CURRICULUM VITAE

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2021.03.13.

EDUCATION

2016 – 2019	Babeş-Bolyai University, Cluj-Napoca, Romania **PhD studies**, Electrochemistry **Thesis title:** Polymer-modified surfaces for electroanalytical applications and anticorrosive protection
2018	SC Soft Skills Training SRL, Cluj-Napoca Romania Project Manager training course
2014 – 2016	Babeş-Bolyai University, Cluj-Napoca, Romania **Pedagogic module II.**
2014 – 2016	Babeş-Bolyai University, Cluj-Napoca, Romania **Master's degree**: Modern techniques in Chemical Synthesis **Dissertation title**: The determination of dopamine with modified electrodes
2010 - 2014	Babeş-Bolyai University, Cluj-Napoca, Romania **Bachelor's degree**: The chemistry and Technology of Organic Substances, Petrochemistry, Carbochemistry **Diploma work title**: The incubation of indigo carmine in sol-gel coatings
2010 - 2014	Babeş-Bolyai University, Cluj-Napoca, Romania **Pedagogic module I.**

PUBLICATIONS

PEER-REVIEWED JOURNAL ARTICLES AND INVITED BOOK CHAPTERS

1. **Szőke**, **Á.F.;** Szabó, G.S.; Hórvölgyi, Z.; Albert, E.; Gaina, L.; Muresan, L.M., Eco-friendly indigo carmine-loaded chitosan coatings for improved anti-corrosion protection of zinc substrates, Carbohydrate Polymers, 215 (**2019**), 63-72. https://doi.org/10.1016/j.carbpol.2019.03.077

2. **Szőke**, **Á.F.;** Szabó, G.; Hórvölgyi, Z.; Albert, E.; Végh, A.G.; Zimányi, L.; Muresan, L.M., Accumulation of 2-Acetylamino-5-mercapto-1,3,4-thiadiazole in chitosan coatings for improved anticorrosive effect on zinc, International Journal of Biological Macromolecules, 412 (**2020)**, 423-431. https://doi.org/10.1016/j.ijbiomac.2019.09.114

3. **Szőke**, **Á.F.;** Szabó, G.; Simó, Z.; Hórvölgyi, Z.; Albert, E.; Végh, A.G.; Zimányi, L.; Muresan, L.M., Chitosan coatings ionically cross-linked with ammonium paratungstate as anticorrosive coatings for zinc, European Polymer Journal, 118 (**2019**), 205-212. https://doi.org/10.1016/j.eurpolymj.2019.05.057

4. **Szoke**, **A.;** Zsebe, Z.; Turdean, G.L.; Muresan, L.M., Composite electrode material based on electrochemically reduced graphene oxide and gold nanoparticles for electrocatalytic detection of ascorbic acid, Electrocatalysis, 10(5) (**2019**), 573-583. https://doi.org/10.1007/s12678-019-00543-4

5. **Szőke, Á.;** Turdean, G.; Muresan, L., Modified glassy carbon electrode based on myoglobin and reduced graphene oxide for hydrogen peroxide detection, Bulgarian Chemical Communications, 49 (**2017**), 147-154.

6. **Szőke, Á.F**.; Turdean, G.L.; Katona, G.; Muresan, L.M., Electrochemical determination of dopamine with graphene-modified glassy carbon electrodes, STUDIA UBB CHEMIA, LXI, 3, Tom I, (2016), 135-144

7. Szabó, G.; Albert, E.; Both, J.; Kócs, L.; Sáfrán, Gy.; **Szöke**, **A.;** Hórvölgyi, Z.; Mureşan L.M., Influence of embedded inhibitors on the corrosion resistance of zinc coated with mesoporous silica layers, Surfaces and Interfaces, 15 (2019), 216-223. https://doi.org/10.1016/j.surfin.2019.03.007

8. Várhelyi Jr., Cs.; Lengyel, A.; Homonnay, Z.; Szalay, R.; Pokol, Gy.; Szilágyi, I.-M.; Huszthy, P.; Papp, J.; Giga, F.; Golban, L.-M.; Várhelyi, M.; Tomoaia-Cotisel, M.; **Szőke**, **Á.;** Kuzmann, E., Mössbauer study of iron (II) complexes synthesized with Schiff bases, Hyperfine interactions, 238:87 (**2017**). https://doi.org/10.1007/s10751-017-1463-1

9. **Szőke**, **Á.F.;** Mureşan, L.M.; Turdean, G.L.; Zsebe, Z.; Ablaeva, K., Glassy carbon electrode modified with graphene oxide and gold nanoparticles for ascorbic acid detection, in Proceedings of the 23rd International Symposium on Analytical and Environmental Problems", pp. 334-337 (**2017**), ISBN: 978-963-306-563-1

