ROMÂNIA
UNIVERSITATEA BABEŞ-BOLYAI CLUJ-NAPOCA
Str. Mihail Kogălniceanu, nr. 1, 400084 Cluj-Napoca
Tel. (00) 40 - 264 - 40.53.00*; 40.53.01; 40.53.02 ; 40.53.22
Fax: 40 - 264 - 59.19.06
E-mail: staff@staff.ubbcluj.ro

RECTORATUL

Universitatea Babeş-Bolyai
Competiţia Excelenţei 2010

Dosar individual

Notă: Toate datele se referă la perioada 2005-2009

Nume, prenume, grad did.	**PROF. DR. ING. FLORIN DAN IRIMIE**
Facultatea, Catedra	Chimie si inginerie chimica, Catedra de biochimie si inginerie biochimica
Domeniul ştiinţific	Biotehnologii, Ingineria si securitatea alimentelor
Adresa paginii web personale	http://www.chem.ubbcluj.ro/catedre/biochimie-inginerie.html
Adresa e-mail	irimie@chem.ubbcluj.ro

Criteriul I – Output

1. Articole ştiinţifice publicate în reviste indexate ISI (cu menţionare factorului de impact în cazul celor cotate)

Titlu	Autori	Revista	Factor impact
NIR surface enhanced Raman spectroscopy and bands assignment by DFT calculations of non-natural β-amino acids	Iliescu, T., Maniu, D., Chiş, V., Irimie, F. D., Paizs, Cs., Toşa, M.	Chemical Physics **2005,** 310, 189-199.	1.961
Role of chemical structure in molecular recognition by transferrin	Takatsy, Aniko; Hodrea, Judit; Majdik, Cornelia; Irimie, Florin Dan; Kilar, Ferenc.	Journal of Molecular Recognition **2006**, 19(4), 270-274.	3.16
Experimental and quantum chemical study on the vibrational spectroscopy of N-methylphenothiazines: Part 1	Endredi, Henrietta; Billes, Ferenc; Tosa, Monica; Majdik, Cornelia; Irimie, Florin Dan.	Spectrochimica Acta, Part A: Molecular and Biomolecular Spectroscopy **2006**, 63A(2), 349-360.	1.510
Chemoenzymatic preparation of enantiopure L-benzofuranyl- and L-benzo[*b*]thiophenyl alanines	Podea, P., Toşa, M. I., Paizs, Cs., Irimie, F. D.	Tetrahedron: Asymmetry **2008**, *19*, 500-511.	2.796
Lipase-catalyzed kinetic resolution of racemic 1-heteroarylethanols—experimental and QM/MM study	Toşa, M. I., Pilbák, S., Moldovan, P., Paizs, Cs., Szatzker, G., Szakács, Gy., Novák, L., Irimie, F. D., Poppe, L.	Tetrahedron: Asymmetry **2008,** *19,* 1844-1852.	2.796
Chemoenzymatic synthesis of (*R*)- and (*S*)-1-heteroarylethanols.	Toşa, M. I., Podea, P., Paizs, Cs., Irimie, F. D	Tetrahedron: Asymmetry **2008,** *19,* 2068-2071.	2.796
Baker's yeast-mediated synthesis of (*R*)- and (*S*)-heteroaryl-ethane-1,2-diols	Podea, P., Paizs, Cs., Toşa, M. I., Irimie, F.	Tetrahedron: Asymmetry **2008,** *19*, 1959-1964.	2.796
Enzyme-catalyzed synthesis of (R)- and (S)-3-heteroaryl-3-hydroxy-propanoic acids and their derivatives.	Brem J., Paizs Cs., Toşa M. I., Vass E., Irimie F. D	Tetrahedron: Asymmetry **2009**, *20*, 489-496.	2.796

Formyl- and acetylindols: vibrational spectroscopy of an expectably pharmacologically active compound family.	Billes, F., Podea, P.V., Mohammed-Ziegler, I., Toşa, M., Mikosch, H., Irimie, D.F.	Spectrochimica acta. Part A, Molecular and biomolecular spectroscopy **2009,** 74 (5), 1031-1045	1.51
New ways for old structures	Irimie, F.D., Paizs, C., Tosa, M., Podea, P.	*Studia Universitatis Babes-Bolyai Chemia* **2009**, 4 (1), 7-16	0
Improvement of sunflower oil extraction by modelling and simulation	Brătfălean, D., Cristea, V.M., Agachi, P.Ş., Irimie, D.F.	Revue Roumaine de Chimie **2008**, 53 (9), pp. 881-888	0.284
,Evaluation of tumor angiogenesis through VEGF modulation in ovarian cancer in vivo using RNA interference.	Tudoran, O., I.B. Neagoe, O. Balacescu, E. Dronca, C. Burz, L. Balacescu, I. Nedelea, A. Irimie, O. Popescu, F.D. Irimie and V. Cristea	Rom. Biotechnol. Lett., 2009. 14(4): p. 4560-4566.	0

