

Nume si prenume: MUTIHAC LUCIA

Data nașterii: 15 aprilie, 1951, Băile Olănești, Vâlcea.

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Titlul științific: Doctor în chimie, „*Separarea aminoacizilor prin membrane lichide cu transportori macrociclici*”, 1990, Conducator de doctorat: Prof.dr. doc. Constantin Luca, Institutul de Chimie Fizică “I. G. Murgulescu” al Academiei Române, București.

Poziția actuala: Profesor

Conducător de doctorat: da, din 2004; 13 doctoranzi

Domenii de competență:

- Chimie analitica si chimie supramoleculară
- Recunoasterea moleculară
- Separarea compusilor chimici si biologici
- Procese de transport prin membrane
- Termodinamica complexilor supramoleculari
- Procesarea datelor în chimia analitică

Activitate didactica: cursuri

Metode de separare si analiza de urme (18 ani)

Biochimie Analitică (lb. română) (10 ani)

Biochimie Analitică (lb. engleză) (2 ani)

Chemometrie (master) (15 ani)

Metode membranare în chimia analitică (curs nou, 2008).

Referent la reviste de specialitate:

1. Journal of Inclusion Phenomena and Macrocyclic Chemistry;
2. Separation Science and Technology;
3. Journal of Membrane Science.
4. Polyhedron
5. Tetrahedron Letters
6. Tetrahedron
7. Analytica Chimica Acta

Evaluator la:

- Raport UNESCO asupra celei de a XV-a Școală Anuală de vară Membrane Processes in Water and Wastewater Treatment , Toulouse, France, 6-10 July, 1998;
- Evaluator granturi naționale si internationale: CNCISIS, CEEEX, RSC-2007 Research Fund Grants;
- Referent oficial în comisii de doctorat naționale și internationale.

Afilier:

- Membru al European Membrane Society;

- Membru al Societății de Chimie Analitică din România;
- Membru al American Chemical Society;
- Membru al Societății de Chimie din România;
- Coordonator pentru România în Global Supramolecular Chemistry Network.

Alte competențe:

- Membru în Comitetului Internațional de Organizare a 1 st International Conference on Supramolecular Science & Technology, Poland, Zakopane 23 Sept-3 Oct., 1998.
- Membru în Comitetului Internațional de Organizare a 2 nd International Conference on Supramolecular Science & Technology, Leuven, Belgium, 10-14 Sept., 2000.
- Secretar executiv la Revue Roumaine de Chimie, Academia Română, January 1986 - 1992,
- Co-Secretar la “ The 7 th International Symposium KAC’ 2001 on Kinetics in Analytical Chemistry, 26-29 September, 2001, Bucharest, Roumania.
- Chairman, RICCCE XIV-București, Romania, Secția 4, Septembrie 2005.

Capitole în străinătate

Books (invited contributions):

- 1. Amino Acid Separation through Liquid Membranes by L. Mutihac and I. Patroescu in** Récents Progrès en Génie de Procédés, , Ed. Groupe Française de Génie des Procédés, Paris, Vol. 6, pp. 431-435, 1992.
- 2. Thermodynamic aspects of complex formation between amino acids and peptides with macrocyclic ligands by H.-J. Buschmann and L. Mutihac in** Thermodynamic of Amino Acid and Protein Solutions, **Research Signpost/Transworld Research Network, (Eds. W. Kunz and J. Tsurko) October 2008, în curs de apariție.**

Cărți în țară

- ADVANCED DATA ANALYSIS IN CHEMOMETRICS (eng.)*
L. Mutihac, R. Mutihac
Editura Universității din București, București, ISBN 978-973-737-585-8, 2008, pg. 400.
- FUNDAMENTALS OF ANALYTICAL BIOCHEMISTRY (eng.)*
Lucia Mutihac
Editura Universității din București, București, ISBN 973-737091, 2005, pg. 194.
- ELEMENTE FUNDAMENTALE DE CHEMOMETRIE*
Lucia Mutihac, Vasile David
Editura Universității din București, București, ISBN 973-575-917-9, 2004, pg. 198.
- CHEMOMETRIE, PRINCIPII SI APLICATII IN CHIMIA ANALITICA*
Camelia Bala, Lucia Mutihac

- Editura Universității din București, București, ISBN 973-575-437-1, 2000, pg. 140.
5. *SEPARAREA COMPUSILOR CHIMICI SI BIOLOGICI PRIN MEMBRANE SI PROCESE MEMBRANARE*
Lucia Mutihac, Camelia Bala
Editura Universității din București, București, ISBN 973-575-301-4, 1999, pg. 131.
 6. *MECANISME DE TRANSPORT PRIN MEMBRANE LICHIDE*
Constantin Luca, Lucia Mutihac, Radu Mutihac, Ana Maria Josceanu
Editura Academiei Române, București, ISBN 973-27-0596-5, 1998, pg. 236.
 7. *CHEMOMETRIE,*
Lucia Mutihac, Vasile David
Editura Universității din București, București, ISBN 973-575-085-6, 1997, pg. 188.
 8. *APLICATII ANALITICE ALE RECEPTORILOR MACROCICLICI*
Elena Diacu, Lucia Mutihac
Editura PRINTECH, București, ISBN 978-973-718-450-4, 2006, pg. 138.

