

## Curriculum vitae

### Raluca-Elena Cârtoac (Munteanu)

Data nașterii: 17 octombrie 1955

Locul nașterii: bucurești

Locul de muncă: Centrul Internațional de Biodinamică, str. Intrarea Portocalelor, nr. 1B, sector 6, București

Email: [r.munteanu20@s.bio.unibuc.ro](mailto:r.munteanu20@s.bio.unibuc.ro) / [rmunteanu@biodyn.ro](mailto:rmunteanu@biodyn.ro) / [munteanuraluca5@gmail.com](mailto:munteanuraluca5@gmail.com)

### Educație

**2014-2017:** Facultatea de Chimie, Universitatea din București, secția Biochimie Tehnologică - licență

**2017-2019:** Facultatea de Chimie, Universitatea din București, Chimia medicamentelor și a produselor cosmetice - master

**2020- prezent:** Școala Doctorală de Biologie, Facultatea de Biologie, Universitatea din București - doctorat

### Experiență profesională:

**2017 - prezent:** Chimist, Centrul Internațional de Biodinamică, București

### Publicații:

1. Munteanu R.-E., Stănică L., Gheorghiu M., Gáspár S., 2018, Measurement of the Extracellular pH of Adherently Growing Mammalian Cells with High Spatial Resolution Using a Voltammetric pH Microsensor, *Analytical Chemistry*, 90 (11), 6899-6905.
2. Munteanu R.-E., Stănică L., Gheorghiu M., Gáspár S., 2019, Water electrolysis carried out on microelectrodes as way to obtain new insights into the regulation of cytosolic pH, *ChemElectroChem*, 6 (6).
3. Munteanu R.-E., Popescu M.N., Gáspár S., 2019, Glucose Oxidase Micropumps: Multi-Faceted Effects of Chemical Activity on Tracer Particles Near the Solid-Liquid Interface, *Condensed Matter*, 4, 73.
4. Munteanu R.-E., Ye R., Polonschii C., Ruff A., Gheorghiu M., Gheorghiu E., Boukherroub R., Schuhmann W., Melinte S., Gáspár S., 2019, High spatial resolution electrochemical biosensing using reflected light microscopy, *Scientific Reports*, 9(1).
5. Munteanu R.-E., Moreno P. S., Bramini M., Gáspár S., 2020, 2D materials in electrochemical sensors for in vitro or in vivo use, *Analytical and Bioanalytical Chemistry*.

6. Munteanu R.-E., Popescu M., Gáspár S., 2020, The impact of geometrical confinement in a slab on the behavior of tracer particles near active glucose oxidase micropumps, *Colloid and Polymer Science*.
7. Gaspar S., Ravasenga T., Munteanu R.-E., David S., Benfenati F., Colombo E., 2021, Electrochemically Synthesized Poly(3-hexylthiophene) Nanowires as Photosensitive Neuronal Interfaces, *Materials*, 14(16).
8. David S., Gheorgiu M., Daakour S., Munteanu R.-E., Polonschii C., Gaspar S., Barboiu M., Gheorghiu E., 2022, Real Time SPR Assessment of the Structural Changes of Adaptive Dynamic Constitutional Frameworks as a New Route for Sensing, *Materials*, 15(2).
9. David, S.; Munteanu, R.-E.; Tițoiu, A.-M.; Petcu, I.-C.; Cernat, I.-C.; Leancu, C.; Gheorghiu, M.; Gheorghiu, E., 2022, Direct, Rapid Detection of Pathogens from Urine Samples. *Materials*, 15 (21), 7640.
10. David, S.; Cârțoc, R.-E.; Petcu, I.-C.; Polonschii, C.; Petran, A.; Turcu, R.; Bratu, D.; Gheorghiu, M.; Gheorghiu, E., 2024, In situ detection and viability assessment of target microorganisms. *Biosensors and Bioelectronics*, 245, 115821.

