

PERSONAL INFORMATION

Mădălina Elena MOISĂ



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WORK EXPERIENCE

Oct 2017–Present

Research assistant

Babeş-Bolyai University, Cluj-Napoca (Romania)

Project title: MIO-enzyme toolkit for the synthesis of non-natural amino acids, IZ11ZO-166543/1

Feb 2016–Sep 2017

Research assistant

Babeş-Bolyai University, Cluj-Napoca (Romania)

Project title: Biocatalyst - Click Chemistry Downstreaming Tandem Based Innovative Kit for Optically Pure Fine Chemicals Synthesis, PN-II-PT-PCCA-2013-4-0734

Nov 2014–Jan 2016

Research assistant

Babeş-Bolyai University, Cluj-Napoca (Romania)

Project title: Integrated Green Technology System for Producing Advanced Biofuels, PN-II-PT-PCCA-2013-4-1006

Oct 2012–Jun 2015

Chemical engineer

Babeş-Bolyai University, Cluj-Napoca (Romania)

Project title: Development of Novel Stereoselective Biocatalysts for Economic Synthesis of Chiral Building Blocks, PN-II-PT-PCCA-2011-3.1-1268

EDUCATION AND TRAINING

Oct 2014–Feb 2019

Ph.D. in Chemistry

EQF level 8

Babeş-Bolyai University, Faculty of Chemistry and Chemical Engineering, Cluj-Napoca (Romania)

- Title of thesis: Tailored lipases for bioprocess development
- Teaching activity – Seminars on Bioprocesses Engineering and Biochemistry, laboratories on Biocatalysis, Biochemistry and Drug Biotechnology, coordination of Bachelor and Master theses

Oct 2012–Jul 2014

MSc degree in Engineering of Organic and Biochemical Processes

EQF level 7

Babeş-Bolyai University, Faculty of Chemistry and Chemical Engineering, Cluj-Napoca (Romania)

Oct 2008–Jul 2012

BSc degree in Chemical Engineering, Biochemical Engineering

EQF level 6

Babeş-Bolyai University, Faculty of Chemistry and Chemical Engineering, Cluj-Napoca (Romania)

2008–2011

Certificate in Didactic Level 1

Babeş-Bolyai University, DPPD, Cluj-Napoca (Romania)

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
Certificate in Advanced English, Level C1					
French	A2	A2	A2	A2	A2
German	B1	B1	B1	B1	B1
Goethe-Zertifikat A1, Start Deutsch 1					

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
[Common European Framework of Reference for Languages](#)

Organisational / managerial skills

- Good team working skills developed while working on different projects
- I have supervised research work carried out by undergraduate students
- Good time management skills, can set priorities and efficiently manage to write reports and prepare presentations, skills developed during the Career Management Winter School, held at Trieste, Italy, 1st-6th November, 2015, organized under the project "Quality, excellence, transnational mobility in doctoral research", POSDRU/187/1.5/S/155383

Job-related skills

- Good competences in designing and controlling chemical reactions at laboratory level for organic synthesis and biocatalysis, in isolation and purification of organic compounds and compounds' analysis
- Good technical skills in chiral liquid and gas chromatography (HPLC and GC), NMR spectroscopy, mass spectrometry, UV-vis spectrophotometry and polarimetry
- Good competences in molecular cloning, site-directed mutagenesis, directed evolution, expression and purification of enzymes

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Independent user	Proficient user	Basic user	Independent user	Independent user

[Digital competences - Self-assessment grid](#)

- Good command of Microsoft Office™ (Word, Excel, Power Point)
- ChemDraw, ChemCAD, ViewerLite, PyMOL, Snaggene
- MestReNova
- Matlab
- SolidEdge

ADDITIONAL INFORMATION

Awards

- Scholarship for scientific performance offered by the Scientific Council of Babeş-Bolyai University in

2013-2014

- Prize for excellence in research offered under the project "Quality, excellence, transnational mobility in doctoral research", POSDRU/187/1.5/S/155383

