

INFORMAȚII PERSONALE

GÁL EMESE

 Iuliu Maniu 2/3, Cluj-Napoca, Romania

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EXPERIENȚA PROFESIONALĂ

- 2013.03- [Asistent universitar](#)
Universitatea Babeș-Bolyai”, Facultatea de Chimie și Inginerie Chimică str. Arany Janos 11 Cluj-Napoca
Activități didactice, cercetare
- 2017.09- [Director de proiect](#)
20/01.09.2017- ERANET-LAC-EFPC (2),
Producția biocompușilor din deșeurile solide și lichide rezultate prin prelucrarea trestiei de zahăr în industria bioetanolului prin tratare electrochimică a efluenților și piroliza materialelor lignocelulozice utilizând cataliză termomagnetică.
- 2011-2013 [Bursă postdoctorală](#)
Universitatea Babeș-Bolyai”, Facultatea de Chimie și Inginerie Chimică str. Arany Janos 11 Cluj-Napoca
Activități de cercetare
- 2010-2011 [Asistent de cercetare](#)
Universitatea Babeș-Bolyai”, Facultatea de Chimie și Inginerie Chimică str. Arany Janos 11 Cluj-Napoca
Activități de cercetare în cadrul proiectului de cercetare
Activități de cercetare în sinteza organică, analiză structurală HPLC, GC-MS, NMR
- 2004-2010 [Doctorand](#)
Universitatea Babeș-Bolyai”, Facultatea de Chimie și Inginerie Chimică str. Arany Janos 11 Cluj-Napoca
Activități de cercetare, activități didactice
- 2007-2008 [Chimist](#)
”Gedeon Richter” Romania LTD
Dezvoltare metode analitice, validare metode analitice,

EDUCAȚIE ȘI FORMARE

- 2013.10- 2014.10 [Grant for Young Researchers-GTC 34035- grant manager](#)
Universitatea ”Babeș-Bolyai”, Facultatea de Chimie și Inginerie Chimică str. Arany Janos 11 Cluj-Napoca
« Sinteza nitronelor, studiul activității antioxidante și captatori pentru radicali liberi ca posibile ingrediente în cremele de protecție solară »
- 2011.07-2013.03 [Bursă postdoctorală](#)
POSDRU/89/1.5/s/60189, „Postdoctoral Programs for Sustainable Development in a Knowledge Based Society”
Titlul proiectului de cercetare: Synthesis of new heterocyclic derivatives and their combinations with metals
Mentor: Prof. Dr. Luminita Silaghi-Dumitrescu,
Universitatea ”Babeș-Bolyai”, Facultatea de Chimie și Inginerie Chimică str. Arany Janos 11 Cluj-Napoca, Departamentul de Chimie Organică
- 2004-2010 [Doctorand- Chimie Organică](#)
Titlul tezei: “Synthesis and characterization of new aromatic heterocyclic aromatic compounds, precursors for materials with non-linear optical properties”
Universitatea ”Babeș-Bolyai”, Facultatea de Chimie și Inginerie Chimică str. Arany Janos 11 Cluj-Napoca
Mecanisme de reacție, Analiză structurală, Metode spectroscopice
- 2003-2004 [Masterat- Chimie organică avansată - engleză](#)

Titlul tezei: "Synthesis and characterization of new Schiff bases derived from phenothiazine, and their complexes"

Universitatea "Babes-Bolyai", Facultatea de Chimie și Inginerie Chimică str. Arany Janos 11 Cluj-Napoca, Retrosinteză organică, Chimia heterociclicilor, Metode spectroscopice

Bsc- Chimie-Fizică

Titlul tezei: "Sinteza și caracterizarea unor noi baze Schiff pe bază de fenotiazină "

Universitatea "Babes-Bolyai", Facultatea de Chimie și Inginerie Chimică str. Arany Janos 11 Cluj-Napoca, Chimie Analitică, Chimie Organică, Termodinamică, Matematică, Electronică, Mecanică, Fizica solidelor, Optică, Biochimie.

1999-2003

COMPETENTE PERSONALE

Limba(i) maternă(e) Maghiară

Alte limbi străine cunoscute

	INTELEGERE		VORBIRE		SCRIERE
	Ascultare	Citire	Participare la conversație	Discurs oral	
Engleză	B2	B2	B1	B1	B2
Franceză	A2	A2	A2	A2	A2

Niveluri: A1/A2: Utilizator elementar - B1/B2: Utilizator independent - C1/C2: Utilizator experimentat
[Cadru european comun de referință pentru limbi străine](#)

Competențe de comunicare

▪ bune competențe de comunicare dobândite prin experiența proprie de chimist la Gedeon Richter LTD, și ca student doctorand.