6. Cărţi ştiinţifice publicate în edituri naţionale acreditate

1. Toşa Monica-Ioana, Paizs Csaba, Irimie Florin-Dan, *Bioprocese pentru obţinerea medicamentelor şi intermediarilor*. Editura Napoca Star, Cluj-Napoca 2007, ISBN 978-973-647-531-5, 215 pag
2. Irimie Florin Dan, Paizs Csaba, Toşa Monica *Biotransformări în sinteza organică. Aspecte Fundamentale.* Editura Napoca Star, Cluj-Napoca 2006, ISBN 978-973-647-467-5, 180 pag
3 . Moldovan Paula, Toşa Monica Ioana, Leţ Daniela, Majdik Cornelia, Paizs Csaba, Irimie Florin Dan *Aplicaţii pentru laboratorul de biochimie* Editura Napoca Star, Cluj Napoca 2006, ISBN 978-973-647-464-4, 153 pag.
4. Florin Dan Irimie, *Elemente de biochimie,* Ed. Erdelyi Hirado, ISBN 973-98374-92, Cluj-Napoca, 1998, 373 pag
5.Gavril Neamtu, Florin Irimie, Fitoregulatori de creștere, Ed. Ceres ISBN-10: 973-40-0182-5**,** Bucuresti, ,1991 420 pg.

9. Brevete naţionale

Titlu	**Autori**	**Revista**	**r.**
Sunburn alleviating lotion	Timbus, Ioan Victor; Turdean, Ioana Virginia; Schenker, Mariana Nicoleta; Irimie, Florin Dan	CODEN: RUXXA3 RO 121364 B1 20070430; RO 20020910/2007	2002-200201195
Sun protective emulsion with SPF 15	Timbus, Ioan Victor; Turdean, Ioana Virginia; Schenker, Mariana Nicoleta; Irimie, Florin Dan	CODEN: RUXXA3 RO 121367 B1 20070430 RO 20020910/2007	2002-200201196
Remineralizing tonic lotion	Timbus, Ioan Victor; Botar, Alexandru; Turdean, Liviu; Schenker, Mariana; Irimie, Florin Dan	CODEN: RUXXA3 RO 121081 B1 20061229 RO 20001127/2006	2000-200001160
Day moisturizing cream	Timbus, Ioan Victor; Botar, Alexandru; Turdean, Liviu; Schenker, Mariana; Irimie, Florian Dan.	CODEN: RUXXA3 RO 120885 B1 20060929 Patent written in Romanian. Application: RO 20001127/2006	2000-200001159

Criteriul II – Prestigiu profesional

1. Citări ale articolelor ISI listate la Criteriul I

Enzyme-catalyzed synthesis of (R)- and (S)-3-heteroaryl-3-hydroxy-propanoic acids and their derivatives , *Tetrahedron Asymmetry* 2009, 20 (4), pp. 489-496

1. Synthesis of a core carbon framework of cyanosporasides A and B, Aburano, D., Inagaki, F., Tomonaga, S., Mukai, C., *Journal of Organic Chemistry* 2009, 74 (15), pp. 5590-5594

Chemoenzymatic synthesis of (R)- and (S)-1-heteroarylethanols , *Tetrahedron Asymmetry* 2008, 19 (17), pp. 2068-2071

1. Chiral spiroaminoborate ester as a highly enantioselective and efficient catalyst for the borane reduction of furyl, thiophene, chroman, and thiochroman-containing ketones, Stepanenko, V., De Jesús, M., Correa, W., Bermúdez, L., Vázquez, C., Guzmán, I., Ortiz-Marciales, M. *Tetrahedron Asymmetry* 2009, 20 (23), pp. 2659-2665
2. Stereoselective chemoenzymatic synthesis of enantiopure 1-(Heteroaryl)ethanamines by lipase-Catalysed kinetic resolutions , Alatorre-Santamaria, S., Gotor-Fernandez, V., Gotor, V. *European Journal of Organic Chemistry*2009, (15), pp. 2533-2538

Baker's yeast-mediated synthesis of (R)- and (S)-heteroaryl-ethane-1,2-diols , *Tetrahedron Asymmetry* 2008, 19 (16), pp. 1959-1964

1. New ways for old structures , Irimie, F.D., Paizs, C., Tosa, M., Podea, P. *Studia Universitatis Babes-Bolyai Chemia* 2009, 4 (1), pp. 7-16
2. Enantioselective Rh-catalyzed transfer hydrogenation of α-sulfonyloxy heteroaryl ketones; asymmetric synthesis of (S)-bufuralol , Kwak, S.H., Lee, D.-M., Lee, K.-I. *Tetrahedron Asymmetry* 209, 20 (22), pp. 2639-2645

Lipase-catalyzed kinetic resolution of racemic 1-heteroarylethanols-experimental and QM/MM study , *Tetrahedron Asymmetry* 2008, 19 (15), pp. 1844-1852

1. Chiral spiroaminoborate ester as a highly enantioselective and efficient catalyst for the borane reduction of furyl, thiophene, chroman, and thiochroman-containing ketones , Stepanenko, V., De Jesús, M., Correa, W., Bermúdez, L., Vázquez, C., Guzmán, I., Ortiz-Marciales, M. *Tetrahedron Asymmetry*2009, 20 (23), pp. 2659-2665
2. Enantioselective acylation of (RS)-phenylethylamine catalysed by lipases , Pilissão, C., Carvalho, P.d.O., Nascimento, M.d.G. *Process Biochemistry* 2009, 44 (12), pp. 1352-1357
3. New ways for old structures , Irimie, F.D., Paizs, C., Tosa, M., Podea, P. *Studia Universitatis Babes-Bolyai Chemia* 2009, 4 (1), pp. 7-16
4. Enantioselective acetylation of racemic alcohols by Manihot esculenta and Passiflora edulis preparations , Machado, L.L., de Gonzalo, G., Lemos, T.L.G., de Mattos, M.C., de Oliveira, M.d.C.F., Gotor-Fernández, V., Gotor, V. *Journal of Molecular Catalysis B: Enzymatic* 2009, 60 (3-4), pp. 157-162
5. Chemoenzymatic synthesis of (R)- and (S)-1-heteroarylethanols, Tosa, M.I., Podea, P.V., Paizs, C., Irimie, F.D. *Tetrahedron Asymmetry* 2008, 19 (17), pp. 2068-2071

