



Europass Curriculum Vitae

Personal information

Habil. Dr. Csaba Paizs

First name/ Surname
Address Babeş-Bolyai University of Cluj-Napoca, Faculty of Chemistry and Chemical Engineering, Department of Chemistry and Chemical Engineering in Hungarian Language, Enzymology and Applied Biocatalysis Research Centre, Arany János str. 11, 400028 Cluj-Napoca (Romania)

Telephone +40-264-593833 Mobile | +40-746-869304

Fax +40-264-590818

E-mail csaba.paizs@ubbcluj.ro; paizs@chem.ubbcluj.ro

Citizenship Romanian

Nationality Hungarian

Date of birth 01 April 1969

Gender Male

Occupational field **Professor**

Work experience

Dates 01 October 1996 - 01 March 2007

Occupation or position held Teaching assistant, Lecturer

Main activities and responsibilities Education and research

Name and address of employer Babeş-Bolyai University, Mihail Kogălniceanu 1, Cluj-Napoca (Romania)

Dates 01 March 2007 - 26 September 2015

Occupation or position held Associate Professor

Main activities and responsibilities Education and research

Name and address of employer Babeş-Bolyai University, Mihail Kogălniceanu 1, Cluj-Napoca (Romania)

Dates 2013 →

Main activities and responsibilities PhD supervisor in chemical science

Name and address of employer Babeş-Bolyai University, Mihail Kogălniceanu 1, Cluj-Napoca (Romania)

Dates 27 September 2015 →

Occupation or position held Professor

Main activities and responsibilities Education and research

Name and address of employer Babeş-Bolyai University, Mihail Kogălniceanu 1, Cluj-Napoca (Romania)

Education and training

Dates 15 March 2012→

Title of qualification awarded Habilitated Doctor in chemical science

Dates 01 October 1996 - 15 June 2001

Title of qualification awarded PhD Chemistry

Name and type of organisation providing education and training	Babeş-Bolyai University																														
Dates	01 October 1994 - 15 June 1995																														
Title of qualification awarded	Master degree in Catalysis and Biocatalysis																														
Name and type of organisation providing education and training	Babeş-Bolyai University																														
Dates	15 September 1989 - 14 June 1994																														
Title of qualification awarded	Chemical Engineer																														
Name and type of organisation providing education and training	Babeş-Bolyai University																														
Personal skills and competences																															
Mother tongue(s)	Romanian, Hungarian																														
Other language(s)	English																														
Self-assessment																															
<i>European level</i>																															
English	<table border="1"> <thead> <tr> <th colspan="4">Understanding</th> <th colspan="4">Speaking</th> <th colspan="2">Writing</th> </tr> <tr> <th colspan="2">Listening</th> <th colspan="2">Reading</th> <th colspan="2">Spoken interaction</th> <th colspan="2">Spoken production</th> <th colspan="2"></th> </tr> </thead> <tbody> <tr> <td>C2</td> <td>Proficient user</td> <td>C2</td> <td>Proficient user</td> <td>C2</td> <td>Proficient user</td> <td>C1</td> <td>Proficient user</td> <td>C2</td> <td>Proficient user</td> </tr> </tbody> </table>	Understanding				Speaking				Writing		Listening		Reading		Spoken interaction		Spoken production				C2	Proficient user	C2	Proficient user	C2	Proficient user	C1	Proficient user	C2	Proficient user
Understanding				Speaking				Writing																							
Listening		Reading		Spoken interaction		Spoken production																									
C2	Proficient user	C2	Proficient user	C2	Proficient user	C1	Proficient user	C2	Proficient user																						
Research interests	<p><i>Synthetic Chemistry:</i> Stereoselective biotransformations (lipases, esterases, oxidoreductases, ammonia-lyases and mutases, transaminases, decarboxilases, etc.)</p> <p><i>Biochemistry:</i> Enzyme mechanistic studies; Study of the stereoselectivity of enzymatic reactions at molecular level; Rational design of the enzymes by molecular biology tools;</p> <p><i>Biotechnology:</i> Development of biocatalysts (enzyme immobilizations, modifications, novel lipases, hydrolases, MIO-enzymes, oxido-reductases, transaminases, decarboxylases, etc.) – Development of enzymatic networks, Enzyme immobilization, Development of integrated (multi)enzymatic micro- and minireactor systems with down-stream units for stereoselective biotransformations</p> <p><i>Analytical chemistry:</i> chromatographic separation of stereoisomers and proteins</p>																														
Teaching	Biochemistry, Enzymology, Biocatalysis, Biotechnology, Asymmetric Synthesis; (lectures, lab practice) Diploma supervisor since 1999 (~ 5 students / year), PhD supervisor since 2014 (4 active PhD students, 3 former PhD students, all awarded with the title of PhD in Chemistry, qualifications: 1 very good, 2 excellent)																														
Organizational skills and competences	Project manager of national grants for young researchers (2), Ideas (2) and Joint Applied Research Projects (1); Project responsible of national Joint Applied Research Projects (2)																														
Academic administration	Director of the Department of Chemistry and Chemical Engineering in Hungarian Language Head of the Enzymology and Applied Biocatalysis Research Centre President of the Commission for Scientific Research of the Senate of Babeş-Bolyai University																														
Scientific organization memberships	Romanian Chemical Society, Romanian Catalysis Society, Regular member of the European Society of Applied Biocatalysis																														
Committee membership	Vice-President of the Regional Committee of the Hungarian Academy of Sciences, President of the Commission for Chemical Sciences National Committee for the Accreditation of Academic Titles, Degrees and Diplomas, Chemistry and Chemical Engineering section (2011-2012), COST CM1303 action (Systems Biocatalysis, SysBiocat): Romanian Member of Committee																														

