F17 - Memoriul ştiinţific al studentului doctorand

MEMORIU ŞTIINŢIFIC

Drd. Ing. Leau Sorina-Alexandra

Studii de doctorat

Perioada: 2021-2026

Conducător ştiinţific: Prof. Dr. Stelian Lupu

Domeniu: Inginerie Chimică

Titlul tezei de doctorat: Senzori electrochimici cu aplicaţii în analize de compuşi biologic activi

Activitate ştiinţifică

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

1. **Leau, S.A.**; Lete, C.; Matei, C.; Lupu, S. Electrochemical Sensing Platform Based on Metal Nanoparticles for Epinephrine and Serotonin. *Biosensors (Basel)* **2023**, *13*, doi:10.3390/bios13080781. **Q1, IF (2023) = 4,9**;
2. **Leau, S.A.**; Lete, C.; Marin, M.; del Campo, F.J.; Diaconu, I.; Lupu, S. Electrochemical Sensors Based on Antimony Tin Oxide-Prussian Blue Screen-Printed Electrode and PEDOT-Prussian Blue for Potassium Ion Detection. *Journal of Solid State Electrochemistry* **2023**, *27*, 1755–1766, doi:10.1007/s10008-023-05392-2. **Q3, IF (2023) = 2,6**;
3. **Leau, S.A.**; Diaconu, I.; Lete, C.; Matei, C.; Lupu, S. ELECTROANALYSIS OF SEROTONIN AT PLATINUM NANOPARTICLES MODIFIED ELECTRODE. *Bull., Series B 86*, 2024. **Q4, IF (2024) = 0,3**;
4. **Leau, S.A.**; Marin, M.; Toader, A.M.; Anastasescu, M.; Matei, C.; Lete, C.; Lupu, S. MeNPs-PEDOT Composite-Based Detection Platforms for Epinephrine and Quercetin. *Biosensors (Basel)* **2024**, *14*, 320, doi:10.3390/bios14070320. **Q1, IF (2024) = 5,6**;
5. **Leau, S.-A.**; Lete, C.; Matei, C.; Lupu, S. Novel Biomimetic Polymer-Based Material Prepared by Alternate Currents Method for Electrochemical Sensing Platform Development. *Journal of Electroanalytical Chemistry* **2026**, *1001*, 119703, doi:10.1016/j.jelechem.2025.119703. **Q1, IF (2024) = 4,1**;

B. Participări la conferinţe/workshop-uri

1. **Leau, S.-A.**; Lete, C.; Lupu, S. Electrochemical Sensor Based on Poly (3,4-Ethylenedioxythiophene) and Pt Nanoparticles for Biologically Active Compounds Determination. In *Book of Abstracts-The 5th Edition of the International Conference of the Doctoral School at the „Gheorghe Asachi" Technical University of Iasi (TUIASI), 18-20 Mai, 2022, online, Prezentare orală*; p. 52.
2. **Leau, S.-A.**; Lete, C.; Lupu, S. Development of Sensing Materials Based on PEDOT and Pt NPs for Analytical Applications. In *The 22nd Romanian International Conference on Chemistry and Chemical Engineering (RICCCE 22), 7–9 Septembrie, 2022, Sinaia, România, Prezentare orală.*
3. **Leau, S.-A.**; Lete, C.; Matei, C.; Lupu, S. PEDOT-AuNPs Nanocomposite Modified Glassy Carbon Electrode for Epinephrine Sensing. In *Book of Abstracts – The 17th Conference of Physical Chemistry (ROMPHYSCHEM), 25–27 Septembrie, 2023, Bucureşti, România, Prezentare orală*; p. 60.
4. Lupu, S.; **Leau, S.-A.**; Lete, C.; Diaconu, I.; Matei, C. Electrochemical Sensing of Neurotransmitters Using a Metal Nanoparticle-Based Composite Platform. In *Book of Abstracts – The 4th International Electronic Conference on Biosensors (IECB 2024), 20–22 Mai, 2024, online, Prezentare orală*; p. 79.
5. **Leau, S.-A.**; Lete, C.; Diaconu, I.; Matei, C.; Lupu, S. Pt-PEDOT Based Electrochemical Sensing Platform for Serotonin Quantification. In *Book of Abstracts – The 17th Conference of Physical Chemistry (ROMPHYSCHEM), 25–27 Septembrie, 2023, Bucureşti, România, Prezentare poster*; p. 68.