Brevete, invenții,

Patent No. 89640/30.01.1986

*Procedeu de stabilizare a guaiazulenei din soluțiile de produse farmaceutice fotooxidabile
(Method of Guajazulene Stabilization from Photooxidable Pharmaceutical Solutions)*

T. Constantinescu, L. Mutihac, E. Negoescu, T. Marinică, M. Gheorghiu, M. Rogoșcă

Lista articolelor ISI

1. *Determinarea dipropilenglicolului din unele compoziții de parfumuri prin cromatografie în fază gazoasă,*
V. Rădulescu, E. Negoescu, L. Mutihac, and C. Fărăianu
Rev. Chim. (București), 3, 281-285, 1981.
2. *Studiul stabilității guajazulenei într-un extract hidroalcoolic de mușețel*
E. Negoescu, L. Mutihac, C. Fărăianu, and M. Botea
Rev. Chim.(București), 4, 375-379, 1981.
3. *Studiul compoziției uleiului volatil obținut din mușețel*
E. Negoescu, L. Mutihac, M. Botea, C. Fărăianu, N. Palibroda, and M. Culea
Rev. Chim. (București), 9, 902-908, 1981.
4. *Studii de caracterizare calitativă a compoziției unor extracte obținute din florile de mușețel*
E. Negoescu, M. Botea, L. Mutihac, C. Fărăianu, N. Palibroda, and M. Culea
Rev. Chim. (București), 2, 162-166, 1982.
5. *Extracția cu solvenți a aminoacizilor sub formă de complecși cu liganzi macrociclici*
C. Luca, L. Mutihac, and T. Constantinescu

- Rev. Chim. (București)*, 39, 1141-1145, 1988.
6. *The Active Transport of Amino Acids Through Liquid Membranes by Macrocyclic Carriers and pH Gradient*
C. Luca, L. Mutihac, T. Constantinescu, and A. Csuma
Rev. Roum. Chim., 34, 2039-2045, 1989.
 7. *Separation of Amino Acids by Liquid Membranes with Macrocyclic Carriers*
C. Luca, L. Mutihac, and T. Constantinescu
Rev. Roum. Chim., 35, 467-473, 1990.
 8. *Procedeu pentru prelucrarea gudronului de lemn. I. Obținerea compușilor Maltol and Cicloten*
T. Constantinescu, G. Rusănescu, L. Mutihac, F. Marinescu, S. Budrugeac, and C. Stăncioiu
Rev. Chim. (București), 42, 44-52, 1991.
 9. *Procedeu pentru prelucrarea gudronului de lemn; II; Obținerea fracțiilor neutră, acizilor carboxilici și a celor fenolice*
T. Constantinescu, G. Rusănescu, L. Mutihac, F. Marinescu, S. Budrugeac, and C. Stăncioiu
Rev. Chim. (București), 42, 283-287, 1991.
 10. *Separation of Amino Acids by Extraction with Macrocyclic Ligands*
L. Mutihac and C. Luca
Rev. Roum. Chim., 36, 85-90, 1991.
 11. *The Influence of Operational Parameters upon the Extraction of Amino Acids with Macrocyclic Ligands*
L. Mutihac, C. Luca, T. Constantinescu, M. Oprea, and M. Radu
Rev. Roum. Chim., 36, 91-99, 1991.
 12. *Mathematical Modelling of Ion Pair Carrier Mediated Transport through Liquid Membranes*
L. Mutihac, R. Mutihac, and C. Luca
Rev. Roum. Chim., 36, 551-561, 1991.
 13. *Rate-Limiting Processes in Ion Pair Carrier Mediated Transport through Bulk Liquid Membranes*
L. Mutihac, R. Mutihac, N. Zârnă, C. Luca, and T. Constantinescu
Rev. Roum. Chim., 37, 91-94, 1992.
 14. *Crown Ethers in Solvent Extraction Processes; I, The Effects of Various Solvents on the Amino Acid Extraction*
L. Mutihac and I. Patroescu
Rev. Roum. Chim., 37, 511-514, 1992.