Referee for scientific journals	<i>Reaction Chemistry and Engineering, Appl. Biochem. Biotechnol., Adv. Synth. Catal., Biocat. Biotechnol., J. Mol. Catal. B, Enzym, Catal. Plos-ONE, Proc. Biochem., Tetrahedron: Asymmetry, Catalysis Lett., Catal. Today, Nature Catalysis, etc.</i>
Activity in scientific evaluations	Project evaluations: for national level projects for Romania - CNCSIS, Hungary - OTKA and Netherland - NWO. PhD evaluations as member of evaluation committees (in Romania and Hungary)
Technical skills and competences	Development of the Biocatalysis and Asymmetric enzymatic synthesis lab. Development of the Enzymology, Genetics and Proteomic lab. Development of Chromatography lab for Chiral separation, Development of Flow Chemistry lab.
Fellowships	<i>CIMO Postdoc fellowship</i> (University of Turku, Finland, in the group of Prof. Liisa T. Kanerva): enzymatic DKR of heteroaryl-cyanohydrins (2002) <i>EU granted Postdoc Fellowship</i> (Department of Biochemistry, University of Karlsruhe, Germany; in the group of Prof. János Rétey): MIO enzymes, transhydroxylases, phosphatases (2003-2005)
Scientific achievements	4 Monographs (co-author) – 4 book chapters (on MIO-enzymes, biofuels and enzymatic polymerization) – 101 Scientific articles (Σ IF ~400) – citations ~ 1520 (Scopus, h-index: 21), ~1370 (Web of Science h-index: 20), ~1900 (Google Scholar, h-index: 22)– 1 Patent – ~ 65 Conference lectures / posters
Awards	The Oláh György prize of the Hungarian Academy of Science (2007)

Link of my public profiles:

Google Scholar: <https://scholar.google.com/citations?user=dfzb11MAAAAJ&hl=en&oi=ao>

ResearchGate: https://www.researchgate.net/profile/Csaba_Paizs

ORCID: <https://orcid.org/0000-0002-7403-7098>

ResearcherID (Publons): <https://publons.com/researcher/1418630/csaba-paizs/>

Scopus ID: 6603023757

Cluj-Napoca

May 12, 2021

Prof. Habil. Dr. Eng. Paizs Csaba



Paizs Csaba lucrări

Books:

1. Moldovan, P., Toşa, M. I., Let, D., Majdik, C., **Paizs, C.**, Irimie, F., D. *Aplicații pentru laboratorul de biochimie*, Napoca Star, Cluj-Napoca, 2006.
2. Irimie, F., D., **Paizs, C.**, Toşa, M. I. *Biotransformări în sinteza organică*, Napoca Star, Cluj-Napoca, 2006.
3. Toşa, M. I., **Paizs, C.**, Irimie, F. D. *Bioprocese pentru obținerea medicamentelor și intermediarilor*, Napoca Star, Cluj-Napoca, 2007.
4. **Paizs, C.**, Katona, A., Brem, J., Bencze, L. C. *Insights in Pure and Applied Biocatalysis*, Napoca Star, Cluj-Napoca, 2015.

Book chapters:

1. Poppe, L., **Paizs, C.**, Kovács, K., Irimie, F. D., Vértessy, B. "Preparation of unnatural amino acids with ammonia-lyases and 2,3-aminomutases", in *Methods in Molecular Biology*, Vol. 794 "Unnatural amino acids", Part 1; New York: Springer Science+Business Media, **2012**, pp 3-19.
2. Irimie, F. D., **Paizs, C.**, Toşa, M. I. "Polymeric Materials Obtained through Biocatalysis, in *Polymeric Biomaterials: Structure and Function*", Volume 1, Eds: Dumitriu, S., Popa, V. CRC Press, USA, **2013**, pp. 617-657.
3. Irimie, F. D., **Paizs, C.**, Toşa, M. I., Bencze, L. C. "Biodiesel, a Green Fuel Obtained Through Enzymatic Catalysis", in *Biomass as Renewable Raw Material to Obtain Bioproducts of High-tech Value* Eds: Popa, V., Volf, I. Elsevier, Netherlands, **2018**, pp. 191-234.
4. Nagy, E. Z. A., Tork, S. D., Filip, A., Poppe, L., Toşa, M. I., **Paizs, C.**, Bencze, L. C. "Production of L- and D-Phenylalanine Analogues Using Tailored Phenylalanine Ammonia-Lyases", in *Applied Biocatalysis: The Chemist's Enzyme Toolbox* vol. 42 (4), Eds: Whittall, J., Sutton, P. W. John Wiley & Sons, New-York, USA, **2020**, pg. 215.

Patent:

1. Barabás, R., **Paizs, C.**, Pop, A. Fungicidal composition based on salts of the *N,N*-ethylene-bis-thiocarbamic acid and process for preparing the same (2010) **Patent Number:** RO122830-B1

Publication List:

1. Toşa, C., Miclăuş, V., Toşa, M. I., Pop, Al., **Paizs, C.** (1997): Oxidation of methanol to formaldehyde on Mo-Fe oxide as catalyst. I Mathematical model of the mass balance. *Revista de Chimie (Bucharest)* **48**, 284-290. (I.f. 0.125)
2. Pop, Al., **Paizs, C.**, Toşa, C., Toşa, M. I., Miclăuş, V. (1997): Oxidation of methanol to formaldehyde on Mo-Fe oxide as catalyst. II Mathematical modeling and process analysis. *Revista de Chimie (Bucharest)* **48**, 616-620. (I.f. 0.125)
3. Irimie, F. D., **Paizs, C.**, Toşa, M. I., Afloroaiei, C., Miclăuş, V. (1997): Baker's yeast mediated reductions of some nitrodibenzofurans. *Heterocyclic Communications* **3**, 549-553. (I.f.0.401)

