



Europass Curriculum Vitae

Informații personale

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|----------------|---|
| Nume / Prenume | Habil. Dr. Csaba Paizs |
| Adresa | Universitatea "Babeș-Bolyai" Cluj, Facultatea de Chimie și Inginerie Chimică, Departamentul de Chimie și Inginerie Chimică în limba maghiară, str. Arany János 11, 400029 Cluj-Napoca (România) |
| Telefon | +40-264-593833 Mobil +40-746-869304 |
| Fax | +40-264-590818 |
| E-mail | paizs@chem.ubbcluj.ro |
| Cetățenia | Română |
| Naționalitatea | Maghiară |
| Data nașterii | 01 Aprilie 1969 |
| Sex | Masculin |

Domeniul de ocupație **Profesor**

Experiența în muncă

| | |
|---|--|
| Perioada | 01 Octombrie 1996 - 01 Martie 2007 |
| Ocupația / poziție | Preparator, Asistent, Lector |
| Principalele activități și responsabilități | Educație și cercetare |
| Numele și adresa angajatorului | Universitatea "Babeș-Bolyai", Mihail Kogălniceanu 1, Cluj-Napoca (România) |
| Perioada | 01 Martie 2007 - 26 Septembrie 2015 |
| Ocupația / poziție | Conferențiar |
| Principalele activități și responsabilități | Educație și cercetare |
| Numele și adresa angajatorului | Universitatea "Babeș-Bolyai", Mihail Kogălniceanu 1, Cluj-Napoca (România) |
| Perioada | 2013 → |
| Principalele activități și responsabilități | Conducător de doctorat (Școala doctorală de Chimie) |
| Numele și adresa angajatorului | Universitatea "Babeș-Bolyai", Mihail Kogălniceanu 1, Cluj-Napoca (România) |
| Perioada | 27 Septembrie 2015 → |
| Ocupația / poziție | Profesor |
| Principalele activități și responsabilități | Educație și cercetare |
| Numele și adresa angajatorului | Universitatea "Babeș-Bolyai", Mihail Kogălniceanu 1, Cluj-Napoca (România) |

Educație și Pregătire

| | |
|---------------------------------|--|
| Perioada | 15 Martie 2013→ |
| Titlul sau calificarea obținută | Abilitat în domeniul chimie |
| Perioada | 01 Octombrie 1996 - 15 Iunie 2001 |
| Titlul sau calificarea obținută | Doctor în chimie |
| Numele și tipul organizației | Universitatea "Babeș-Bolyai", Mihail Kogălniceanu 1, Cluj-Napoca (România) |

| | |
|---------------------------------|--|
| Perioada | 01 Octombrie 1994 - 15 Iunie 1995 |
| Titlul sau calificarea obținută | Masterat în Cataliză și Biocataliză |
| Numele și tipul organizației | Universitatea "Babeș-Bolyai", Mihail Kogălniceanu 1, Cluj-Napoca (România) |
| Perioada | 15 Septembrie 1989 - 14 Iunie 1994 |
| Titlul sau calificarea obținută | Inginer Chimist |
| Numele și tipul organizației | Universitatea "Babeș-Bolyai", Mihail Kogălniceanu 1, Cluj-Napoca (România) |

Aptitudini și competențe personale

Limba maternă **Maghiară, Română**

Limbi străine **Engleză**

| Înțelegere | | | | Vorbire | | | | Scriere | |
|------------|-------------------------|--------|-------------------------|----------------------------|-------------------------|--------------|-------------------------|---------|-------------------------|
| Ascultare | | Citire | | Participare la conversație | | Discurs oral | | | |
| C2 | Utilizator experimentat | C2 | Utilizator experimentat | C2 | Utilizator experimentat | C1 | Utilizator experimentat | C2 | Utilizator experimentat |

Domenii de cercetare

Biocataliză: biotransformări stereoselective (lipaze, esteraze, oxidoreductaze, amoniace-liaze și mutaze, transaminaze, decarboxilaze etc.)
 Biochimie: mecanisme enzimatic; Studiul stereoselectivității reacțiilor enzimatic la nivel molecular; Proiectarea rațională a enzimelor, Utilizarea instrumentelor de biologie moleculară;
 Biotehnologie: Dezvoltarea biocatalizatorilor (imobilizări enzimatic, inginerie proteică, lipaze noi, hidrolaze, enzime MIO-dependente, oxido-reductaze, transaminaze, decarboxilaze, etc.) - Dezvoltarea rețelelor enzimatic, imobilizarea enzimelor, dezvoltarea sistemelor integrate de micro- și minireactoare (multi)-enzimatic -sisteme cu unități în flux, pentru biotransformări stereoselective
 Chimie analitică: separare cromatografică a enantiomerilor și proteinelor

Membru al asociațiilor profesionale

Membru în: Societatea de Chimie din România; Societatea Română de Cataliză;
 Membru CNATDCU Comisia de Chimie și Inginerie Chimică (2011-2012)
 Expert din partea României în acțiunea COST CM1303 (Systems Biocatalysis, SysBiocat)
 Membru în Comitetului Științific al Asociației Europene pentru Biocataliză Aplicată
 Membru al Academiei Maghiar de Științe

Referent

Nature Catalysis - Appl. Biochem. Biotechnol. – Adv. Synth. Catal. – Biocat. Biotechnol. J. Mol. Catal. B, Enz. –Catal. Lett. – Plos-ONE – Proc. Biochem. –Tetrahedron: Asymmetry, -React. Chem. Eng. etc.
 Evaluator proiecte CNCSIS (România), OTKA (Ungaria) și NWO (Olanda). Referent la teze de doctorat (România și Ungaria)

