaging of galvanic corrosion reactions, *Corrosion Science* 129 (2017): 136-145

## 2 Presentations and posters

1. CO<sub>2</sub> Partial Pressure Imaging in Gas Phase with Scanning Electrochemical Microscopy (SECM), Poster, *X. CECE Conference, Pécs, 2010*.
2. Selective Amperometric Determination Of Pyrocatechol and Phenol in Wines with Flow-Injection Analysis, Poster, *X. CECE Conference, Pécs, 2010*.
3. Four-Channel Enzyme Biosensor for Determination of Phenols in Wine, Poster, *X. CECE Conference, Pécs, 2010*.
4. Development of a CO<sub>2</sub> microcell, and its application as measuring tip in Scanning Electrochemical Microscope. Scanning in gas phase over biological samples, Presentation, *XXXIV. Szegedi Kémiai Előadói Napok, Szeged, 2011*.
5. Investigation of Mg/Al alloy sacrificial anode corrosion with Scanning Electrochemical Microscopy, Poster, *Chemical Engineering Workshop '12, Veszprém, 2012*.
6. Investigation of galvanic corrosion of the Fe-Mg galvanic pair with Scanning Electrochemical Microscope, Poster, *Chemical Sensors Workshop '12, Pécs, 2012*.
7. Fabrication of a new, solid contact Mg<sup>2+</sup> ion-selective electrode, and its application in Scanning Electrochemical Microscopic corrosion studies, Presentation, *1st Doctoral Workshop on Natural Sciences, Pécs, 2012*.

8. A new, solid contact  $\text{Mg}^{2+}$  ion-selective electrode as measuring tip for Scanning Electrochemical Microscope in corrosion studies, Presentation, *János Szentágothai Memorial Conference and Student Competition, Pécs, October 29-30, 2012.*
9. New insights in the corrosion mechanism of magnesium by SECM, Presentation, *7th Workshop on Scanning Electrochemical Microscopy (SECM) and Related Techniques, Ein Gedi, Israel, February 17-21, 2013.*
10. High-speed potentiometric SECM imaging of radially symmetric targets, Presentation, *ESEAC Malmö, Sweden, June 11-14, 2013.*
11. Deconvolution of potentiometric SECM images recorded with high scanrate, Poster, *Mátrafüred Conference, June 13-16, 2014. Visegrád, Hungary.*
12. High-speed SECM imaging, Plenar presentation, *Analytica Conference 2016, May 10-13, 2016., München, Germany.*
13. The effect of electric field on potentiometric Scanning Electrochemical Microscopic imaging, Poster presentation, *Mátrafüred Conference 2017 11-16 June, Visegrád, Hungary.*
14. High-speed SECM imaging, Plenar presentation, *9th Workshop on Scanning Electrochemical Microscopy and Related Techniques, 2017 13-17 August, Warsaw, Poland.*