4. Damian, G., Cozar, O., Miclăuș, V., **Paizs, C.**, Znamirovski, V., Chiș, V., David, L. (1998): ESR Study of the dynamics of adsorbed nitroxide radicals on porous surfaces in the dehydration process. *Colloids and Surfaces A* 137, 1-6. (I.f. 1.146)
5. Irimie, F. D., Afloroaiei, C., Toșa, M. I., **Paizs, C.** (1999): Bioreduction with baker's yeast of π -deficient heterocyclic aldehydes. *Heterocyclic Communication* 5, 253-256. (I.f. 0.401)
6. Grosu, I., Balog, M., **Paizs, C.**, Ple, G., Irimie, F. D., Mager, S., Podea, R. (2000): Synthesis and stereochemistry of some new 1,3-dioxane derivatives obtained from 5-aryl-2-furaldehydes. *Revue Roumaine de Chimie* 45, 877-882. (I.f. 0.259)
7. Toșa, M. I., **Paizs, C.**, Majdik, C., Poppe, L., Kolonits, P., Silberg I. A., Novák, L., Irimie, F. D. (2001): Selective oxidation methods for preparation of N-alkylphenothiazine sulfoxides and sulfones. *Heterocyclic Communications* 7, 277-282. (I.f. 0.352)
8. Toșa, M. I., **Paizs, C.**, Majdik, C., Moldovan, P., Novák, L., Kolonits, P., Szabó, É., Poppe, L., Irimie, F. D. (2002): Baker's yeast mediated preparation of (10-alkyl-10H-phenothiazin-3-yl)methanols. *Journal of Molecular Catalysis B, Enzymatic* 17, 241-248. (I.f. 1.408)
9. Toșa, M. I., **Paizs, C.**, Majdik, C., Novák, L., Kolonits, P., Irimie, F., Poppe, L. (2002): Optically active 3-substituted-10-alkyl-10H-phenothiazine-5-oxides by enantiomer selective biotransformations. *Tetrahedron: Asymmetry* 13, 211-221. (I.f. 2.265)
10. Cimpoiu, C., Hodișan, T., Toșa, M. I., **Paizs, C.**, Majdik, C., Irimie, F. D. (2002): Separation of N-alkyl-phenothiazin- sulfones by HPTLC using an optimum mobile phase. *Journal of Pharmaceutical and Biomedical Analysis* 28, 385-359. (I.f. 1.177)
11. Iliescu, T., Irimie, F. D., Bolboaca, M., **Paizs, C.**, Kiefer, W. (2002): Vibrational spectroscopic investigations of 5-(4-fluoro-phenyl)-furan-2-carbaldehyde. *Vibrational Spectroscopy* 29, 235-239. (I.f. 1.167)
12. Iliescu, T., Irimie, F. D., Bolboaca, M., **Paizs, C.**, Kiefer, W. (2002): Surface enhanced Raman spectroscopy of 5-(4-fluoro-phenyl)-furan-2-carbaldehyde adsorbed on silver colloid. *Vibrational Spectroscopy* 29, 251-255. (I.f. 1.167)
13. Irimie, F. D., **Paizs, C.**, Toșa, M. I., Majdik, C., Mișca, R., Silaghi-Dumitrescu, R. (2002): Bioorganic synthesis of some (5-(benzothiazole-2-yl)furan-2-yl)methanols in cell catalysis using *Saccharomyces cerevisiae*. *Heterocyclic Communications* 8, 489-492. (I.f. 0.352)
14. **Paizs, C.**, Toșa, M. I., Majdik, C., Bódai, V., Novák, L., Irimie, F. D., Poppe, L. (2002) Chemo-enzymatic preparation of hydroxymethyl ketones. *Journal of the Chemical Society, Perkin Transactions 1* 21, 2000-2002. (I.f. 2.208)
15. **Paizs, C.**, Toșa, M. I., Majdik, C., Tähtinen, P., Irimie, F. D., Kanerva, L. T. (2003) *Candida antarctica* lipase A in the dynamic resolution of novel furylbenzotiazol-based cyanohydrin acetates. *Tetrahedron: Asymmetry* 14, 619-627. (I.f. 2.178)
16. **Paizs, C.**, Toșa, M. I., Majdik, C., Moldovan, P., Novák, L., Kolonits, P., Marcovici, A., Irimie, F. D., Poppe, L. (2003): Optically active 1-(benzofuran-2-yl)ethanols and ethane-1,2-diols by enantiotopic selective bioreductions. *Tetrahedron: Asymmetry* 14, 1495-1501. (I.f. 2.178)