Specializări și calificări

1. Grant de cercetare la Universitatea din Karlsruhe (Prof. Dr. János Rétey) oferit de Comisia Europeană, HPRN- CT-2002-00195, 01.07.2003-31.10.2005
 2. Grant de cercetare la Universitatea din Turku (Prof. Dr. Liisa T. Kanerva) oferit de "Center for International Mobility (CIMO)", Finlanda, 01.03.2002-31.12.2002

Publicații

4 Cărți (1 autor principal) – 3 capitole de cărți – 120 articole ISI (ΣIF ~400) – citări ~ 1920 (Scopus, h-index: 23), ~1750 (Web of Science h-index: 22), ~2550 (Google Scholar, h-index: 26)– 1 Patent – ~ 65 Conferințe prezentări orale / postere - 1 Brevet național

Premii

Premiul "Oláh György" al Academiei Maghiare (2007)
 Premiul "Arany János" al Academiei Maghiare (2022)

Linkuri profilelor științifice publice

Google Scholar: <https://scholar.google.com/citations?user=dfzb1IMAAAAJ&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

Cărți:

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

Capitole de cărți:

1. Poppe, L., **Paizs, Cs.**, 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, Cs.**, Toșa, 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.**, Toșa, 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.

Brevet

1. Barabás, R., **Paizs, Cs.**, 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**

Lista de publicații

1. Toșa, C., Miclăuș, V., Toșa, 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.**, Toșa, C., Toșa, M. I., Miclăuș, 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.**, Toșa, M. I., Afloroaiei, C., Miclăuș, 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., Toşa, 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. Toşa, 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. Toşa, 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. Toşa, 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. Cimpoi, C., Hodişan, T., Toşa, 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.**, Toşa, M. I., Majdik, C., Mişca, 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.**, Toşa, 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.**, Toşa, 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.**, Toşa, 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-hydroxy-propanoic 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., Liljebld, 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-10*H*-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., Liljebblad, 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.**, Pálóvics, 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. Czíkó, 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 Enantioselectivity 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., Tóth, 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. Moişă, 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 prepartes 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., 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. Moişă, 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.; Tótfős, 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.; Hădade, 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.; Tótfős, 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. 4.379)
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. 8.198)

93. Spelmezan, C. G., Bencze, L. C., Katona, G., Irimie, F. D., **Paizs, C.**, Toşa, 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. 4.411)
94. Bartha-Vári, J., Moisă, M. E., Bencze, L. C., Irimie, F. D., **Paizs, C.**, Toşa, M. I. (2020) Efficient biodiesel production catalyzed by nanobioconjugate of lipase from *Pseudomonas fluorescens*. *Molecules*, 25, 651. (I. f. 4.411)
95. Nagy-Győr, L., Farkas, E., Lăcătuş, 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., Toşa, M. I., **Paizs, C.**, Bencze, L. C. (2020) Fluorescent enzyme-coupled activity assay for phenylalanine ammonia-lyases. *Scientific Reports*, 10, 18418. (I. f. 4.379)
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. 5.076)
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. 4.379)
99. Varga, A., Csuka, P., Sonesouphapa, O., Bánóczy, G., Toşa, 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. 6.766)
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. 13.084)
101. Dudu, A. M., Lăcătuş M. A., Bencze, L. C., **Paizs, C.**, Toşa, 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. 8.198)
102. Csuka, P., Nagy-Győr, L., Molnár, Z., **Paizs, C.**, Bodai, V., Poppe, L. (2021) Characterization of Yeast Strains with Ketoreductase Activity for Bioreduction of Ketones. *Periodica Polytechnica Chemical Engineering*, 65, 299-307. (I. f. 1.571)
103. Boros, K., Moisă, M. E., Nagy, L. C., **Paizs, C.**, Toşa, M. I., Bencze, L. C. (2021) Robust, site-specifically immobilized phenylalanine ammonia-lyases for the enantioselective ammonia addition of cinnamic acids. *Catalysis Science & Technology*, 11, 5553-5563. (I. f. 6.119)
104. Gal, C. A., Barabás, L. E., Bartha Vári, J. H., Moisă, M. E., Balogh-Weiser, D., Bencze, L. C., Poppe, L., **Paizs, C.**, Toşa, M. I. (2021) Lipase on carbon nanotubes-an active, selective, stable and easy-to-optimize nanobiocatalyst for kinetic resolutions. *Reaction Chemistry and Engineering*, 6, 2391 – 2399. (I. f. 4.239)
105. Gergely, A., **Paizs, C.**, Tötös, R., Néda, Z. (2021) Oscillations and collective behavior in convective flows. *Physics of Fluids*, 33, 124104. (I. f. 3.521)

106. Nagy, F., Sánta-Bell, E., Jipa, M., Hornyánszky, G., Szilágyi, A., László, K., Katona, G., **Paizs, C.**, Poppe, L., Balogh-Weiser, D. (2022) Cross-Linked Enzyme-Adhered Nanoparticles (CLEANs) for Continuous-Flow Bioproduction. *ChemSusChem*, 15, e2021022. (I. f. 8.928)

107. Dudu, A. I., Bencze, L. C., **Paizs, C.**, Toşa, M. I. (2022) Deep eutectic solvents-a new additive in the encapsulation of lipase B from: *Candida antarctica*: Biocatalytic applications. *Reaction Chemistry and Engineering*, 7, 442 – 449. (I. f. 4.239)

Cluj-Napoca

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Acad. Prof. Habil. Dr. Ing. Csaba Paizs