Chemoenzymatic preparation of enantiopure l-benzofuranyl- and l-benzo[b]thiophenyl alanines *Tetrahedron Asymmetry* 2008, 19 (4), pp. 500-511

1. New ways for old structures , Irimie, F.D., Paizs, C., Tosa, M., Podea, P. *Studia Universitatis Babes-Bolyai Chemia* 2009, 4 (1), pp. 7-16
2. Biocatalytic routes to chiral amines and amino acids , Gotor-Fernández, V., Gotor, V. *Current Opinion in Drug Discovery and Development* 2009, 12 (6), pp. 784-797
3. A new and general route to 2-pyrrolylglycine, 2-pyrrolylalanine and homo-2-pyrrolylalanine derivatives, Sarkar, K., Singha, S.K., Chattopadhyay, S.K. *Tetrahedron Asymmetry* 2009, 20 (15), pp. 1719-1721
4. Highly diastereoselective approach to novel phenylindolizidinols via benzothieno analogues of tylophorine based on reductive desulfurization of benzo[b]thiophene, Šafář, P., Žúžiová, J., Marchalín, S., Tóthová, E., Prónayová, N., Švorc, L., Vrábel, V., Daïch, A. *Tetrahedron Asymmetry* 2009, 20 (5), pp. 626-634
5. Enzyme-catalyzed synthesis of (R)- and (S)-3-heteroaryl-3-hydroxy-propanoic acids and their derivatives, Brem, J., Paizs, C., Toşa, M.I., Vass, E., Irimie, F.D. *Tetrahedron Asymmetry* 2009, 20 (4), pp. 489-496

Role of chemical structure in molecular recognition by transferrin *Journal of Molecular Recognition* 2006, 19 (4), pp. 270-274

1. Chiral recognition of mandelic acid on quartz crystal microbalance by vapor diffused molecular assembly method, Guo, H.-S., Kim, J.-M., Chang, S.-M., Kim, W.-S. *Journal of Nanoscience and Nanotechnology 2009,* 9 (5), pp. 2937-2943
2. Versatile method for chiral recognition by the quartz crystal microbalance: Chiral mandelic acid as the detection model , *Langmuir* 2009, 25 (2), pp. 648-652
3. Capillary electrophoresis of proteins 2005-2007 , Dolník, V. *Electrophoresis* 2008, 29 (1), pp. 143-156
4. Advances in chiral seperation using capillary electromigration techniques, Gübitz, G., Schmid, M.G. *Electrophoresis* 2007, 28 (1-2), pp. 114-126

Experimental and quantum chemical study on the vibrational spectroscopy of N-methylphenothiazines: Part 1 *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy* 2006, 63 (2), pp. 349-360

1. Azure A chloride: Computational and spectroscopic study , Snehalatha, M., Hubert Joe, I., Ravikumar, C., Jayakumar, V.S. *Journal of Raman Spectroscopy* 2009, 40 (2), pp. 176-182

NIR surface enhanced Raman spectroscopy and bands assignment by DFT calculations of non-natural β-amino acids *Chemical Physics* 2005, 310 (1-3), pp. 189-199

1. Identification and characterisation of the E951 artificial food sweetener by vibrational spectroscopy and theoretical modelling , Peica, N. *Journal of Raman Spectroscopy* 2009, 40 (12), pp. 2144-2154
2. Dopamine molecules on Aucore-Agshell bimetallic nanocolloids: Fourier transform infrared, raman, and surface-enhanced Raman spectroscopy study aided by density functional theory , Pande, S., Jana, S., Sinha, A.K., Sarkar, S., Basu, M., Pradhan, M., Pal, A., (...), Pal, T. *Journal of Physical Chemistry C* 2009, 113 (17), pp. 6989-7002
3. Mulberry non-engineered silk gland pKundu, J., Dewan, M., Ghoshal, S., Kundu, S.C. rotein vis-à-vis silk cocoon protein engineered by silkworms as biomaterial matrices , *Journal of Materials Science: Materials in Medicine* 2008, 19 (7), pp. 2679-2689
4. Raman and surface enhanced Raman spectroscopy on molecules of pharmaceutical and biological interest , Iliescu, T., Baia, M., Maniu, D. *Romanian Reports on Physics* 2008, 60 (3), pp. 829-855
5. Surface-enhanced Raman scattering and DFT computational studies of a benzotriazole derivative , Li, M.-Y., Liao, Q., Zhang, M., Ai, X.-C., Li, F.-Y. *Journal of Molecular Structure* 2008, 888 (1-3), pp. 2-6
6. N-acetylalanine monolayers at the silver surface investigated by surface enhanced Raman scattering spectroscopy and X-ray photoelectron spectroscopy: Effect of metallic ions , Yang, H., Zhu, X., Song, W., Sun, Y., Duan, G., Zhao, X., Zhang, Z. *Journal of Physical Chemistry C*2008, 112 (38), pp. 15022-15027
7. Concentration-dependent orientational changes of 2-amino-2-thiazoline molecule adsorbed on silver nanocolloidal surface investigated by SERS and DFT , Chowdhury, J., Sarkar, J., Tanaka, T., Talapatra, G.B. *Journal of Physical Chemistry C2008,* 112 (1), pp. 227-239
8. Surface-enhanced Raman scattering and DFT computational studies of a cyanuric chloride derivative, Liao, Q., Li, M.-Y., Hao, R., Ai, X.-C., Zhang, J.-P., Wang, Y. *Vibrational Spectroscopy* 2007, 44 (2), pp. 351-356
9. Adsorption of 2-amino-6-methylbenzothiazole on colloidal silver particles: Quantum chemical calculations and surface enhanced Raman scattering study, Chowdhury, J., Sarkar, J., De, R., Ghosh, M., Talapatra, G.B. *Chemical Physics* 2006, 330 (1-2), pp. 172-183
10. Electromagnetic mechanism of SERS, Schatz, G.C., Young, M.A., Van Duyne, R.P. *Topics in Applied Physics* 2006,103, pp. 19-46
11. Ab initio, DFT vibrational calculations and SERRS study of Rhodamine 123 adsorbed on colloidal silver particles , Sarkar, J., Chowdhury, J., Pal, P., Talapatra, G.B. *Vibrational Spectroscopy* 2006, 41 (1), pp. 90-96
12. Experimental and theoretical surface enhanced raman scattering study of 2-amino-4-methylbenzothiazole adsorbed on colloidal silver particles , Sarkar, J., Chowdhury, J., Ghosh, M., De, R., Talapatra, G.B. *Journal of Physical Chemistry B* 2005, 109 (47), pp. 22536-22544