17. Bolboaca, M., Iliescu, T., **Paizs, C.**, Irimie, F. D., Kiefer, W. (2003): Raman, Infrared, and Surface-Enhanced Raman Spectroscopy in Combination with *ab initio* and density functional theory calculations on 10-isopropyl-10H-phenothiazine-5-oxide. *Journal of Physical Chemistry A* 107, 1811-1818. (I.f. 2.792)
18. **Paizs, C.**, Tähtinen, P., Lundell, K., Poppe, L., Irimie, F. D., Kanerva, L. T. (2003): Preparation of novel phenylfuran-based cyanohydrin esters: lipase-catalysed kinetic and dynamic resolution. *Tetrahedron: Asymmetry* 14, 1895-1904. (I.f. 2.178)
19. **Paizs, C.**, Toşa, M. I., Bódai, V., Szakács, Gy., Kmecz, I., Simándi, B., Majdik, C., Novák, L., Irimie F. D., Poppe L. (2003): Kinetic resolution of 1-(benzofuran-2-yl)ethanols by lipase-catalyzed enantiomer selective reactions. *Tetrahedron: Asymmetry* 14, 1943-1949. (I.f. 2.178)
20. **Paizs, C.**, Tähtinen, P., Toşa, M. I., Majdik, C., Irimie, F. D., Kanerva, L. T. (2004) Biocatalytic enantioselective preparation of phenothiazine-based cyanohydrin acetates: kinetic and dynamic kinetic resolution. *Tetrahedron* 60, 10533-10540. (I.f. 2.643)
21. Iliescu, T., Maniu, D., Chiş, V., Irimie, F. D., **Paizs, C.**, Toşa, M. (2005) NIR surface enhanced Raman spectroscopy and bands assignment by DFT calculations of non-natural β -amino acids. *Chemical Physics* 310, 189-199. (I.f. 2.316)
22. **Paizs, C.**, Katona, A., Rétey, J. (2006) The Interaction of Heteroaryl-Acrylates and Alanines with Phenylalanine Ammonia-Lyase from Parsley. *Chemistry, a European Journal* 12, 2739-2744. (I.f. 5.015)
23. **Paizs, C.**, Katona, A., Rétey, J. (2006) Chemoenzymatic One-Pot Synthesis of Enantio-Pure L-Arylalanines From Arylaldehydes. *European Journal of Organic Chemistry* 1113-1116. (I.f. 2.769)
24. Katona, A., Toşa, M. I., **Paizs, C.**, Rétey, J. (2006) Inhibition of Histidine Ammonia-Lyase by Heteroaryl-alanines and Acrylates. *Chemistry and Biodiversity* 3, 502-508. (I.f. 1.616)
25. **Paizs, C.**, Bartlewski-Hof, U., Rétey, J. (2007) Investigation of the Mechanism of Action of Pyrogallol-Phloroglucinol Transhydroxylase by Using Putative Intermediates. *Chemistry, a European Journal* 13, 2805-2811. (I.f. 5.330)
26. Podea, P., Toşa, M. I., **Paizs, C.**, Irimie, F. D. (2008) Chemoenzymatic preparation of enantiopure L-benzofuranyl- and L-benzo[b]thiophenyl alanines. *Tetrahedron: Asymmetry* 19, 500-511. (I.f. 2.796)
27. Toşa, M. I., Pilbák, S., Moldovan, P., **Paizs, C.**, Sztzker, G., Szakács, Gy., Novák, L., Irimie, F. D., Poppe, L. (2008) Lipase-catalyzed kinetic resolution of racemic 1-heteroarylethanols-experimental and QM/MM study. *Tetrahedron: Asymmetry* 19, 1844-1852. (I.f. 2.796)
28. Podea, P., **Paizs, C.**, Toşa, M. I., Irimie, F. D. (2008) Baker's yeast-mediated synthesis of (R)- and (S)-heteroaryl-ethane-1,2-diols. *Tetrahedron: Asymmetry* 19, 1959-1964. (I.f. 2.796).
29. Toşa, M. I., Podea, P., **Paizs, C.**, Irimie, F. D. (2008) Chemoenzymatic synthesis of (R)- and (S)-1-heteroarylethanols. *Tetrahedron: Asymmetry* 19, 2068-2071. (I.f. 2.796).

30. **Paizs, C.**, Diemer, T., Rétey, J. (2008) The putative coenzyme B₁₂-dependent methylmalonyl-CoA mutase from potatoes is a phosphatase. *Bioorganic Chemistry* 36, 261-264. (I.f. 1.985).
31. Brem, J. **Paizs, C.**, Toşa, M. I., Vass, E., Irimie, F. D. (2009) Enzyme-catalysed synthesis of (*R*)- and (*S*)-3-heteroaryl-3-hydroxypropanoic acids and their derivatives. *Tetrahedron: Asymmetry* 20, 489-496. (I.f. 2.625)
32. Irimie, F. D., **Paizs, C.**, Toşa, M. I., Podea, P. (2009) New ways for old structures. *Studia Universitatis Babeş-Bolyai, Chemia* 54, 7-16. (I.f. 0.086)
33. Sandu, D., Lingvay, I., Lányi, Sz., Micu, D. D., Popescu, C. L., Brem, J. Bencze, L. Cs., **Paizs, C.*** (2009) The effect of electromagnetic fields on baker's yeast population dynamics, biocatalytic activity and selectivity. *Studia Universitatis Babeş-Bolyai, Chemia* 54, 195-201. (I.f. 0.086)
34. Bencze L. Cs., **Paizs, C.**, Toşa, M. I., Irimie, F. D. (2010) Substituent effects on the stereochemical outcome of the baker's yeast-mediated biotransformation of α -hydroxy- and α -acetoxymethyl-5-phenylfuran-2-yl-ethanones. *Tetrahedron: Asymmetry* 21, 356-364. (I.f. 2.484)
35. Brem, J. Toşa, M. I., **Paizs, C.**, Vass, E., Irimie, F. D. (2010) Enzyme-catalyzed synthesis of (*R*)- and (*S*)-3-hydroxy-3-(10-alkyl-10*H*-phenothiazin-3-yl)propanoic acids. *Tetrahedron: Asymmetry* 21, 365-373. (I.f. 2.484)
36. Bencze L. Cs., **Paizs, C.**, Toşa, M. I., Vass, E., Irimie, F. D. (2010) Synthesis of enantiomerically enriched (*R*)- and (*S*)-benzofuranyl- and benzo[*b*]thiophenyl-1,2-ethanediols *via* enantiopure cyanohydrins as intermediates. *Tetrahedron: Asymmetry* 21, 443-450. (I.f. 2.484)
37. Brem, J., Toşa, M. I., **Paizs, C.**, Munceanu, A., Matković-Čalogović, D., Irimie, F. D. (2010) Lipase-catalyzed kinetic resolution of racemic 1-(10-alkyl-10*H*-phenothiazin-3-yl)ethanols and their butanoates. *Tetrahedron: Asymmetry* 21, 1993-1998. (I.f. 2.484)
38. Bencze L. C., **Paizs, C.**, Toşa, M. I., Trif, M., Irimie, F. D. (2010) CaL-B a highly selective biocatalyst for the kinetic resolution of furylbenzthiazole-2-yl ethanols and acetates. *Tetrahedron: Asymmetry* 21, 1999-2004. (I.f. 2.484)
39. **Paizs, C.**, Toşa, M. I., Bencze L. C., Brem, J., Irimie, F. D., Rétey, J. (2011) 2-Amino-3-(5-phenylfuran-2-yl) propanoic acids and 5-phenylfuran-2-yl acrylic acids are novel substrates of phenylalanine-ammonia-lyase. *Heterocycles* 82, 1217-1228. (I.f. 0.999)
40. Bencze, L. Cs., **Paizs, C.**, Toşa, M. I., Irimie, F. D. Rétey, J. (2011) Chemoenzymatic One-Pot Synthesis of both (*R*)- and (*S*)-aryl-1,2-ethanediols. *ChemCatChem* 3, 343-346. (I.f. 5.207)
41. Brem, J., Liljeblad, A., **Paizs, C.**, Toşa, M. I., Irimie, F. D., Kanerva, L. T. (2011) Lipases A and B from *Candida antarctica* in the enantioselective acylation of ethyl 3-heteroaryl-3-hydroxypropanoates: aspects on the preparation and enantiopreference. *Tetrahedron: Asymmetry* 22, 315-322. (I.f. 2.652)
42. Bencze, L. Cs., **Paizs, C.**, Toşa, M. I., Irimie, F. D. (2011) Sequential use of regio- and stereoselective lipases for the efficient kinetic resolution of racemic 1-(5-phenylfuran-2-yl)ethane-1,2-diols. *Tetrahedron: Asymmetry* 22, 675-683. (I.f. 2.652)