## Participări la conferințe:

### Prezentări orale:

- Mihaela Gheorghiu, Cristina Polonschii, **Raluca Elena Cârțoc**, Daniela Tudor, Sorin David, Eugen Gheorghiu, Electrically modulated microscopy assay for fast high content, label free assessment of live cell's dynamics at SPIE BiOS, 2024, San Francisco, California, United States.
- **Raluca-Elena Munteanu**, Daniela Tudor, Sorin David, Eugen Gheorghiu, Mihaela Gheorghiu, Lab-chip evaluation of bacterial cells' dynamics for rapid antimicrobial susceptibility testing at New Trends on Sensing- Monitoring- Telediagnosis for Life Sciences, 8-10 septembrie 2022, Brasov, Romania.
- Daniela-Alexandra Tudor, **Raluca-Elena Munteanu**, Cristina Polonschii, Eugen Gheorghiu, Mihaela Gheorghiu, Novel reflected light microscopy assay for rapid, label free assessment of cellular processes and cellular status at single cell level at New Trends on Sensing- Monitoring- Telediagnosis for Life Sciences, 8-10 septembrie 2022, Brasov, Romania.
- Sorin David, Ionela-Cristina Petcu, Ioana-Cristina Cernat, Cristina Polonschii, **Raluca-Elena Munteanu**, Mihaela Gheorghiu, Dumitru Bratu, Daniela Tudor, Eugen Gheorghiu, Towards an integrated automatic platform for rapid determination of antibiotic susceptibility of target bacteria, New Trends on Sensing- Monitoring- Telediagnosis for Life Sciences, 8-10 septembrie 2022, Brasov, Romania, comunicare orală, pagina 31.
- Mihaela Gheorghiu, Cristina Polonschii, Szilveszter Gaspar, Sorin M. David, **Raluca Elena Munteanu**, Eugen Gheorghiu, High-resolution electro-optical mapping of living cells for (bio)sensing: case studies on eukaryotic and prokaryotic (bacterial) cells at Sixth Edition of International Conference on Analytical and Nanoanalytical Methods for Biomedical and Environmental Sciences, "IC-ANMBES 2022", 8-10 iunie 2022, Brașov, Romania.

- **R.-E. Munteanu**, D.A.Tudor, M. Gheorghiu, Studii preliminare pentru dezvoltarea de senzori electro-optici pentru identificarea și evaluarea răspunsului la tratament a unor celule patogene, Sesiunea de Comunicări Științifice a Studenților Facultății de Biologie, București, 28 mai 2021.
- **R.-E. Munteanu**, L. Stănică, M. Gheorghiu, S. Gáspár, Extracellular pH of cancer cells and normal cells as revealed with a voltammetric pH microsensor, IC-ANMBES 2018, Brasov, Romania

Cu poster:

- **R.-E. Munteanu**, C. Polonschii, E. Gheorghiu, M. Gheorghiu, the 31st Anniversary World Congress on Biosensors 26-29 July 2021, Online, “A novel sensing platform for quantification of viral (particles) entry towards customized “cell sentinels””
- **R.-E. Munteanu**, D.A. Tudor, S. David, E. Gheorghiu, M. Gheorghiu, the 31st Anniversary World Congress on Biosensors 26-29 July 2021, Online, “Quantitative evaluation of microorganisms’ dynamics in a lab-chip assay for rapid identification”
- **Raluca-Elena Munteanu**, Daniela Tudor, Sorin David, Cristina Polonschii, Eugen Gheorghiu, Mihaela Gheorghiu, Quantitative evaluation of bacterial cells’ dynamics in a lab-chip assay at Biodynamics A Transdisciplinary Approach- International Symposium, 19-21 mai 2022, Bucharest, Romania.
- Daniela-Alexandra Tudor, **Raluca-Elena Munteanu**, Cristina Polonschii, Mihaela Gheorghiu, Microscopic Evaluation of Formazan Products for Assessing Single Cell Viability at Biodynamics A Transdisciplinary Approach- International Symposium, 19-21 mai 2022, Bucharest, Romania.