



## Europass Curriculum Vitae

### Personal information

First name/ Surname **Habil. Dr. Csaba Paizs**

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, [REDACTED]**

Telephone [REDACTED] Mobile | [REDACTED]

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Citizenship **Romanian**

Nationality **Hungarian**

Date of birth [REDACTED]

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

*European level*

**English**

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**

*Synthetic Chemistry:* Stereoselective biotransformations (lipases, esterases, oxidoreductases, ammonia-lyases and mutases, transaminases, decarboxylases, etc.)

*Biochemistry:* Enzyme mechanistic studies; Study of the stereoselectivity of enzymatic reactions at molecular level; Rational design of the enzymes by molecular biology tools;

*Biotechnology:* 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

*Analytical chemistry:* chromatographic separation of stereoisomers and proteins

**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

<b>Referee for scientific journals</b>	<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>
<b>Activity in scientific evaluations</b>	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)
<b>Technical skills and competences</b>	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.
<b>Fellowships</b>	<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)
<b>Scientific achievements</b>	4 Monographs (co-author) – 4 book chapters (on MIO-enzymes, biofuels and enzymatic polymerization) – 107 Scientific articles ( $\Sigma$ IF ~400) – citations ~ 1670 (Scopus, h-index: 22), ~1530 (Web of Science h-index: 21), ~2220 (Google Scholar, h-index: 24)– 1 Patent – ~ 65 Conference lectures / posters
<b>Awards</b>	The Oláh György prize of the Hungarian Academy of Science (2007)

**Link of my public profiles:**

Google Scholar: <https://scholar.google.com/citations?user=dfzb1IIMAAAJ&hl=en&oi=ao>

ResearchGate: [https://www.researchgate.net/profile/Csaba\\_Paizs](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

February 23, 2022

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., Miclăuş, V., **Paizs, C.**, Znamirovski, V., Chiş, 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  $\pi$ -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. Cimpoiu, 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  $\beta$ -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.**, Szatzker, 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 B<sub>12</sub>-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  $\alpha$ -hydroxy- and  $\alpha$ -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., Liljebblad, 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  $\beta$ -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)
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