3. Citări în perioada 2005-2009 ale articolelor anterioare anului 2005

Biocatalytic enantioselective preparation of phenothiazine-based cyanohydrin acetates: Kinetic and dynamic kinetic resolution *Tetrahedron* 2004, 60 (46 SPEC. ISS.), pp. 10533-10540

1. Dynamic enzymatic kinetic resolution of methyl 2,3-dihydro-1h-indene-1- carboxylate , Pietruszka, J., Simon, R.C., Kruska, F., Braun, M. *European Journal of Organic Chemistry* 2009, (35), pp. 6217-6224
2. New ways for old structures, Irimie, F.D., Paizs, C., Tosa, M., Podea, P. *Studia Universitatis Babes-Bolyai Chemia* 2009, 4 (1), pp. 7-16
3. Chemoenzymatic method to enantiopure Sulphur heterocyclic β-hydroxy nitriles, Turcu, M.C., Perkiö, P., Kanerva, L.T. *Arkivoc* 2009 (3), pp. 251-263
4. Enantioselective enzyme-catalysed synthesis of cyanohydrins, Holt, J., Hanefeld, U. *Current Organic Synthesis* 2009, 6 (1), pp. 15-37
5. Chemoenzymatic and microbial dynamic kinetic resolutions, Kamaruddin, A.H., Uzir, M.H., Aboul-Enein, H.Y., Halim, H.N.A. *Chirality* 2009, 21 (4), pp. 449-467
6. Lipase-catalyzed dynamic kinetic resolution giving optically active cyanohydrins: use of silica-supported ammonium hydroxide and porous ceramic-immobilized lipase, Sakai, T., Wang, K., Ema, T. *Tetrahedron* 2008, 64 (9), pp. 2178-2183
7. Recent developments in dynamic kinetic resolution, Pellissier, H. *Tetrahedron* 2008, 64 (8), pp. 1563-1601
8. Enantiomers of amino ethanols and their precursors by lipase catalysis in non-aqueous solvents, Lundell, K., Kanerva, L.T. *Chimica Oggi* 2007, 25 (5 SUPPL. 2), pp. 26-30
9. Emulation of racemase activity by employing a pair of stereocomplementary biocatalysts , Gruber, C.C., Nestl, B.M., Gross, J., Hildebrandt, P., Bornscheuer, U.T., Faber, K., Kroutil, W. *Chemistry - A European Journal* 2007, 13 (29), pp. 8271-8276
10. An asymmetric, chemo-enzymatic synthesis of O-acetylcyanohydrins , Belokon, Y.N., Blacker, A.J., Clutterbuck, L.A., Hogg, D., North, M., Reeve, C. *European Journal of Organic Chemistry* 2006, (20), pp. 4609-4617
11. Catalytic hydrogenation of cyanohydrin esters as a novel approach to N-acylated β-amino alcohols - Reaction optimisation by a design of experiment approach, Veum, L., Pereira, S.R.M., Van Der Waal, J.C., Hanefeld, U. *European Journal of Organic Chemistry* 2006, (7), pp. 1664-1671