43. Brem, J., Pilbák, S., **Paizs, C.**, Bánoczi, G., Irimie, F. D., Toşa, M. I., Poppe, L. (2011) Lipase-catalyzed kinetic resolutions of racemic 1-(10-ethyl-10H-phenothiazin-1,2, and 4-yl)ethanols and their acetates. *Tetrahedron: Asymmetry* 22, 916-923. (I.f. 2.652)
44. Gog, A., Chintoanu, M., Roman, M., Luca, E., **Paizs C.**, Irimie, F. D. (2011) Biodiesel Production from Sunflower Oil with *Candida antarctica* Lipase B. *Studia Universitatis Babeş-Bolyai, Chemia* 56, 71-79. (I.f. 0.129)
45. Pop, L. A., Czompa, A., **Paizs, C.**, Toşa, M. I., Vass, E., Mátyus, P., Irimie, F. D. (2011) Lipase-Catalyzed Synthesis of Both Enantiomers of 3-Chloro-1-arylpropan-1-ols *Synthesis* 2011, 2921-2928. (I.f. 2.466)
46. Brem, J., Naghi, M., Toşa, M. I., Boros, Z., Poppe, L., Irimie, F. D., **Paizs, C.*** (2011) Lipase mediated sequential resolution of aromatic β -hydroxy esters using fatty acid derivatives. *Tetrahedron: Asymmetry* 22, 1672-1679. (I.f. 2.652)
47. Brem, J., Turcu, M.C., **Paizs, C.**, Lundell, K., Toşa, M.I., Irimie, F.D., Kanerva, L.T. (2012) Immobilization to improve the properties of *Pseudomonas fluorescens* lipase for the kinetic resolution of 3-aryl-3-hydroxy esters. *Process Biochemistry* 47, 119-126. (I.f. 2.627)
48. Gog, A., Roman, M., Toşa, M.I., **Paizs C.**, Irimie, F. D. (2012) Biodiesel production using enzymatic transesterification - Current state and perspectives. *Renewable Energy* 39, 10-16. (I.f. 2.978)
49. Naghi, M., Bencze, L. Cs., Brem, J., **Paizs C.**, Irimie, F. D., Toşa, M.I. (2012) Sequential enzymatic procedure for the preparation of enantiomerically pure 2-heteroaryl-2-hydroxyacetic acids. *Tetrahedron: Asymmetry* 23, 181-187. (I.f. 2.652)
50. Brem, J., Bencze, L. Cs., Liljeblad, A., Turcu, M.C., **Paizs C.**, Irimie, F. D., Kanerva, L.T. (2012) Chemoenzymatic Preparation of 1-Heteroarylethanamines of Low Solubility. *European Journal of Organic Chemistry* 17, 3288-3294. (I.f. 3.329)
51. Toşa, M.I., Brem, J., Mantu, A., Irimie, F. D., **Paizs C.***, Rétey, J. (2013) The Interaction of Nitrophenylalanines with Wild Type and Mutant 4-Methylideneimidazole-5-one-less Phenylalanine Ammonia Lyase. *ChemCatChem* 5, 779-783. (I.f. 5.044)
52. Hara, P., Turcu, M., Sundell, R., Toşa, M. I., **Paizs, C.**, Irimie, F. D., Kanerva, L. T. (2013) Lipase-catalyzed asymmetric acylation in the chemoenzymatic synthesis of furan-based alcohols. *Tetrahedron: Asymmetry* 24, 142-150. (I.f. 2.165)
53. Nagy, B., Dima, N., **Paizs, C.**, Brem, J., Irimie, F. D., Toşa, M. I. (2014) New chemo-enzymatic approaches for the synthesis of (*R*)- and (*S*)-bufuralol. *Tetrahedron: Asymmetry* 25, 1316-1322. (I.f. 2.165)
54. Weiser, D., Varga, A., Kovács, K., Nagy, F., Szilágyi, A., Vértessy, B., **Paizs, C.**, Poppe, L. (2014) Bisepoxide Cross-Linked Enzyme Aggregates-New Immobilized Biocatalysts for Selective Biotransformations. *ChemCatChem* 6, 1463-1469. (I.f. 4.556)
55. Kovács, K., Bánoczi, G., Varga, A., Szabó, I., Holzinger, A., Hornyánszki, G., Zagyva, I., **Paizs, C.***, Vértessy, B., Poppe, L. (2014) Expression and Properties of the Highly Alkalophilic Phenylalanine Ammonia-Lyase of Thermophilic *Rubrobacter xylanophilus*. *Plos One* 9, e85943. (I.f. 3.234)
56. Boros, Z., Abaháziová, E., Weiser, D., Kovács, P., **Paizs, C.***, Poppe, L. (2014) Surface modification of silica gels for selective adsorption of bacterial lipases. *Studia Universitatis Babeş-Bolyai, Chemia* 59(4), 33-38. (I.f. 0.136)