10. **Szőke**, **Á.F.;** Kerekes, E.; Timár, D.K.; Turdean, G.L.; Mureșan, L.M.; Szabó, G.; Barabás R., Modern applications of chitosan in protective layers and composites, Acta Scientiarum Transylvanica, 25(3) (**2017**), 72-79. ISSN: 1842-5070

11. **Szőke**, **Á.F.;** Szabó, G.; Hórvölgyi, Z.; Albert, E., The study of porous silica coatings impregnated with methylene blue, Acta Scientiarum Transylvanica, 26(3) (**2018**), 38-46. ISSN: 1842-5070

12. **Szőke**, **Á.F.;** Szabó, G.S.; Mureșan, L.M., Hórvölgyi, Z.; Albert, E., Anticorrosive chitosan coatings on zinc obtained through ionic crosslinking by indigo carmine, Acta Scientiarum Transylvanica, 27(3) (**2019**), 29-37, ISSN: 1842-5070

CONFERENCE PRESENTATIONS

TALKS

Szőke, Á.F.; Szabó, G., The incubation of indigo carmine in sol-gel coatings, From molecules to functionalized materials, September **2014**, Ohrid, Macedonia

Szőke, Á.F.; Szabó, G., The incubation of indigo carmine in sol-gel coatings, XVII. Transylvanian Student Conference (ETDK), Mai **2014**, Cluj-Napoca, Romania

Szőke, Á.F.; Szabó, G., The incubation of indigo carmine in sol-gel coatings, XXXII. National Student Conference (OTDK), April **2015**, Veszprém, Hungary

Szőke, Á.F., Sol-gel coatings and applications, BBTE technical college conference, interdisciplinary conference, April 2016, Cluj-Napoca, Romania

Szőke, Á.F.; Turdean, G., Graphene based modified electrodes for dopamine detection prepared with different immobilization techniques, XIII. Students for students international conference, April **2016**, Cluj-Napoca, Romania

Szőke, Á.F.; Turdean, G., Modified electrodes for dopamine determination, XIX. Transylvanian Student Conference (ETDK), Mai **2016**, Cluj-Napoca, Romania

Szőke, **Á.F.;** Sanders, Q.J.; Szabó, G.S.; Muresan, L.M.; Turdean, G.L., Electrochemical sensors based on reduced graphene oxide immobilized with chitosan, 22nd International Conference on Chemistry, November **2016**, Timisoara, Romania

Szőke, **Á.F.,** Kerekes, E., Timár, D.K., Turdean, G.L., Muresan, L.M., Szabó, G.S.; Barabás R., Modern applications of chitosan in protective layers and composites, 15th Transylvanian Conference of Natural Science, November **2016**, Cluj-Napoca, Romania

Szőke, **Á.F. ;** Turdean, G.L., Modified electrodes for dopamine determination, 33rd National Student Conference (OTDK), March **2017**, Miskolc, Hungary

Szőke, **Á.F.;** Szabó, G.S.; Albert, E.; Hórvölgyi, Z.; Muresan, L.M., Colloidal coatings with improved corrosion inhibition properties, 6th RSE-SEE international conference, June **2017**, Balatonkenese, Hungary

Szőke, **Á.F.;** Szabó, G.S.; Muresan, L.M.; Albert, E.; Hórvölgyi, Z., The corrosion inhibiting effect of chitosan coatings impregnated with indigo carmine on zinc substrates, 22nd International Conference on Chemistry, October **2017**, Deva, Romania

Szőke, **Á.F.;** Szabó, G.S.; Muresan, L.M.; Hórvölgyi, Z.; Albert, E., The study of porous silica coatings impregnated with methylene blue, 16th Transylvanian Conference of Natural Science, November **2017**, Cluj-Napoca, Romania

Szőke, **Á.F.;** Szabó, G.S.; Albert, E.; Muresan, L.M.; Hórvölgyi, Z., Cross-linking chitosan for improved anticorrosive protection of zinc, 11th Conference on Colloid Chemistry – 11CCC, Mai **2018**, Eger, Hungary

Szőke, **Á.F.;** Zsebe, Z.; Turdean, G.L.; Muresan, L.M., Selective detection of ascorbic acid and dopamine at AuNPs - electrochemically reduced graphene oxide modified glassy carbon electrode, 69th Annual Conference of the International Society of Electrochemistry, September **2018**, Bologna, Italy