Competențe organizaționale/manAGERIALE

▪ manager de proiect (în prezent, sunt responsabil/ă de o echipă de 4 persoane)

Permis de conducere B

ANEXE

Researcher ID: D-9541-2012

Research visits:

25. 06. 2006. - 25. 07. 2006. Research project: Romanian–Hungarian Intergovernmental S&T Cooperation program 2006-2007, University ELTE Budapest
19. 09. 2006. – 19. 02. 2007. Socrates/Erasmus scholarship, University of Debrecen, Hungary
26. 09. 2007-27. 09. 2007. 12th Summer courses on Pharmaceutical analysis, Island of Elba
01. 02. 2010- 31. 03. 2010. Research project: Romanian–Hungarian Intergovernmental S&T Cooperation program 33. /06.06.2008, University ELTE Budapest
01. 07. 2010- 30. 09. 2010 Socrates/Erasmus placement scholarship, University ELTE Budapest
01. 09. 2012-30. 09. 2012 Postdru Postdoc research stage, University of Debrecen, Hungary
01. 02. 2013-28. 02. 2013 Postdru Postdoc research stage, University of Debrecen, Hungary
22. 09. 2013- 27. 09. 2013 Socrates/Erasmus teaching staff placement University ELTE Budapest
08. 09. 2014-14. 09. 2014 Socrates/Erasmus teaching staff placement University ELTE Budapest
- 07.09.2015-11.09.2015 Socrates/Erasmus teaching staff placement Corvinus University Budapest
- 23.09.2015-29.09.2015 Socrates/Erasmus teaching staff placement University ELTE Budapest
- 05.09.2016-09.09.2016 Socrates/Erasmus teaching staff placement Szent Istvan University, Food Science, Budapest
- 07.15.2017-24.07.2017 Socrates/Erasmus teaching staff placement University Kuala Lumpur Malaysian Institute of Chemical And Bioengineering Technology
- 18.09.2017-22.09.2017 Socrates/Erasmus teaching staff placement University of Debrecen, Hungary

Article:

- Chromium(II)-complex mediated formation of C-glycosides from glycosyl halides under aqueous biphasic conditions, Zs. Juhász, K. Micskei, E. Gál, L. Somsák, *Tetrahedron Letters*, 2007 48(41), 7351-7353
- Violation of Distribution Symmetry in Statistical Evaluation of Absolute Enantioselective Synthesis B. Barabas, L. Caglioti, C. Zucchi, M. Maioli, E. Gál, K. Micskei, Gy. Pályi, *J. Phys. Chem. B*; 2007; 111(39), 11506 – 11510;
- Oscillatory Symmetry Breaking in the Soai Reaction, K. Micskei, Gy. Rábai, E. Gál, L. Caglioti, Gy. Pályi, *J. Phys. Chem. B* 2008, 112, 9196–9200
- Synthesis and fluorescence properties of new Schiff bases containing phenothiazine units, E. Gál, L. Găină, T. Lovász, C. Cristea L. Silaghi-Dumitrescu, *Studia Universitatis Babes-Bolyai, Seria Chemia*, 4(I), 2009
- Iodine-catalyzed stepwise [4+2] cycloaddition of phenothiazine- and ferrocene-containing Schiff bases with DHP promoted by microwave irradiation, E. Gál, C. Cristea, L. Silaghi-Dumitrescu, T. Lovász, A. Csámpai, *Tetrahedron*, 66 (52), 2010, 9938-9944
- Acylated mono-, bis- and tris- Cinchona-Based Amines Containing Ferrocene or Organic Residues: Synthesis, Structure and in Vitro Antitumor Activity on Selected Human Cancer Cell Lines, B. I. Károlyi, Sz. Bősze, E. Orbán, P. Sohár, L. Drahos, E. Gál A. Csámpai, *Molecules* 2012, 17(3), 2316-2329
- Synthesis, structural investigations, and DFT calculations on novel 3-(1,3-dioxan-2-yl)-10-methyl-10H-phenothiazine derivatives with fluorescence properties, L. Găină, E. Gal, L. Mătarângă-Popa, D. Porumb, A. Nicolescu, C. Cristea, L. Silaghi-Dumitrescu, *Tetrahedron*, 2012, 68 (11), 2465-2470
- Microwave assisted cycloaddition reactions of unsaturated phenothiazine derivatives, E. Gal, L. Gaina, C. Cristea, L. Silaghi-Dumitrescu, *Studia Universitatis Babes-Bolyai, Seria Chemia*, 2010, 55 (3), 257-263,
- Synthesis and characterization of new phenothiazinyldiphenyl-posphines, T. Lovasz, E. Gal, L. Gaina, I. Sas, C. Cristea, L. Silaghi-Dumitrescu, *Studia Universitatis Babes-Bolyai, Seria Chemia*, 2010, 55(3), 249-257
- Synthesis and characterization of new phenothiazinyldiphenyl-posphines , T. Lovasz, E. Gal, C. Cristea and L. Silaghi-Dumitrescu, *Studia Universitatis Babes-Bolyai, Seria Chemia* 2011 56(4),
- Laccase is upregulated via stress pathways in the phytopathogenic fungus *Sclerotinia Sclerotiorum*, C. Coman, A. C. Moț, E. Gal, M. Pârvu, R. Silaghi-Dumitrescu, *Fungal Biology* 2013, 117, 528-539.
- Novel meso-phenothiazinyldiporphyrin dyes: Synthesis, optical, electrochemical properties and PDT assay, E. Gal, B. Brem, I. Pereteanu, L. Gaina, T. Lovasz, M. Perde-Schrepler, L. Silaghi-Dumitrescu, C. Cristea, L. Silaghi-Dumitrescu, *Dyes and Pigments* 2013, 99, 144-153.
- Microwave-Assisted Catalytic Amination of Phenothiazine; Reliable Access to Phenothiazine Analogues of Tröger's Base, L. I. Găină, L. N. Mătarângă-Popa, E. Gal, P. Boar, P. Lönnecke, E. Hey-Hawkins, C. Bischin, R. Silaghi-Dumitrescu, I. Lupan, C. Cristea, L. Silaghi-Dumitrescu, *European Journal of Organic Chemistry*, 2013, 24, 5500-5508.
- Synthesis and antibacterial properties of new phenothiazinyl- and phenyl-nitrones H. Iulia Petkes, E. Gál, L. Găină, M. Sabou, C. Majdik, L. Silaghi-Dumitrescu, *Comptes Rendus Chimie*, 2014, 17, 1050-1057.
- Microwave assisted synthesis, photophysical and redox properties of (phenothiazinyl)vinyl-pyridinium dyes, L. Găină, I. Torje, E. Gal, A. Lupan, C. Bischin, R. Silaghi-Dumitrescu, G. Damian, P.r Lönnecke, C. Criste, L. Silaghi-Dumitrescu, *Dyes and Pigments*, 2014; 102, 315–325.
- Testing antiplatelet and antioxidant activity of the extract of seven varieties of *Allium cepa* L. A. Saplontai-Pop, A. Moț, M. Moldovan, R. Oprean, R. Silaghi-Dumitrescu, O. Orășan, Marcel Pârvu, E. Gal, C. Ionescu, *Open Life Sci.*

2015, 10, 89-98.

17. Influence of DGAT1 K232A Polymorphism on Milk Fat Percentage and Fatty Acid Profiles in Romanian Holstein Cattle. A. Tăbăran, V. A. Balteanu, E. Gal, D. Pusta, R. Mihaiu, S. D. Dan, A. F. Tăbăran, M. Mihaiu, *Animal Biotechnology* 2015; 26(2), 105-111.

18. Tuning the coordination properties of phenothiazine by regioselective introduction of diphenylphosphanyl groups I. H. Filip, E. Gál, I. Lupan, M. Perde-Schrepler, P. Lönnecke, M. Surducan, L. I. Găină, E. Hey-Hawkins, L. Silaghi-Dumitrescu, *Dalton Transactions* 2014; 44(2).

19. Synthesis of novel (phenothiazinyl)dipyrrolymethanes, Brem, Balazs; Gal, Emese; Gaina, Luiza; Cristea, Castelia; Silaghi-

Dumitrescu, *Luminita Revue Roumaine de Chimie*, 2014, 59 (11-12), 947-952

20. Estimation of radical scavenging capacity of some diaryl- and phenothiazinyl-nitrones, H. Petkes · E. Gal · C. Bischin · I. Lupan · C. Majdik · C. Cristea · L. Silaghi-Dumitrescu, *Rev. Roum. Chim.* 2015, 60 (7-8), 659-664.

21. Metallo complexes of meso-phenothiazinylporphyrins: Synthesis, linear and nonlinear optical properties, B. Brem · E. Gal · L. Gaina · C. Cristea · A. M. Gabudean · S. Astilean · L. Silaghi-Dumitrescu, *Dyes and Pigments* 2015; 9, 123.