Articles

- Moisă M. E., Bencze L. C., Paizs C., Toşa M. I. Continuous-flow enzymatic kinetic resolution mediated by a lipase nanobioconjugate, *Studia UBB Chemia*, 2019, LXIV, 2, Tom I, 79-86.
- Lar C., Moisă M. E., Bogdan E., Terec A., Hădade N. D., Grosu I., David L., Paizs C., Grosu I. G., "Geländer" macrocycles: Synthesis, chirality and racemisation barriers, *Tetrahedron Letters*, 2019, 60, 335-340 (IF 2.259)
- Moisă M. E., Poppe L., Gal C. A., Bencze L. C., Irimie F. D., Paizs C., Péter F., Toşa M. I., Click reaction-aided enzymatic kinetic resolution of secondary alcohols, *Reaction Chemistry & Engineering* 2018, 3, 790-798 (IF 4.641)
- Moisă M. E., Spelmezan C. G., Paul C., Bartha-Vári J. H., Bencze L. C., Irimie F. D., Paizs C., Péter F., Toşa M. I., Tailored sol-gel immobilized lipase prepartates for the enzymatic kinetic resolution of heteroaromatic alcohols in batch and continuous flow systems, *RSC Advances*, 2017, 7, 52977-52987 (IF 2.936)
- Nagy B., Moisă M., Filip A., Bencze L. C., Toşa M. I. Lipase catalyzed parallel kinetic resolution of ibuprofen, *Studia UBB Chemia*, 2016, 61(4), 255-266 (IF 0.244)
- Radu, A. Moisă, M. E., Toşa, M. I., Dima, N., Zaharia, V., Irimie, F. D. Candida antarctica lipases acting as versatile catalysts for the synthesis of enantiopure (R)- and (S)-1-(2-phenylthiazol-4-yl)ethanamines, *Journal of Molecular Catalysis B: Enzymatic*, 2014, 107, 114-119 (IF 2.128)
- Hapău, D., Brem, J., Moisă, M., Toşa, M. I., Irimie, F. D., Zaharia, V. Heterocycles 32. Efficient kinetic resolution of 1-(2-arylthiazol-4-yl) ethanol and their acetates using lipase B from *Candida antarctica*, *Journal of Molecular Catalysis B: Enzymatic*, 2013, 94, 88-94 (IF 2.745)

Conferences

- Moisă M. E., Amariei D., Tomoiagă R. B., Szarvas N., Toşa M. I., Paizs C., Bencze L. C.,
- High-Throughput Fluorescence Assay for Phenylalanine Ammonia Lyase Activity, 14th International Symposium on Biocatalysis and Biotransformations (BioTrans 2019), Groningen (Netherlands), 2019
- Moisă M. E., Poppe L., Irimie F. D., Toşa M. I., Paizs C., Click Reaction Strategy for the
- Efficient Separation of EKR Products, 13th International Symposium on Biocatalysis and Biotransformations (BioTrans 2017), Budapest (Hungary), 2017
- Moisă M. E., Paizs C., Poppe L., Irimie F. D., Toşa M. I., Click Reactions for Efficient Enzymatic Kinetic Resolution Processing, 3rd Symposium „Biotransformations 2016”, Warsaw (Poland), 2016
- Moisă M. E., Paizs C., Irimie F. D., Toşa M. I., Click chemistry – an efficient tool in biocatalysis, Young Researchers' International Conference on Chemistry and Chemical Engineering (YRICCCE I), Cluj-Napoca (Romania), 2016
- Moisă M. E., Paizs C., Poppe L., Irimie F. D., Toşa M. I., Click Reaction Strategy Applied in the Enzymatic Kinetic Resolution Processes, „Systems Biocatalysis” COST Training School, Siena (Italy), 2016
- Moisă M. E., Paizs C., Irimie F. D., Péter F., Toşa M. I., Novel Immobilized Lipases Preparations for the Heteroaromatic Ethanol Resolution by EKR, 10th European Congress of Chemical Engineering + 3rd European Congress of Applied Biotechnology + 5th European Process Intensification Conference, Nice (France), 2015
- Moisă M. E., Paizs C., Irimie F. D., Péter F., Toşa M. I., Activity and Stereoselectivity Studies of Some Novel Immobilized Lipases Preparations on Heteroaromatic Ethanol and β -Hydroxy Esters, 15th International Symposium and Summer School on Bioanalysis, Târgu Mureş (Romania), 2015
- Moisă M. E., Paizs C., Toşa M. I., Irimie F. D., CaL-A-mediated synthesis of benzofuranyl- β -amino acid derivatives, 2nd International Conference on Chemical Engineering, Iaşi (Romania), 2014
- Moisă M. E., Paizs C., Toşa M. I., Irimie F. D., Stereoselective Enzymatic Synthesis of β -Amino Acid Derivatives, 14th International Symposium and Summer School on Bioanalysis, Bratislava-Smolence (Slovakia), 2014

- Moisă M. E., Radu A., Irimie F. D., Lipases as versatile catalysts for the enzymatic kinetic resolution of 1-heteroaryl-ethanamines, 11th International „Students for Students” Conference, Cluj-Napoca, (Romania), 2014
- Moisă M. E., Paizs C., Irimie F. D., Toşa M. I., Unnatural Amino Acids Stereoselective Enzymatic Synthesis, 13th International Symposium and Summer School on Bioanalysis, Debrecen (Hungary), 2013
- Moisă M. E., Naghi M. A., Mantu A., Irimie F. D., CaL-B mediated synthesis of optically pure (R)- and (S)-ethyl 3-hydroxy-3-(2-aryl-thiazol-4-yl)propanoates, 9th International „Students for Students” Conference, Cluj-Napoca (Romania), 2012 - Special award from the Romanian Chemical Society