12. Carrier enabled catalytic reaction cascades, Veum, L., Hanefeld, U. *Chemical Communications* 2006, (8), pp. 825-831
13. Biotechnological applications of Candida antarctica lipase A: State-of-the-art , Domínguez De María, P., Carboni-Oerlemans, C., Tuin, B., Bargeman, G. , Van Der Meer, A., Van Gemert, R. *Journal of Molecular Catalysis B: Enzymatic* 2005, 37 (1-6), pp. 36-46
14. Enantioselective synthesis of aliphatic cyanohydrin acetates , Veum, L., Hanefeld, U. *Synlett* 2005, (15), pp. 2382-2384
15. Enantioselective C-C bond synthesis catalysed by enzymes , Sukumaran, J., Hanefeld, U. *Chemical Society Reviews* 2005, 34 (6), pp. 530-542
16. Optimisation of the enantioselective synthesis of cyanohydrin esters , Veum, L., Kanerva, L.T., Halling, P.J., Maschmeyer, T., Hanefeld, U. *Advanced Synthesis and Catalysis* 2005, 347 (7-8), pp. 1015-1021
17. Chemoenzymatic preparation of the enantiomers of β-tryptophan ethyl ester and the β-amino nitrile analogue , Li, X.-G., Kanerva, L.T. *Tetrahedron Asymmetry* 2005, 16 (9), pp. 1709-1714

Erratum: Raman, infrared, and surface-enhanced Raman spectroscopy in combination with ab initio and density functional theory calculations on 10-isopropyl-10H-pheno-thiazine-5-oxide (Journal of Physical Chemistry A (2003), 107A) *Journal of Physical Chemistry A* 2003, 107 (25), pp. 5144

1. Electromagnetic mechanism of SERS , Schatz, G.C., Young, M.A., Van Duyne, R.P. *Topics in Applied Physics* 2006, 103, pp. 19-46

Kinetic resolution of 1-(benzofuran-2-yl)ethanols by lipase-catalyzed enantiomer selective reactions *Tetrahedron Asymmetry* 2003, 14 (13), pp. 1943-1949

1. Chiral spiroaminoborate ester as a highly enantioselective and efficient catalyst for the borane reduction of furyl, thiophene, chroman, and thiochroman-containing ketones , Stepanenko, V., De Jesús, M., Correa, W., Bermúdez, L., Vázquez, C., Guzmán, I., Ortiz-Marciales, M. *Tetrahedron Asymmetry* 2009, 20 (23), pp. 2659-2665
2. New ways for old structures Irimie, F.D., Paizs, C., Tosa, M., Podea, P. *Studia Universitatis Babes-Bolyai Chemia* 2009, 4 (1), pp. 7-16
3. Combined sol-gel entrapment and adsorption method to obtain solid-phase lipase biocatalyst, Zarcula, C., Claudia, K., Corici, L., Croitoru, R., Csunderlik, C., Peter, F. *Revista de Chimie* 2009, 60 (9), pp. 922-927
4. Stereoselective chemoenzymatic synthesis of enantiopure 1-(Heteroaryl)ethanamines by lipase-Catalysed kinetic resolutions , Alatorre-Santamaria, S., Gotor-Fernandez, V., Gotor, V. *European Journal of Organic Chemistry*2009, (15), pp. 2533-2538
5. Lipase-catalyzed kinetic resolution of racemic 1-heteroarylethanols-experimental and QM/MM study , Tosa, M., Pilbák, S., Moldovan, P., Paizs, C., Szatzker, G., Szakács, G., Novák, L., (...), Poppe, L. *Tetrahedron Asymmetry* 2008, 19 (15), pp. 1844-1852
6. Effect of chain length on enzymatic hydrolysis of p-nitrophenyl esters in supercritical carbon dioxide , Varma, M.N., Madras, G. *Applied Biochemistry and Biotechnology* 2007, 144 (3), pp. 213-223
7. Biocatalysis in supercritical fluids, in fluorous solvents, and under solvent-free conditions, Hobbs, H.R., Thomas, N.R. *Chemical Reviews* 2007, 107 (6), pp. 2786-2820
8. Trends in lipase-catalyzed asymmetric access to enantiomerically pure/enriched compounds, Ghanem, A. *Tetrahedron* 2007, 63 (8), pp. 1721-1754
9. Lipase-catalyzed deacylation by alcoholysis: A selective, useful transesterification reaction, Santaniello, E., Casati, S., Ciuffreda, P. *Current Organic Chemistry* 2006, 10 (10), pp. 1095-1123
10. Asymmetric synthesis using hydrolytic enzymes in supercritical carbon dioxide, Matsuda, T., Harada, T., Nakamura, K., Ikariya, T. *Tetrahedron Asymmetry* 2005, 16 (5), pp. 909-91
11. Biocatalysis in supercritical CO2 , Matsuda, T., Harada, T., Nakamura, K. *Current Organic Chemistry* 2005, 9 (3), pp. 299-315
12. Application of lipases in kinetic resolution of racemates , Ghanem, A., Aboul-Enein, H.Y. *Chirality* 2005, 17 (1), pp. 1-15
13. Lipase-mediated chiral resolution of racemates in organic solvents , Ghanem, A., Aboul-Enein, H.Y. *Tetrahedron Asymmetry* 2004, 15 (21), pp. 3331-3351
14. Investigation of biocatalysts and biocatalytic processes and their synthetic applications, Bódai, V. *Periodica Polytechnica: Chemical Engineering* 2003, 47 (1), pp. 55-56

Preparation of novel phenylfuran-based cyanohydrin esters: Lipase-catalysed kinetic and dynamic resolution *Tetrahedron Asymmetry* 2003, 14 (13), pp. 1895-1904

1. Enzymatic kinetic resolution of racemic cyanohydrins via enantioselective acylation , Xu, Q., Xie, Y., Geng, X., Chen, P. *Tetrahedron* 2010, 66 (3), pp. 624-630
2. New ways for old structures Irimie, F.D., Paizs, C., Tosa, M., Podea, P. *Studia Universitatis Babes-Bolyai Chemia* 2009, 4 (1), pp. 7-16
3. Enantioselective enzyme-catalysed synthesis of cyanohydrins, Holt, J., Hanefeld, U. *Current Organic Synthesis2009,* 6 (1), pp. 15-37

