

PhD. Student Cornelia Elena Mușină (căs. BORȘARU)
List of papers that include data from the thesis

PAPERS LIST

- A1. A.-G. Brotea, O. T. Matica, C.-E. Musina (Borsaru), E.-M. Ungureanu, Polyazulene-Based Materials based on 4-(azulene-1-yl)-2,6-bis((E)-2-(thiophene-2-yl)vinyl)pyridine for Heavy Metals Ions Detection, UPB Scientific Bulletin, Series B, Vol. 84, Iss. 3, 2022, ISSN 1454-2331, 117.
- A2. A.-G. Brotea, O.-T. Matica, C.-E. Musina (Borsaru), M. Cristea, A. Stefaniu, A.-M. Pandele, E.-M. Ungureanu. Advanced Materials Based on Azulenyl-Phenyloxazolone, Symmetry 2023, 15,540. <https://doi.org/10.3390/sym15020540>.
- A3. O.- T. Matica, A.-G. Brotea, C.-E. Musina (Borsaru), E.-M. Ungureanu, M. Cristea, R. Isopescu, G. O. Buica, A. Razus. Electrochemistry of rhodanine derivatives as model for new colorimetric and electrochemical sensors based on azulene for the detection of heavy metal ions, Symmetry 2023, 15, (3), doi: 10.3390/SYM15030752.
- A4. A.-G. Brotea, O.-T. Matica, C.-E. Musina (Borsaru), A. M. Pandele, R. Trusca, E.-M. Ungureanu, Chemically Modified Electrodes Based on 4-((5-Isopropyl-3,8-dimethylazulen-1-yl)methylene)-2-phenyloxazol-5(4H)-one, Symmetry 2024, 16, (2), doi: 10.3390/sym16020245.
- A5. Eleonora-Mihaela Ungureanu, Cornelia Elena Musina (Borsaru), Ovidiu-Teodor Matica, Raluca Isopescu, Gabriela Stanciu, Amalia Stefaniu, Studies on rhodanine derivatives for estimation of chemical reactivity parameters by DFT, Symmetry 2025, 17, 444. <https://doi.org/10.3390/sym17030444>.
- A6. Cornelia Elena Mușină (Borșaru), Ovidiu-Teodor Matica, Eleonora-Mihaela Ungureanu, Studies on azulene-rhodanine derivatives complexation with Pb(II) by UV-Vis, UPB Scientific Bulletin, Series B, Vol. 87, Iss. 3, 2025, ISSN 1454-2331, 47.
- A7. Cornelia Musina (Borsaru), Mihaela Cristea, Raluca Gavrilă, Oana Brîncoveanu, Florin Comănescu, Veronica Anăstăsoaie, Gabriela Stanciu, Eleonora-Mihaela Ungureanu, Polymer films of 2-(azulen-1-yl diazenyl)-5-(thiophen-2-yl)-1,3,4-thiadiazole: surface characterization and electrochemical sensing of heavy metals, Molecules 2025, <https://doi.org/10.3390/molecules30193959>.
- A8. Cornelia Musina (Borsaru), A.-G. Brotea, M. Cristea, G. Stanciu, A. Stefaniu, E.-M. Ungureanu, Electrochemical and optical experiments and DFT calculations for an alyl-thiophene substituted azulene, Molecules 2025, 30(18), 3762. <https://doi.org/10.3390/molecules30183762>

SCIENTIFIC MEETINGS ATTENDED

- C1. A.-G. Brotea, C.-E. Musina (Borsaru), O.-T. Matica, M. Cristea, E.-M. Ungureanu, A. Stefaniu, Advanced materials based on azulene-phenyloxazolone, Global Advanced Materials & Surfaces International Conference (GAMS 2022), Paris, France, 15 - 17 June 2022, poster 28.
- C2. C.-E. Musina (Borsaru), A.-G. Brotea, O. T. Matica, R. Isopescu, E.-M. Ungureanu, A.

Stefaniu, DFT analysis of quantum chemical reactivity parameters for electro-chemical applications of an azulene-phenyloxazolone based ligand, 8th Regional Symposium on Electrochemistry for South-East Europe, Graz, Austria, 11-15 July 2022.

C3. A.-G. Brotea, O.-T. Matica, C.-E. Musina (Borsaru), M. R. Bujduveanu E.-M. Ungureanu, Chemical modified electrodes based on new azulene-thiophen-vinylpyridine, 22nd Romanian International Conference on Chemistry and Chemical Engineering, Sinaia, Romania - September 7 – 9, 2022, Poster S7- 107.

C4. E.-M. Ungureanu, O.-T. Matica, C.-E. Musina (Borsaru), A.-G. Brotea, R. Isopescu, A. C. Razus, Rhodanine derivatives as model for new electrochemical and colorimetric sensors based on azulene, The 4th International Conference on Symmetry, Barcelona, Spain, 21–23 Jun 2023.

C5. A. Stefaniu, A.-G. Brotea, O.-T. Matica, C.-E. Musina (Borsaru), E.-M. Ungureanu, In silico approaches for rational design of new electrochemical sensors based on azulene-phenyloxazolone, The 4th International Conference on Symmetry, Barcelona, Spain, 21–23 June 2023, Poster P10.

C6. C.-E. Musina (Borsaru), A.-G. Brotea, O.-T. Matica, O.I. Enache, A. Stefaniu, E.-M. Ungureanu, Electrochemical and DFT analysis of quantum chemical reactivity parameters for electrochemical applications of an azulene-phenyloxazolone, New Trends on Sensing-Monitoring-Telediagnosis for Life Sciences, September 8-10, 2022, Braşov, Romania, Poster.

C7. C.-E. Musina (Borsaru), A.-G. Brotea, M.R. Bujduveanu, E.-M. Ungureanu, A. Ştefaniu, Modified electrodes based on ethene-2,1-diyltetrathiophene azulene derivative for electroanalytical applications, XIXth edition of the International Symposium "Priorities of Chemistry for a Sustainable Development", PRIOCHEM 2023, 11-13 October 2023, INCDCP-ICECHIM, Bucharest, Romania, Poster.

C8. C.-E. Musina (Borsaru), A.-G. Brotea, M. Pandele, R. Trusca, M. Cristea, E.-M. Ungureanu, Modified electrodes based on ethene-2,1-diyltetrathiophene azulene derivative for heavy metals analysis. INTERNATIONAL CONFERENCE CHIMIA 2024. NEW TRENDS IN APPLIED CHEMISTRY, May 30 - June 1, 2024, Constanta, Romania, Poster.

C9. E.-M. Ungureanu, C.-E. Musina (Borsaru), A.-G. Brotea, O.-T. Matica, A. Stefaniu, G.-O. Buica, R. Isopescu, Electrochemical and optical experiments and DFT calculations for an allyl-thiophene substituted azulene, 9th REGIONAL SYMPOSIUM ON ELECTROCHEMISTRY OF SOUTH-EAST EUROPE, June 3 - 7, 2024, Novi Sad, Serbia, Oral presentation.

3.STUDENT'S TUTORIAL

1.CARABULEA Maria-Carina, an II, gr. 1121A, IC, anul II, Studii privind complexarea derivatilor azulene-rhodaninici cu Pb(II) prin spectroscopie UV-Vis, Sesiunea de Comunicări Ştiinţifice 2025 a Studenţilor de la Cercul de Chimie Fizica Aplicată şi Electrochimie, Facultatea de Inginerie Chimică şi Biotehnologii, Universitatea Naţională de Ştiinţă şi Tehnologie POLITEHNICA Bucureşti, Mai 2025.