22. Antioxidant content in romanian traditional distilled alcoholic beverages, B. Mureșan · C. Cimpoiu · A. Hosu · C. Bischin · E. Gal · G. Damian · E. Fischer-Fodor · R. Silaghi-Dumitrescu, *Studia Universitatis Babes-Bolyai, Seria Chemia* 2015 60(2), 355-370.

23. Synthesis of new benzothiazolyl-phenothiazine derivatives, B. Brem · E. Gal · C. Cristea · L. Găină · A. Grozav · V. Zaharia · L. Silaghi-Dumitrescu, *Studia Universitatis Babes-Bolyai Chemia*, 2015; 60(2), 371-378

24. Assessments of electronic properties in phenothiazine carbaldehyde regioisomers series, B. Brem · E. Gal · T. Lovász · C. Cristea · L. Găină · L. Silaghi-Dumitrescu, *Studia Universitatis Babes-Bolyai Chemia*, 2015; 60(2), 271-279.

25. The influence of bonding topology on the electronic properties of new Schiff bases containing phenothiazine building blocks, E. Gal, L. Găină, C. Cristea, V. Munteanu, L. Silaghi-Dumitrescu, *Journal of Electroanalytical Chemistry*, 2016, 770, 14–22

26. Glassy carbon electrode modified with hemin and new melamine compounds for H₂O₂ amperometric detection, A. R. Deac, C. Morar, G. L. Turdean, M. Darabantu, E. Gál, A. Bende, L. M. Muresan, *J Solid State Electrochem*, 2016, 20, 3071-3081.

27. Novel 1,9-dialkyl-5-(Phenothiazinyl)dipyrromethane dialkyltin complexes, B. Brem, E. Gal, L. Găină, T. Lovasz, E.-A. Molnar, D. Porumb, C. Cristea, *STUDIA UBB CHEMIA, LXI*, 2016, 3, 73-80.

28. Novel thiazolo[5,4-b]phenothiazine derivatives: Synthesis, structural characterization, and in vitro evaluation of antiproliferative activity against human leukaemia, B. Brem, E. Gal, L. Găină, L. Silaghi-Dumitrescu, E. Fischer-Fodor, C. Ionuț Tomuleasa, A. Grozav, V. Zaharia, L. Filip, C. Cristea, *Int. J. Mol. Sci.* 2017, 18, 1365.

29. Determination of heavy metals and lead strontium isotope characterization from Merlot soil samples, Dealu Bujorului vineyard, F. D. Bora, A. Doinici, A. Calugar, I. V. Petrescu Mag, E. Gál, C. I. Bunea, *STUDIA UBB CHEMIA, LXII*, 4, Tom II, 2017 (p. 317-332),

30. Fe(III) – Sulfide interaction in globins: Characterization and quest for a putative Fe(IV)-sulfide species, A. C. Mot, C. Bischin, G. Damian, Amr A.A. Attia, E. Gal, N. Dina, N. Leopold, R. Silaghi-Dumitrescu, *Journal of Inorganic Biochemistry*, 2018, 179, 32-39.

31. Novel metal modified diatomite, zeolite and carbon xerogel catalysts for mild conditions wet air oxidation of phenol: Characterization, efficiency and reaction pathway, R. Pleșa Chicinaș, E. Gál, H. Bedeleian, M. Darabantu, A. Măicăneanu, *Separation and Purification Technology* 2018, 197, 36-46.

Postere și prezentări:

1. Sinteza bazelor Schiff fenotiazinice și reacții de complexare cu săruri de metale tranziționale.

E. Gal, T. Lovasz, L. Ghizdavu, I.A. Silberg, 11th International Conference of Chemistry, Cluj-Napoca 2005 November 11-13

2. Synthesis and structural analysis of sulfonylphenothiazine derivatives Emese Gál; Luiza Găină and Luminița Silaghi-Dumitrescu 11th Central and Eastern European NMR Symposium and 11th Central and Eastern European Bruker Users Meeting, Cluj-Napoca October 4-6, 2009

3. Microwave-assisted [4+2] cycloadditions of phenothiazinyl- and ferrocenyl Schiff bases with DHP catalyzed by iodine Emese Gál, Castelia Cristea, Luiza Gaina, Tamás Lovász, Antal Csámpai, Luminița Silaghi-Dumitrescu, 15th International Conference on Chemistry, Cluj-Napoca 2010.