57. Bartha-Vári, J., Toşa, M. I., Irimie, F. D., Weiser, D., Boros, Z., **Paizs, C.***, Poppe, L. (2015) Immobilization of phenylalanine ammonia-lyase on single-walled carbon nanotubes for stereoselective biotransformations in batch and in continuous-flow modes. *ChemCatChem* 7, 1122-1128. (I.f. 4.724)
58. Leonte, D., Bencze, L. C., **Paizs, C.**, Irimie, F. D., Zaharia, V. (2015) Heterocycles 38. Biocatalytic synthesis of new heterocyclic mannich bases and derivatives. *Molecules*, 20, 12300-12313. (I.f. 2.465)
59. Bencze, L.C., Komjáti, B., Pop, L. A., **Paizs, C.**, Irimie, F. D., Nagy, J., Poppe, L., Toşa, M. I. (2015) Synthesis of enantiopure L-(5-phenylfuran-2-yl)alanines by a sequential multienzyme process. *Tetrahedron: Asymmetry* 26, 1095-1101. (I.f. 2.115)
60. Weiser, D., Bencze, L. C., Bánóczy, G., Ender, F., Kiss, R., Kókai, E., Szilágyi, A., Vértessy, B. G., Farkas, Ö., **Paizs C.***, Poppe, L. (2015) Phenylalanine ammonia-lyase catalyzed deamination of an acyclic amino acid - Enzyme mechanistic studies aided by a novel microreactor filled with magnetic nanoparticles. *ChemBioChem*, 16, 2283-2288. (I.f. 2.850)
61. Bencze, L. C., Bartha-Vári, J., Katona, G., Toşa, M. I., **Paizs, C.**, Irimie, F. D. (2016) Nanobioconjugates of *Candida antarctica* lipase B and single-walled carbon nanotubes in biodiesel production. *Bioresource Technology*, 200, 853-860. (I.f. 4.917)
62. Leonte, D., Bencze, L. C., **Paizs, C.**, Toşa, M. I., Zaharia, V., Irimie, F. D. (2016) Heterocycles 36. Single-Walled Carbon Nanotubes-Bound *N,N*-Diethyl Ethanolamine as Mild and Efficient Racemisation Agent in the Enzymatic DKR of 2-Arylthiazol-4-yl-alanines. *Molecules*, 21, 25. (I.f. 2.465)
63. Ender, F., Weiser, D., Nagy, B., Bencze, L. C., **Paizs, C.**, Pálovics, P., Poppe, L. (2016) Microfluidic Multiple Cell Chip Reactor Filled with Enzyme-coated Magnetic Nanoparticles — An Efficient and Flexible Novel Tool for Enzyme Catalyzed Biotransformations. *Journal of Flow Chemistry*, 6, 43-52. (I.f. 1.942)
64. Varga, A., Bánóczy, G., Nagy, B., Bencze, L. C., Toşa, M. I., Gellért, Á., Irimie, F. D., Rétey, J., Poppe, L., **Paizs, C.*** (2016) Influence of the aromatic moiety in α - and β -arylalanines on their biotransformation with phenylalanine 2,3-aminomutase from *Pantoea agglomerans*. *RSC: Advances*, 6, 56412-56420. (I.f. 3.289)
65. Czikó, M., Bogya, E. S., **Paizs, C.**, Katona, G., Konya, Z., Kukovecz, Á., Barabás, R. (2016) Albumin adsorption study onto hydroxyapatite-multiwall carbon nanotube based composites. *Materials Chemistry and Physics*, 180, 314-325. (I.f. 2.101)
66. Varga, A., Filip, A., Bencze, L. C., Sátorhelyi, P., Bell, E., Vértessy, B., Poppe, L., **Paizs, C.*** (2016) Expression and Purification of Recombinant Phenylalanine 2,3-Aminomutase from *Pantoea agglomerans*. *Studia Universitatis Babeş-Bolyai, Chemia*, 51, 2, 7-19. (I.f. 0. 244)
67. Dima, N., Filip, A., Bencze, L. C., Oláh, M., Sátorhelyi, P., Vértessy, B., Poppe, L., **Paizs, C.*** (2016) Expression and Purification of Recombinant Phenylalanine Ammonia Lyase from *Petroselinum crispum*. *Studia Universitatis Babeş-Bolyai, Chemia*, 51, 2, 21-34. (I.f. 0. 244)