4. Chemoenzymatic and microbial dynamic kinetic resolutions , Kamaruddin, A.H., Uzir, M.H., Aboul-Enein, H.Y., Halim, H.N.A. *Chirality* 2009, 21 (4), pp. 449-467
5. Synthesis, biological evaluation and molecular modeling of arylfurans as potential trypanothione reductase inhibitors | [Síntese, avaliação biológica e modelagem molecular de arilfuranos como inibidores da enzima, tripanotiona redutase] De Oliveira, R.B., Zani, C.L., Ferreira, R.S., Leite, R.S., Alves, T.M.A., Da Silva, T.H.A., Romanha, A.J. *Quimica Nova* 2008, 31 (2), pp. 261-267
6. Recent developments in dynamic kinetic resolution, Pellissier, H. *Tetrahedron* 2008, 64 (8), pp. 1563-1601
7. Enantiomers of amino ethanols and their precursors by lipase catalysis in non-aqueous solvents, Lundell, K., Kanerva, L.T. *Chimica Oggi* 2007, 25 (5 SUPPL. 2), pp. 26-30
8. Potential and capabilities of hydroxynitrile lyases as biocatalysts in the chemical industry, Purkarthofer, T., Skranc, W., Schuster, C., Griengl, H. *Applied Microbiology and Biotechnology* 2007, 76 (2), pp. 309-320
9. Recent progress on the lipase-catalyzed asymmetric syntheses , Akai, S., Kita, Y. *Yuki Gosei Kagaku Kyokaishi/Journal of Synthetic Organic Chemistry2007,* 65 (8), pp. 772-782
10. An asymmetric, chemo-enzymatic synthesis of O-acetylcyanohydrins , Belokon, Y.N., Blacker, A.J., Clutterbuck, L.A., Hogg, D., North, M., Reeve, C. *European Journal of Organic Chemistry* 2006, (20), pp. 4609-4617
11. Biotechnological applications of Candida antarctica lipase A: State-of-the-art , Domínguez De María, P., Carboni-Oerlemans, C., Tuin, B., Bargeman, G., Van Der Meer, A., Van Gemert, R. *Journal of Molecular Catalysis B: Enzymatic* 2005, 37 (1-6), pp. 36-46
12. Enantioselective synthesis of aliphatic cyanohydrin acetates , Veum, L., Hanefeld, U. *Synlett* 2005, (15), pp. 2382-2384
13. Optimisation of the enantioselective synthesis of cyanohydrin esters , Veum, L., Kanerva, L.T., Halling, P.J., Maschmeyer, T., Hanefeld, U. *Advanced Synthesis and Catalysis* 2005, 347 (7-8), pp. 1015-1021
14. Enantioselective formation of mandelonitrile acetate: Investigation of a dynamic kinetic resolution II, Veum, L., Hanefeld, U. *Tetrahedron Asymmetry* 2004, 15 (23), pp. 3707-3709

Optically active 1-(benzofuran-2-yl)ethanols and ethane-1,2-diols by enantiotopic selective bioreductions *Tetrahedron Asymmetry* 2003, 14 (11), pp. 1495-1501

1. The effect of electromagnetic fields on baker's yeast population dynamics, biocatalytic activity and selectivity, Sandu, D., Lingvay, I., Lányi, S., Micu, D.D., Popescu, C.L., Brem, J., Bencze, L.C., Paizs, C. *Studia Universitatis Babes-Bolyai Chemia* 2009, 4 (2), pp. 195-201
2. New ways for old structures Irimie, F.D., Paizs, C., Tosa, M., Podea, P. *Studia Universitatis Babes-Bolyai Chemia* 2009, 4 (1), pp. 7-16
3. Enantioselective Rh-catalyzed transfer hydrogenation of α-sulfonyloxy heteroaryl ketones; asymmetric synthesis of (S)-bufuralol , Kwak, S.H., Lee, D.-M., Lee, K.-I. *Tetrahedron Asymmetry* 2009, 20 (22), pp. 2639-2645
4. Chemoenzymatic synthesis of (R)- and (S)-1-heteroarylethanols, Tosa, M.I., Podea, P.V., Paizs, C., Irimie, F.D. *Tetrahedron Asymmetry* 2008, 19 (17), pp. 2068-2071
5. Baker's yeast-mediated synthesis of (R)- and (S)-heteroaryl-ethane-1,2-diols, Podea, P.V., Paizs, C., Tosa, M.I., Irimie, F.D. *Tetrahedron Asymmetry* 2008, 19 (16), pp. 1959-1964
6. Lipase-catalyzed kinetic resolution of racemic 1-heteroarylethanols-experimental and QM/MM study , Tosa, M., Pilbák, S., Moldovan, P., Paizs, C., Szatzker, G., Szakács, G., Novák, L., (...), Poppe, L. *Tetrahedron Asymmetry* 2008, 19 (15), pp. 1844-1852
7. RhIII- and IrIII-catalyzed asymmetric transfer hydrogenation of ketones in water , Wu, X., Li, X., Zanotti-Gerosa, A., Pettman, A., Liu, J., Mills, A.J., Xiao, J. *Chemistry - A European Journal* 2008, 14 (7), pp. 2209-2222
8. Biocatalytic reduction of carbonyl groups, Nakamura, K., Matsuda, T. *Current Organic Chemistry* 2006, 10 (11), pp. 1217-1246
9. Microwave-assisted preparation of fused bicyclic heteroaryl boronates: Application in one-pot suzuki couplings, DiMauro, E.F., Vitullo, J.R. *Journal of Organic Chemistry* 2006, 71 (10), pp. 3959-3962
10. Synthesis and conversion of 3-(2-hydroxythiobenzamido)benzo[b]furans , Briel, D. *Heterocycles* 2005, 65 (6), pp. 1295-1309
11. Synthesis of 2-, 4- and 5-(2-alkylcarbamoyl-1-methylvinyl)-7- alkyloxybenzo[b]furans and their leukotriene B4 receptor antagonistic activity , Ando, K. *Yakugaku Zasshi* 2005, 125 (11), pp. 863-874
12. Synthesis of 2-, 4- And 5-(2-alkylcarbamoyl-l-methylvinyl)-7- alkyloxybenzo[b]furans and their leukotriene 64 receptor antagonistic activity , Ando, K., Tsuji, E., Ando, Y., Kunitomo, J.-I., Kobayashi, R., Yokomizo, T., Shimizu, T., (...), Ohishi, Y. *Organic and Biomolecular Chemistry* 2005, 3 (11), pp. 2129-2139

