

Model F17 - Memoriul științific al studentului doctorand

MEMORIU ȘTIINȚIFIC Drd. Cornelia Elena MUȘINĂ (căs. BORȘARU)

Studii de doctorat

Perioada: 2020-2025

Conducător științific: Prof.dr.ing. Prof. Em. Dr. Ing. Eleonora-Mihaela UNGUREANU

Domeniu: Inginerie Chimică

Titlul tezei de doctorat „Electrochemical and spectral studies on organic ligands in view of heavy metal determination using chemically modified electrodes”.

Activitate științifică (se vor lăsa doar cele care se aplică)

A. Lista de lucrări științifice (articole în reviste sau volume)

1.Cornelia Elena MUȘINĂ (BORȘARU) 1, Ovidiu-Teodor MATICA², Eleonora-Mihaela UNGUREANU³, Studies on azulene-rhodanine derivatives complexation with Pb(II) by UV-Vis UPB Scientific Bulletin, Vol. 87, Iss. 3, 2025, ISSN 1454-2331, 47.

2.Cornelia Musina (Borsaru) 1,Mihaela Cristea 2, Raluca Gavrilă 3 , Oana Brincoveanu 3, Florin Constantin Comănescu 3,Veronica Anăstăsoaie 3,* Gabriela Stanciu 4 and Eleonora-Mihaela Ungureanu 5,*Polymer Films of 2-(Azulen-1-yl-diazenyl)-5-(thiophen-2-yl)-1,3,4-thiadiazole: Recent Advances in Applied Chemistry, Molecules, ISSN 1420-3049, MDPI, 2025, <https://doi.org/10.3390/molecules30193959>

3.Cornelia Musina (Borsaru)1, Alina-Giorgiana Brotea², Mihaela Cristea³, Gabriela Stanciu^{2,*}, Amalia Stefanu⁴, Eleonora-Mihaela Ungureanu^{5,*}Electrochemical and Optical Experiments and DFT Calculations of 1,4,6,8-Tetrakis((E)-2-(thiophen-2-yl)vinyl)azulene †: Characterization of Organic Ligands: Correlations Between Results by Electrochemistry and Other Methods, Molecules, ISSN 1420-3049 , MDPI, 2025, <https://doi.org/10.3390/molecules30183762>

B. Cărți și manuale

C. Participări la conferințe/workshop-uri

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

C2. 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, C.-E. Musina (Borsaru), A.-G. Brotea, O. T. Matica, R. Isopescu, E.-M. Ungureanu, A. Stefanu, , Graz, Austria, 11-15 July 2022.

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

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

C5. In silico approaches for rational design of new electrochemical sensors based on azulene-phenyloxazolone, The 4th International Conference on Symmetry, A. Stefanu, 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. Electrochemical and DFT analysis of quantum chemical reactivity parameters for electrochemical applications of an azulene-phenyloxazolone, New Trends in Sensing-Monitoring-Telediagnosis for Life Sciences, C.-E. Musina (Borsaru), A.-G. Brotea, O.-T. Matica, O.I. Enache, A. Stefanu, E.-M. Ungureanu, , September 8-10, 2022, Braşov, Romania, Poster.

C7. 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, C.-E. Musina (Borsaru), A.-G. Brotea, M.R. Bujduveanu, E.-M. Ungureanu, A. Ştefanu, , 11-13 October 2023, INCDCP-ICECHIM, Bucharest, Romania, Poster.

C8. Modified electrodes based on ethene-2,1-diyltetrathiophene azulene derivative for heavy metals analysis. INTERNATIONAL CONFERENCE CHIMIA 2024. NEW TRENDS IN APPLIED CHEMISTRY C.-E. Musina (Borsaru), A.-G. Brotea, M. Pandeale, 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. Electrochemical and optical experiments and DFT calculations for an allyl-thiophene substituted azulene, 9th

REGIONAL SYMPOSIUM ON ELECTROCHEMISTRY OF SOUTH-EAST EUROPE, E.-M. Ungureanu, C.-E. Musina (Borsaru), A.-G. Brotea, O.-T. Matica, A. Stefaniu, G.-O. Buica, R. Isopescu, , June 3 - 7, 2024, Novi Sad, Serbia, Oral presentation.

D. Brevete

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E. Proiecte de cercetare științifică

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F. Stagii de perfecționare

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G. Cursuri de perfecționare

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H. Membru în comitete de organizare sau comitete științifice ale conferințelor/colective de redacție ale unor reviste

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Student-doctorand
Cornelia Elena MUȘINĂ (căs. BORȘARU)