68. Bódai, V., Nagy-Győr, L., Örkényi, R., Molnár, Z., Kohári, S., Erdélyi, B., Nagymáté, Z., Romsics, C., **Paizs, C.**, Poppe, L., Hornyánszky, G. (2016) *Wickerhamomyces subpelliculosus* as whole-cell biocatalyst for stereoselective bioreduction of ketones. *Journal of Molecular Catalysis B: Enzymatic*, 136, 206-214. (I. f. 2.189)
69. Bata, Z., Qian, R., Roller, A., Horak, J., Bencze, L. C., **Paizs, C.**, Hammerschmidt, F., Vértessy, B. G., Poppe, L. (2017) A Methylidene Group in the Phosphonic Acid Analogue of Phenylalanine Reverses the Enantioference of Binding to Phenylalanine Ammonia-Lyases. *Advanced Synthesis and Catalysis*, 359, 2109-2120. (I. f. 5.123)
70. Nagy, B., Galla, Z., Bencze, L. C., Toşa, M. I., **Paizs, C.**, Forró, E., Fülöp, F. (2017) Covalently Immobilized Lipases are Efficient Stereoselective Catalysts for the Kinetic Resolution of *rac*-(5-Phenylfuran-2-yl)- β -alanine Ethyl Ester Hydrochlorides. *European Journal of Organic Chemistry*, 20, 2878-2882. (I. f. 2.882)
71. Bartha-Vári, J. H., Bencze, L. C., Bell, E., Poppe, L., Katona, G., Irimie, F. D., **Paizs, C.**, Toşa, M. I. (2017) Aminated single-walled carbon nanotubes as carrier for covalent immobilization of phenylalanine ammonia-lyase. *Periodica Polytechnica Chemical Engineering*, 61, 59-66. (I. f. 0.877)
72. Bencze, L. C., Filip, A., Bánóczy, G., Toşa, M. I., Irimie, F. D., Gellért, Á., Poppe, L., **Paizs, C.*** (2017) Expanding the substrate scope of phenylalanine ammonia-lyase from *Petroselinum crispum* towards styrylalanines. *Organic and Biomolecular Chemistry*, 17, 3717-3727. (I. f. 3.423)
73. Balázsi, J., **Paizs, C.**, Irimie, F. D., Toşa, M. I., Bencze, L. C., Tótfős, R. (2017) Validated LC-MS/MS Method for the Concomitant Determination of Amoxicillin and Clavulanic Acid from Human Plasma. *Studia Universitatis Babeş-Bolyai, Chemia*, 52, 2, 167-178. (I. f. 0.305)
74. Moisă, M. E., Spelmezan, C. G., Paul, C., Bartha-Vári, H. J., Bencze, L. C., Irimie, F. D., **Paizs, C.**, Péter, F., Toşa, M. I. (2017) Tailored sol-gel immobilized lipase prepartates for the enzymatic kinetic resolution of heteroaromatic alcohols in batch and continuous flow systems. *RSC: Advances*, 7, 59277-59287. (I. f. 2.936)
75. Csuka, P., Juhász, V., Kohári, S., Filip, A., Varga, A., Sátorhelyi, P., Bencze, L. C., Barton, H., **Paizs C.***, Poppe, L. (2018) *Pseudomonas fluorescens* Strain R124 Encodes Three Different MIO Enzymes. *ChemBioChem*, 19, 411-418. (I. f. 2.774)
76. Abaházi, E., Sátorhelyi, P., Erdélyi, B., Vértessy, B. G., Land, H., **Paizs, C.**, Berglund, P., Poppe, L. (2018) Covalently immobilized Trp60Cys mutant of ω -transaminase from *Chromobacterium violaceum* for kinetic resolution of racemic amines in batch and continuous-flow modes. *Biochemical Engineering Journal*, 132, 270-278. (I. f. 3.226)
77. Filip, A., Nagy, E. Z. A., Tork, S. D., G. Bánóczy, G., Toşa, M. I., Irimie, F. D., Poppe, L., **Paizs, C.***, Bencze, L. C. (2018) Tailored mutants of phenylalanine ammonia-lyase from *Petroselinum crispum* for the synthesis of bulky L- and D-arylanines. *ChemCatChem*, 10, 2627-2633. (I. f. 4.674)
78. Moisă, M. E., Poppe, L., Gal, C. A., Bencze, L. C., Irimie, F. D., **Paizs, C.**, Peter, F., Toşa, M. I. (2018) Click reaction-aided enzymatic kinetic resolution of secondary alcohols. *Reaction Chemistry and Engineering*, 3, 790-798. (I. f. 4.641)

79. Nagy-Győr, L., Abaházi, E., Bódai, V., Sátorhelyi, P., Erdélyi, B., Balogh-Weiser, D., **Paizs, C.**, Hornyánszky, G., Poppe, L. (2018) Co-immobilized Whole Cells with ω -Transaminase and Ketoreductase Activities for Continuous-Flow Cascade Reactions. *ChemBioChem*, **19**, 1845-1848. (I. f. 2.774)
80. Lăcătuș M. A., Bencze, L. C., Toșa, M. I., **Paizs, C.**, Irimie, F. D. (2018) Eco-Friendly Enzymatic Production of 2,5-Bis(hydroxymethyl)furan Fatty Acid Diesters, Potential Biodiesel Additives. *ACS Sustainable Chemistry & Engineering*, **6**, 11353-11359. (I. f. 6.970)
81. Farkas, E., Oláh, M., Földi, A., Kóti, J., Nagy, J., Gal, C. A., **Paizs, C.**, Hornyánszky, G., Poppe, L. (2018) Chemoenzymatic Dynamic Kinetic Resolution of Amines in Fully Continuous-Flow Mode. *Organic Letters*, **20**, 8052-8056. (I. f. 6.492)
82. Nagy, E. Z. A.; Nagy, C. L., Filip, A.; Nagy, K., Gál, E.; Tóth, R.; Poppe, L.; **Paizs, C.**; Bencze, L. C. (2019) Exploring the substrate scope of ferulic acid decarboxylase (FDC1) from *Saccharomyces cerevisiae*. *Scientific Reports*, **9**, 647. (I. f. 4.011)
83. Lar, C, Moisă, M. E.; Bogdan, E.; Terec, A.; Hădăde, N. D.; Grosu, I.; David, L.; **Paizs, C.**; Grosu, L. G. (2019) "Gelander" macrocycles: Synthesis, chirality and racemisation barriers. *Tetrahedron Letters*, **60**, 335-340. (I. f. 2.259)
84. Molnár, Z., Farkas, E.; Lakó, A.; Erdélyi, B.; Kroutil, W.; Vértessy, B. G., **Paizs, C.**; Poppe, L. (2019) Immobilized Whole-Cell Transaminase Biocatalysts for Continuous-Flow Kinetic Resolution of Amines. *Catalyst*, **9**, 438. (I. f. 3.520)
85. Moisă, M. E., Bencze, L. C., **Paizs, C.**, Toșa, M. I. (2019) Continuous-Flow Enzymatic Kinetic Resolution Mediated by a Lipase Nanobioconjugate. *Studia Universitatis Babeş-Bolyai, Chemia*, **64**, **2**, 79-86. (I. f. 0.494)
86. Lungu, C. N.; **Paizs, C.**; Füstös, M. E.; Orza, A.; Diudea, M. V.; Grudzinski, I. P. (2019) A Predictive Toxicity Study of PEIs, PAMAM and ZAC Dendrimers. *Studia Universitatis Babeş-Bolyai, Chemia*, **64**, **2**, 499-508. (I. f. 0.494)
87. Nagy, Emma Z. A.; Tork, S. D.; Lang, P. A.; Filip, A.; Irimie, F. D.; Poppe, L.; Toșa, M. I.; Schofield, C. J.; Brem, J.; **Paizs, C.***, Bencze, L. C. (2019) Mapping the Hydrophobic Substrate Binding Site of Phenylalanine Ammonia-Lyase from *Petroselinum crispum*. *ACS Catalysis*, **9**, 8825-8834. (I. f. 12.350)
88. Decsi, B; Krammer, R.; Hegedüs, K.; Ender, F.; Gyarmati, B.; Szilágyi, A.; Tóth, R.; Katona, G.; **Paizs, C.**; Balogh, G. T.; Poppe, L.; Balogh-Weiser, D. (2019) Liver-on-a-ChipMagnetic Nanoparticle Bound Synthetic Metalloporphyrin-Catalyzed Biomimetic Oxidation of a Drug in a Magnechip Reactor. *Micromachines*, **10**, 668. (I. f. 2.523)
89. Sánta-Bell, E.; Molnár, Z.; Varga, A.; Nagy, F.; Hornyánszky, G.; **Paizs, C.**; Balogh-Weiser, D.; Poppe, L. (2019) "Fishing and Hunting"-Selective Immobilization of a Recombinant Phenylalanine Ammonia-Lyase from Fermentation Media. *Molecules*, **22**, 4146. (I. f. 3.267)
90. Nagy-Győr, L., Lăcătuș, M., Balogh-Weiser, D., Csuka, P., Bódai, V., Erdélyi, B., Molnár, Z., Hornyánszky, G., **Paizs, C.***, Poppe, L. (2019) How to turn yeast cells into sustainable and switchable biocatalyst? On-demand catalysis of ketone bioreduction or acyloin condensation. *ACS Sustainable Chemistry & Engineering*, **7**, 19375-19383. (I. f. 7.632)
91. Tork, S. D., Nagy, E. Z. A., Cserepes, L., Bordea, D. M., Nagy, B., Toșa, M. I., **Paizs, C.**, Bencze, L. C. (2019) The production of L- and D-phenylalanines using engineered phenylalanine ammonia lyases from *Petroselinum crispum*. *Scientific Reports*, **9**, 20123. (I. f. 4.011)