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* 2003, 107 (11), pp. 1811-1818

1. Probing the adsorption mechanism in thiamazole bound to the silver surface with Surface-enhanced Raman Scattering and DFT, Biswas, N., Thomas, S., Sarkar, A., Mukherjee, T., Kapoor, S. *Chemical Physics Letters* 2009, 479 (4-6), pp. 248-254

2. SERS not to be taken for granted in the presence of oxygen Erol, M., Han, Y., Stanley, S.K., Stafford, C.M., Du, H., Sukhishvili, S. *Journal of the American Chemical Society* 2009, 131 (22), pp. 7480-7481
3. Dopamine molecules on Aucore-Agshell bimetallic nanocolloids: Fourier transform infrared, raman, and surface-enhanced Raman spectroscopy study aided by density functional theory, Pande, S., Jana, S., Sinha, A.K., Sarkar, S., Basu, M., Pradhan, M., Pal, A., (...), Pal, T. *Journal of Physical Chemistry C* 2009, 113 (17), pp. 6989-7002
4. Studies on adsorption of mono- and multi-chromophoric hemicyanine dyes on silver nanoparticles by surface-enhanced resonance raman and theoretical calculations , Biswas, N., Thomas, S., Kapoor, S., Mishra, A., Wategaonkar, S., Mukherjee, T. *Journal of Chemical Physics* 2008, 129 (18), art. no. 184702
5. Exploration of electrostatic field force in surface-enhanced Raman scattering: An experimental investigation aided by density functional calculations, Sarkar, S., Pande, S., Jana, S., Sinha, A.K., Pradhan, M., Basu, M., Chowdhury, J., Pal, T. *Journal of Physical Chemistry C* 2008, 112 (46), pp. 17862-17876
6. Concentration-dependent orientational changes of 2-amino-2-thiazoline molecule adsorbed on silver nanocolloidal surface investigated by SERS and DFT, Chowdhury, J., Sarkar, J., Tanaka, T., Talapatra, G.B. *Journal of Physical Chemistry C* 2008, 112 (1), pp. 227-239
7. Quantitative online detection of low-concentrated drugs via a SERS microfluidic system, Ackermann, K.R., Henkel, T., Popp, J. *ChemPhysChem* 2007, 8 (18), pp. 2665-267
8. Experimental and theoretical studies of Raman spectroscopy on 4-mercaptopyridine aqueous solution and 4-mercaptopyridine/Ag complex system, Zhang, L., Bai, Y., Shang, Z., Zhang, Y., Mo, Y. *Journal of Raman Spectroscopy* 2007, 38 (9), pp. 1106-1111
9. Adsorption of CGA on colloidal silver particles: DFT and SERS study , Biswas, N., Kapoor, S., Mahal, H.S., Mukherjee, T. *Chemical Physics Letters* 2009, 444 (4-6), pp. 338-345
10. Adsorption of 4-methyl-4H-1,2,4-triazole-3-thiol molecules on silver nanocolloids: FT-IR, Raman, and surface-enhanced Raman scattering study aided by density functional theory, Sarkar, J., Chowdhury, J., Talapatra, G.B., *Journal of Physical Chemistry C* 2007, 111 (27), pp. 10049-10061
11. On the photophysics of artificial blue-light photoreceptors: An ab initio study on a flavin-based dye dyad at the level of coupled-cluster response theory, Sadeghian, K., Schütz, M. *Journal of the American Chemical Society* 2007, 129 (13), pp. 4068-4074
12. Surface-enhanced resonance raman scattering and density functional calculations of hemicyanine adsorbed on colloidal silver surface, Biswas, N., Thomas, S., Kapoor, S., Mishra, A., Wategaonkar, S., Venkateswaran, S., Mukherjee, T. *Journal of Physical Chemistry A* 2006, 110 (5), pp. 1805-1811
13. Surface enhanced Raman scattering (SERS) - A quantitative analytical tool?, Sackmann, M., Materny, A. *Journal of Raman Spectroscopy* 2006, 37 (1-3), pp. 305-310
14. Experimental and theoretical surface enhanced raman scattering study of 2-amino-4-methylbenzothiazole adsorbed on colloidal silver particles , Sarkar, J., Chowdhury, J., Ghosh, M., De, R., Talapatra, G.B. *Journal of Physical Chemistry B* 2005, 109 (47), pp. 22536-22544
15. Adsorption of 2-aminobenzothiazole on colloidal silver particles: An experimental and theoretical surface-enhanced Raman scattering study, Sarkar, J., Chowdhury, J., Ghosh, M., De Rina, Talapatra, G.B., *Journal of Physical Chemistry B* 2005, 109 (26), pp. 12861-12867