Szőke, **Á.F.;** Szabó, G.S.; Muresan, L.M.; Albert, E.; Hórvölgyi, Z., Characterizing the permeability of chitosan coatings on zinc by wetting and impedance spectroscopy studies, 24th International Conference on Chemistry, October **2018**, Sovata, Romania

Szőke, **Á.F.;** Szabó, G.S.; Muresan, L.M.; Hórvölgyi, Z.; Albert, E., Anticorrosive chitosan coatings on zinc obtained through ionic crosslinking by indigo carmine, 17th Transylvanian Conference of Natural Science, November **2018**, Cluj-Napoca, Romania

Szőke, **Á.F.;** Bliet, G.; Szabó, G.; Muresan, L., Indigó kármin oldat és nagy viszkozitású kitozánból készült bevonatok korrózióvédő hatásának vizsgálata, Interdiszciplinaritás a Kárpát-Medencében, PhD conference, Mai **2019**, Pécs, Hungary

Szőke, **Á.F.;** Szabó, G.S.; Hórvölgyi, Z.; Albert, E.; Muresan, L.M., Improving the anticorrosive properties of chitosan coatings by impregnation, Mai **2019**, Split, Croatia

Szőke, Á. F.; Szabó, G.S.; Óvári, T.R.; Buier, R.H.; Both, J.K.; Muresan, L.M., The development of modern anticorrosive coatings, 19th Transylvanian Conference of Natural Science, november **2020**, Cluj-Napoca, Romania

POSTERS

Szőke, Á.F.; Muresan, L.M.; Turdean, G.L.; Zsebe, Z.; Ablaeva, K., Glassy carbon electrode modified with graphene oxide and gold nanoparticles for ascorbic acid detection, 23rd International Symposium on Analytical and Environmental Problems, October **2017**, Szeged, Hungary

Zsebe, Z.; **Szőke**, **Á.F.;** Muresan, L.M.; Turdean, G.L., Hybrid material based on gold nanoparticles and graphene for detection of ascorbic acid, 23rd International Conference on Chemistry, October **2017**, Deva, Romania

Simó, Z.; **Szőke**, **Á.;** Albert, E.; Hórvölgyi, Z.; Szabó, G.; Muresan, L., The electrochemical characterization of chitosan coatings impregnated with indigo carmine, 15th Students for students international conference, April **2018**, Cluj-Napoca, Romania

Both, J.; **Szőke**, **Á.;** Albert, E.; Hórvölgyi, Z.; Muresan, L., Gabriella Szabó, Anti-corrosion properties of scratched silica coatings on Zn substrates, 15th Students for students international conference, April **2018**, Cluj-Napoca, Romania

Szőke, Á.F.; Szabó, G.S.; Hórvölgyi, Z.; Albert, E.; Végh, A.G.; Zimányi, L.; Filiatre, C.; Muresan L.M., Tailoring the permeability of chitosan-based coatings deposited on zinc substrates with different methods, 71th Annual Conference of the International Society of Electrochemistry, September **2020**

Buier, R.H., Szabó, G.S., **Szőke, Á.F**., Fülöp, A.P., Muntean, N., Katona, G., Mureșan, L.M., Metilénkékkel impregnált szilika nanokonténerek hatása a kitozán vékony rétegre, 26th International Conference on Chemistry, September **2020**

TEACHING EXPERIENCE

„Cadru Didactic Asociat"
Babeș-Bolyai University
2016 october – 2019 february
Conducting labworks for 2nd, 3rd and 4th year student int he following subjects:
- Electrochemistry
- Corrosion and corrosion prevention

- Surface protection

Assistent lecturer
Babeș-Bolyai University
2020 february-…
Conducting labworks for 1st, 2nd, 3rd and 4th year student int he following subjects:

- Electrochemistry
- Thermodinamics
- Cinetics
- The chemistry of colloids and surfaces
- The basics of chemical reaction engineering
- The chemistry of macromolecules
- Surface protection

RESEARCH THEMES

My research consists of the developement and physico-chemical characterization of thin layer with for anticorrosive protection.

Materials used druing my research: chitosan, porous silica, Nafion, materials with electrocatalitic activity, corrosion inhibitors

*Methods:*dip-coating, drop casting, electrophoretic deposition, voltammetric methods, potentiodynamic polarization, electrochemical impedance spectroscopy, UV-Vis spectroscopy, microscopy methods, methods to determine wettability (sessile drop method, captive bubble method)

KNOWN LANGUAGES

Mother tongue:
Hungarian

Other known languages:

Language	Understanding		Speaking		Writing
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
Romanian	C2	C2	C2	C2	C2
Spanish	A2	A2	A2	A2	A2
French	B1	B1	B1	B1	A2