15. *Modelling and Simulation of Carrier Mediated Transport of Ion Pairs through Liquid Membranes*
L. Mutihac and R. Mutihac
Acta Chimica Hungarica - Models in Chemistry, 129, No. 3-4, 573-577, 1992.
16. *Characteristic Parameters in Active Transport through Liquid Membranes*
L. Mutihac, I. Patroescu, and R. Mutihac
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17. *Crown Ethers in Solvent Extraction Processes. II. Extraction Constants of Amino Acids with Some Crown Ethers*
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18. *Procedeu pentru prelucrarea gudronului de lemn. III. Obținerea 2-metoxifenolului și a 2,6-dimetoxifenolului*
T. Constantinescu, F. Marinescu, L. Mutihac, S. Rădulescu, L. Papahagi, I. Duță, C. Stăncioiu, and N. Cristescu.
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19. *Interactions between Protonated Amines and the Macrocyclic Ligand 18-crown-6 in Methanol*
H.-J. Buschmann and L. Mutihac
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20. *Complex Formation between the Macrocyclic Ligand 18-crown-6 and Unprotonated Amines in Methanol*
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21. *The Transport of Amino Acids by 18-crown-6 through Liquid Membranes*
L. Mutihac, R. Mutihac, T. Constantinescu, and C. Luca
J. Inclusion Phenom. Molec. Recognit. Chem., 17, 45-51, 1994.
22. *Solvent Extraction and the Transport of K^+ through Liquid Membranes using DB-18-crown-6 Carrier*
L. Mutihac and E. Blidaru
Rev. Roum. Chim., 39, 1197-1201, 1994.
23. *Solvent Influence upon Complex Formation between Crown Ethers and Unprotonated Amines*
H.-J. Buschmann, E. Schollmeyer, G. Wenz, and L. Mutihac
Thermochim. Acta, 261, 1-5, 1995.

24. *Solvent Extraction of Amino Acids with Crown Ethers and Cryptand [2.2.2]*
L. Mutihac, D. O. Popescu, and R. Stefan
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25. *Molecular Recognition of Some Amines by Kryptofix[2.2] and Kryptofix [2.2.2]*
L. Mutihac
Rev Roum. Chim., 40, 577-579, 1995.
26. *Liquid Membrane Transport of Supramolecular Complexes of Some Amines and AminoAcids with Macrocyclic Ligands*
L. Mutihac, R. Mutihac, and H.-J. Buschmann
J. Inclusion Phenom. Molec. Recognit. Chem., 23, 167-174, 1995.
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Rev. Roum. Chim., 41, 433-436, 1996.
28. *Membrane transport of some amino acids and amines using macrocyclic carriers*
H.-J. Buschmann and L. Mutihac
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29. *Correlations between the Structure of α -Amino Acids in Supramolecular Complex Form and Their Distribution in Biphasic Systems*
L. Mutihac, N. Zărnă, T. Constantinescu, and R. Mutihac
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30. *The complexation of the ammonium ion by 18-crown-6 in different solvents and by noncyclic ligands, crown ethers and cryptands in methanol*
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31. *The chlorinated solvents effects upon the distribution of amino acids as supramolecular complexes with crown ethers*
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32. *Relationship between physical-chemistry parameters of α -amino acids and those of the chlorinated solvents in the case of the L/L partition as supramolecular complexes.*
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33. *Crown ethers in solvent extraction processes. III¹ Extraction of some amino acids with 18-crown-6 and various anions*
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34. *Correlation aspects in extraction and liquid membrane transport of amino acid with macrocyclic ligands*
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35. *The complexation of amino acids by crown ethers and cryptands in methanol*
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36. *An experimental technique to determine the complex stabilities of nearly insoluble dibenzo crown ethers with ammonium and alkylammonium ions in aqueous solution*
H.-J. Buschmann, E. Cleve, L. Mutihac, and E. Schollmeyer
Anales de Quimica, Int. Ed., 94, 5-8, 1998.
37. *Physicochemical parameters of the transport of amines and amino acids through liquid membranes by macrocyclic ligands*
H.-J. Buschmann, L. Mutihac, and R. Mutihac
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38. *Self-Complexation of Aminobenzo-Crown Ethers*
H.-J. Buschmann, L. Mutihac, K. Jansen, and E. Schollmeyer
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39. *The complexation of amino alcohols and amino acids by the crown ether 18C6 and the cryptand [2.2.2] in methanol*
H.-J. Buschmann, E. Schollmeyer, and L. Mutihac
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40. *Complexation formation between some amino acids and dibenzo-18-crown-6 in aqueous solution*
H.-J. Buschmann, E. Cleve, L. Mutihac, and E. Schollmeyer
Rev. Roum. Chim., 43, 941-944, 1998.
41. *Molecular recognition aspects of Glycyl-L-Leucine extraction in 1,2-dichloroethane by various macrocyclic ligands,*
L. Mutihac, H.-J. Buschmann, and R. Mutihac
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42. *Interactions between protonated amines, aza crown ethers, and cryptands with dibenzocrown ethers by a new spectrophotometric technique*
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43. *Complex formation between crown ethers and urea and some guanidinium derivatives in methanol*
H.-J. Buschmann, H. Dong, L. Mutihac and E. Schollmeyer
Journal of Thermal Analysis and Calorimetry, **57**, 487-491, 1999.
44. *Liquid-liquid extraction of some nonprotein amino acids by 18-crown-6 and cryptand (222)*
H.-J. Buschmann and L. Mutihac
Annali di Chimica, 90, nr. 5-6, 369-377, 2000.
45. *A novel experimental method for the study of complex formation between alpha-, beta-, and gamma- cyclodextrin and nearly insoluble cucurbituril-[2]rotaxanes in aqueous solution*
H.-J. Buschmann, E. Cleve, L. Mutihac, and E. Schollmeyer
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46. *The complexation of protonated amines, diaza 18-crown-6 and cryptand (222) by 18-crown-6 in different solvents*
H.-J. Buschmann, L. Mutihac, A. Wego and E. Schollmeyer
Polish J. Chemistry., 74, 61-66, 2000.
47. *Interaction and transport through liquid membranes of some dipeptide complexes with macrocyclic receptors*
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48. *Complexes of amines compound by different macrocyclic receptors. Review*
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49. *Membranes and Membrane Processes.III^l. Applications of Membrane Processes in Water Treatment*
L. Mutihac, H.-J. Buschmann, E. Diacu, and R. Mutihac
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50. *Complexation of some dipeptide by 18-crown-6*
L. Mutihac