92. Lăcătuș M. A., Dudu, A., Bencze, L. C., Katona, G., Irimie, F. D., **Paizs, C.**, Toșa, M. I. (2020) Solvent-Free Biocatalytic Synthesis of 2,5-bis-(Hydroxymethyl)Furan Fatty Acid Diesters from Renewable Resources. *ACS Sustainable Chemistry & Engineering*, **8**, 1611-1617. (I. f. 7.632)
93. Spelmezan, C. G., Bencze, L. C., Katona, G., Irimie, F. D., **Paizs, C.**, Toșa, M. I. (2020) Efficient and stable magnetic chitosan-lipase B from *Candida antarctica* bioconjugates in the enzymatic kinetic resolution of racemic heteroarylethanol. *Molecules*, **25**, 350. (I. f. 3.263)
94. Bartha-Vári, J., Moisă, M. E., Bencze, L. C., Irimie, F. D., **Paizs, C.**, Toșa, M. I. (2020) Efficient biodiesel production catalyzed by nanobioconjugate of lipase from *Pseudomonas fluorescens*. *Molecules*, **25**, 651. (I. f. 3.263)
95. Nagy-Győr, L., Farkas, E., Lăcătuș, M., Tóth, G., Incze, D., Balogh-Weiser, D., Hornyánszky, G., Bódai, V., **Paizs, C.**, Poppe, L., Balogh-Weiser, D. (2020) Conservation of the Biocatalytic Activity of Whole Yeast Cells by Supported Sol-Gel Entrapment for Efficient Acyloin Condensation. *Periodica Polytechnica Chemical Engineering*, **64**, 153-161. (I. f. 1.257)
96. Moisă, M. E., Amariei, D., Nagy, E. Z. A., Szarvas, N., Toșa, M. I., **Paizs, C.**, Bencze, L. C. (2020) Fluorescent enzyme-coupled activity assay for phenylalanine ammonia-lyases. *Scientific Reports*, **10**, 18418. (I. f. 4.011)
97. Balogh-Weiser, D., Decsi, B., Krammer, R., Dargó G., Ender F., Mizsei, J., Berkecz, R., Gyarmati, B., Szilágyi, A., Tötös, R., **Paizs, C.**, Poppe, L., Balogh, G. T. (2020) Magnetic Nanoparticles with Dual Surface Functions-Efficient Carriers for Metalloporphyrin Catalyzed Drug Metabolite Synthesis in Batch and Continuous-Flow Reactors. *Nanomaterials*, **10**, 2329. (I. f. 4.324)
98. Gergely, A., Sándor, B., **Paizs, C.**, Tötös, R., Néda, Z. (2020) Flickering candle flames and their collective behavior. *Scientific Reports*, **10**, 21305. (I. f. 4.011)
99. Varga, A., Csuka, P., Sonesouphapa, O., Bánóczy, G., Toșa, M. I., Katona, G., Molnár, Z., Bencze, L. C., Poppe, L., **Paizs, C.*** (2021) A novel phenylalanine ammonia-lyase from *Pseudozyma antarctica* for stereoselective biotransformations of unnatural amino acids. *Catalysis Today*, **366**, 185-194 (I. f. 5.825)
100. Bata Z., Molnár, Z., Madaras, E., Molnár, B., Sánta-Bell, E., Varga, A., Leveles, I., Qian, R., Hammerschmidt, F., **Paizs, C.***, Vértessy, B. G., Poppe, L. (2021) Substrate Tunnel Engineering Aided by X-ray Crystallography and Functional Dynamics Swaps the Function of MIO-Enzymes *ACS Catalysis*, **11**, 4538-4549. (I. f. 12.350)
101. Dudu, A. M., Lăcătuș M. A., Bencze, L. C., **Paizs, C.**, Toșa, M. I. (2021) Green Process for the Enzymatic Synthesis of Aroma Compounds Mediated by Lipases Entrapped in Tailored Sol-Gel Matrices. *ACS Sustainable Chemistry & Engineering*, **9**, 5461-5469. (I. f. 7.632)

Cluj-Napoca
May 12, 2021

Prof. Habil. Dr. Eng. Paizs Csaba