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6. Lete, C.; Marin, M.; **Leau, S.-A.**; Marcu, M.; Lupu, S. Investigation of Different Synthesis Parameters in Developing of An Innovative AgNPs-PEDOT Based Electrochemical Sensor for Quercetin Determination. In *Book of Abstracts – The 17th Conference of Physical Chemistry (ROMPHYSCHEM), 25–27 Septembrie, 2023, București, România, Prezentare poster*; p. 69.

7. Lete, C.; Marin, M.; **Leau, S.-A.**; Marcu, M.; Lupu, S. Novel Platforms for Electrochemical Sensing of Antioxidant Compounds. In *Book of Abstracts – The 4th International Electronic Conference on Biosensors (IECB 2024), 20–22 Mai, 2024, online, Prezentare poster*; p. 80.

8. Lete, C.; Marin, M.; **Leau, S.-A.**; Lupu, S. Development of Sensitive Nanocomposite Materials for Biologically Active Compounds. In *The International Conference CHIMIA 2024 "New Trends in Applied Chemistry", 30 Mai-1Iunie, Constanța, România, Prezentare poster.*

9. **Leau, S.-A.**; Marin, M.; Lete, C.; Diaconu, I.; Matei, C.; Lupu, S. Development of Nanostructured Electrochemical Sensing Platforms by Novel Sinusoidal Current Methods. In *The 23rd Romanian International Conference on Chemistry and Chemical Engineering (RICCCE 23), 4–7 Septembrie, 2024, Constanța-Mamaia, România, Prezentare poster.*

10. **Leau, S.-A.**; Marin, M.; Lete, C.; Lupu, S. Innovative and Efficient Synthesis of Nanocomposite Materials for Electrochemical Sensing Applications. In *The 23rd Romanian International Conference on Chemistry and Chemical Engineering (RICCCE 23), 4–7 Septembrie, 2024, Constanța-Mamaia, România, Prezentare poster.*

11. **Leau, S.-A.**; Lete, C.; Pigani, L.; Lupu, S. Metal-Organic Composite Material-Based Electrochemical Sensor for Biomolecule Quantification. In *Book of Abstracts – The 5th International Electronic Conference on Biosensors (IECB 2025), 26–28 Mai, 2025, online, Prezentare poster*; p. 79.

12. **Leau, S.-A.**; Lete, C.; Marin, M.; Matei, C.; Lupu, S. Polydopamine-PEDOT-Based Composite Material for Electrochemical Sensing Applications. In *Book of Abstracts – The 5th International Electronic Conference on Biosensors (IECB 2025), 26–28 Mai, 2025, online, Prezentare poster*; p. 73.

13. **Leau, S.-A.**; Lete, C.; Lupu, S. Hybrid Organic-Inorganic Material Based Sensing Platform for Environmental Monitoring of Biomarkers. In *The International Symposium "The Environment and the Industry" (SIMI 2025), 23-24 Octombrie, 2025, București, România, Prezentare poster.*

14. Lete, C.; Marin, M.; **Leau, S.-A.**; Lupu, S. Voltammetric Detection of Thioctic Acid Using Inorganic-Organic Composite Material. In *The 12th International Electronic Conference on Sensors and Applications (ECSA-12), 12–14 Noiembrie, 2025, online, Prezentare poster.*

C. Proiecte de cercetare științifică

1. Titlu proiect: „Platforme electrochimice pe bază de materiale nanocompozite pentru detecția compușilor biologic activi", contract nr. 607PED/27.06.2022, cod proiect PN-III-P2-2.1-PED-2021-3693, program PNCDI III, Ministerul Cercetării, Inovării și Digitalizării, CNCS/CCCDI-UEFISCDI.

D. Stagii de perfecţionare

1. Mobilitate de plasament Erasmus+ la Universitatea din Modena si Reggio Emilia (UNIMORE), Departamentul de Stiinte Chimice si Geologice, Modena, Italia. Perioada de mobilitate: 01/03/2023-26/05/2023. Profesor indrumator din universitatea partenera: Prof. Laura Pigani. Nr. de ore lucrate pe saptamana: 35. Scop program: Dezvoltarea de senzori electrochimici pentru determinarea de compusi biologic activi (serotonina, epinefrina).

Student-doctorand

Ing. Leau Sorina-Alexandra



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