- Rev.Roum.Chim.*, 46 (10), 1183-1185, 2001.
51. *Complexation of amino acid methylesters and amino alcohols by 18-crown-6 and benzo-18-crown-6 in methanol*
H.-J. Buschmann, E. Schollmeyer and L. Mutihac
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52. *Aspects of peptide complexation with macrocyclic receptors*
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53. *The influence of water molecules on the complex formation between K^+ and 18-crown-6 and the cryptand (222) in chloroform*
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54. *Cyclodextrins and Polymers. Towards Applications. Review*
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55. *Characteristic Extraction and Transport Properties of Crown Ethers and Cryptand [2.2.2] for Amino Acid Methylesters*
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57. *Heats of protonation of amines, diazacrown ethers and cryptands in methanol*
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60. *Complexation, solvent extraction, and transport through liquid membrane of protonated peptides using crown ethers*
H.-J. Buschmann and Lucia Mutihac
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61. *Complexation of some amino acids and peptides by p-sulfonatocalix[4]arene and hexasodium p-sulfonatocalix[6]arene in aqueous solution*
H.-J. Buschmann, L. Mutihac, and E. Schollmeyer
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62. *Some aspects of extractability and transport of amino acid esters by calixarenes*
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J. Incl. Phenom., 47, 3-4, 123-128, 2003.
63. *Relationship between extraction properties and transport through liquid membrane of amino acids by calixarene derivatives*
L. Mutihac, H.-J. Buschmann, R. Mutihac
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64. *Molecular recognition of amino acid methylesters*
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65. *Thermodynamic data for the complex formation of alkylamines and their hydrochlorides with α -Cyclodextrin in aqueous solution*
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66. *Complexation Behavior of Cucurbit[6]uril with Short Polipeptides*
Hans-Jürgen Buschmann, Lucia Mutihac, Radu-Cristian Mutihac, and Eckhard Schollmeyer
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67. *Complexation and separation of amines, amino acids, and peptides by functionalized calix[n]arenes. Review*
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- H.-J. Buschmann, L. Mutihac, E. Schollmeyer
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76. *Considerations on MS/MS detection of Bromazepam after liquid chromatographic separation from plasma samples: application to a bioequivalence study*
F. Albu, C. Georgita, F. Tache, L. Mutihac, A. Medvedovici, V. David
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Journal of Inclusion Phenomena and Macrocyclic Chemistry, 59, 177-181, 2007.
78. *Mining in chemometrics. Review*
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82. *Extraction and transport behavior of aromatic amino acids by modified cyclodextrin*
 L. Kim, A.-D. Stancu, E. Diacu, H.-J. Buschmann, L. Mutihac
Supramolecular Chemistry, 2009, in press.
83. *Chromo-ionophoric properties of para-(5-phthalhydrazide-azo)-phenylene-N-aza-15-crown-5 in the presence of lithium and sodium ions*
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