4. SYNTHESIS AND CHARACTERIZATION OF SOME NEW PORPHYRINS WITH PHENOTHIAZINE UNITS Brém Balázs, Gál Emese, Lovász Tamás, Luminița Silaghi-Dumitrescu, Workshop "From Molecules to Functionalised Materials" – Cluj-Napoca, October 2010

5. New phenothiazinyl-porphyrine and spectroscopic study, E. Gal, B. Brem, L. Gaina, L. Silaghi-Dumitrescu, 4th BioNanoSpec, 2011, September 4-7, Cluj-Napoca

6. Fluorescence properties of new phenothiazinyl-porphyrine derivatives, E. Gal, B. Brem, L. Gaina, T. Lovasz, C. Cristea, L. Silaghi-Dumitrescu, 12th International Conference on Methods and Applications of Fluorescence Spectroscopy, imaging and probes. Strasbourg, France, September 11-14, 2011.

7. Synthesis of new phenothiazinyl-porphyrine derivatives and structural analysis, E. Gál, B. Brém, L. Găină, T. Lovász,

- C. Cristea, L. Silaghi-Dumitrescu, 17th International Conference on Chemistry, Cluj-Napoca, November 3-6, 2011.
8. CHARACTERIZATION OF Pd(II) AND Ru(II) COMPLEXES WITH NEW WATER SOLUBLE 2-PHOSPHINOPYRIMIDINE LIGANDS, Tamas LOVASZ, Emese GAL, Luminita SILAGHI-DUMITRESCU, XIX-th EuCOMC, 19-th EuCheMS International Conference on Organometallic Chemistry, Toulouse, France, 3-7 July 2011
9. SYNTHESIS AND CHARACTERIZATION OF SOME NEW WATER SOLUBLE PHOSPHINE LIGANDS, Tamas LOVASZ, Emese GAL, Luminita SILAGHI-DUMITRESCU, 17th International Conference on Chemistry, Cluj-Napoca, 3-6 Nov. 2011
10. Asymmetric hydrogenation of phenothiazinyl chalcones, Emese GÁL, Luiza GAINA, Tamás LOVÁSZ, Luminita SILAGHI-DUMITRESCU 18th International Conference on Chemistry, Oradea, 23-26 Nov. 2012
11. Green chemistry synthesis of aromatic nitriles, amines and their complexation with Pt/Pd, E. Gal, H. Petkes, L. Silaghi-Dumitrescu, 19th International Conference on Chemistry, Baia-Mare, 21-24 Nov. 2013
12. EPR-study and DNA interaction of new phenothiazinyl/phenyl mono and di nitrones, E. Gal, L. Gaina, H. Petkes, L. Silaghi-Dumitrescu, 16th JCF-Fruhjahrssymposium, Jena, Germany, March 26-29, 2014.
13. Synthesis of novel phenothiazinyl/phenyl mono and di-nitrones, EPR and DNA interaction study. E. Gal, H. Petkes, L. Gaina, K. Majdik, L. Silaghi-Dumitrescu, 20th International Conference on Organic Synthesis, 29 June-4 July 2014, Budapest, Hungary
14. Porphyrins, results and perspectives, Oral presentation on 20th International Conference on Chemistry, Cluj-Napoca, November 6-9, 2014.
15. Synthesis and structural characterization of regioisomeric phenothiazinyl schiff bases with different chromophores, Emese Gál; Luiza-Ioana Gaina; Castelia Cristea; Cornelia Majdik; Luminita Silaghi-Dumitrescu, 16th Blue Danube Symposium on Heterocyclic Chemistry, Balatonalmadi, Hungary, 14-17 June, 2015.
16. Structural characterization of meso-phenothiazinyl-porphyrins and their metal complexes, Emese Gál; Balázs Brém, Luiza-Ioana Gaina; Castelia Cristea; Cornelia Majdik; Luminita Silaghi-Dumitrescu, 33rd EUCMOS, Szeged, 30 July-04 August 2016, Hungary.
17. Structural characterization of novel barbiturates obtained by Knoevenagel condensation, Emese Gál, Balázs Brém, Luiza-Ioana Găină, Luminița Silaghi-Dumitrescu, XXXIV-th Romanian Chemistry Conference, October 4-7, 2016, Calimanesti-Caciulata, Valcea, Romania.
18. Structural characterization of novel barbiturates obtained by Knoevenagel condensation, Emese Gál, Balázs Brém, Luiza-Ioana Găină, Luminița Silaghi-Dumitrescu, 22nd International Conference on Chemistry, Timișoara, November 3-6, 2016.
19. Photophysical properties of meso-phenothiazinyl-porphyrins and their metal complexes, E. Gál, B. Brém, L. Găină, C. Cristea, A. M. Găbudean, S. Astilean, L. Silaghi-Dumitrescu, 15th Conference on Methods and Applications in Fluorescence. Bruges, Belgium, September 10-13, 2017.