Candida antarctica lipase A in the dynamic resolution of novel furylbenzotiazol-based cyanohydrin acetates *Tetrahedron Asymmetry* 2003, 14 (5), pp. 619-627

1. New ways for old structures Irimie, F.D., Paizs, C., Tosa, M., Podea, P. *Studia Universitatis Babes-Bolyai Chemia* 2009, 4 (1), pp. 7-16
2. Chemoenzymatic method to enantiopure Sulphur heterocyclic β-hydroxy nitriles, Turcu, M.C., Perkiö, P., Kanerva, L.T. *Arkivoc* 2009 (3), pp. 251-263
3. Chemoenzymatic synthesis of optically active 1,2-disubstituted ferrocenes with planar chirality , Merabet-Khellasi, M., Aribi-Zouioueche, L., Riant, O. *Tetrahedron Asymmetry* 2009, 20 (12), pp. 1371-1377
4. Enantioselective enzyme-catalysed synthesis of cyanohydrins , Holt, J., Hanefeld, U. *Current Organic Synthesis* 2009, 6 (1), pp. 15-37
5. Donor-π-acceptor benzothiazole-derived dyes with an extended heteroaryl-containing conjugated system: synthesis, DFT study and antimicrobial activity, Zajac, M., Hrobárik, P., Magdolen, P., Foltínová, P., Zahradník, P. *Tetrahedron* 2008, 64 (46), pp. 10605-10618
6. Recent developments in dynamic kinetic resolution, Pellissier, H. *Tetrahedron* 2008, 64 (8), pp. 1563-1601
7. Enantiomers of amino ethanols and their precursors by lipase catalysis in non-aqueous solvents , Lundell, K., Kanerva, L.T. *Chimica Oggi* 2007, 25 (5 SUPPL. 2), pp. 26-30
8. An asymmetric, chemo-enzymatic synthesis of O-acetylcyanohydrins , Belokon, Y.N., Blacker, A.J., Clutterbuck, L.A., Hogg, D., North, M., Reeve, C. *European Journal of Organic Chemistry* 2006, (20), pp. 4609-4617
9. A chemoenzymatic scalable route to optically active (R)-1-(pyridin-3-yl)-2- aminoethanol, valuable moiety of β3-adrenergic receptor agonists, Perrone, M.G., Santandrea, E., Giorgio, E., Bleve, L., Scilimati, A., Tortorella, P. *Bioorganic and Medicinal Chemistry* 2006, 14 (4), pp. 1207-1214

10. Biotechnological applications of Candida antarctica lipase A: State-of-the-art, Domínguez De María, P., Carboni-Oerlemans, C., Tuin, B., Bargeman, G., Van Der Meer, A., Van Gemert, R. *Journal of Molecular Catalysis B: Enzymatic* 37 (1-6), pp. 36-46
11. Enantioselective synthesis of aliphatic cyanohydrin acetates, Veum, L., Hanefeld, U. *Synlett* 2005, (15), pp. 2382-2384
12. Optimisation of the enantioselective synthesis of cyanohydrin esters, Veum, L., Kanerva, L.T., Halling, P.J., Maschmeyer, T., Hanefeld, U. *Advanced Synthesis and Catalysis* 2008, 347 (7-8), pp. 1015-1021
13. Chemoenzymatic preparation of the enantiomers of β-tryptophan ethyl ester and the β-amino nitrile analogue , Li, X.-G., Kanerva, L.T. *Tetrahedron Asymmetry* 2005, 16 (9), pp. 1709-1714

Chemo-enzymatic preparation of hydroxymethyl ketones *Journal of the Chemical Society. Perkin Transactions 1* 2002, (21), pp. 2400-2402

1. Microwave-assisted one-carbon chain extension in the preparation of terminal -hydroxy ketones , Vaismaa, M.J.P., Leskinen, M.V., Lajunen, M.K. *Synthetic Communications* 2009, 39 (11), pp. 2042-2052
2. Convenient synthesis and evaluation of biological activity of benzyl (2S)-2-[(R)-1-hydroxy-2-oxo-(1-phenethyl)prop-3-ylcarbamoyl]-4-oxopiperidine- (or -4-oxopyrrolidine)-1-carboxylate as novel histone deacetylase inhibit, Oh, S., Moon, H.-I., Jung, J.-C. *Zeitschrift fur Naturforschung - Section B Journal of Chemical Sciences* 2008, 63 (11), pp. 1300-1304
3. Baker's yeast-mediated synthesis of (R)- and (S)-heteroaryl-ethane-1,2-diols, Podea, P.V., Paizs, C., Toşa, M.I., Irimie, F.D. *Tetrahedron Asymmetry* 2009, 19 (16), pp. 1959-1964
4. A simple synthesis of 4-substituted 2-(3-hydroxy-2-oxo-1-phenethyl- propylcarbamoyl)pyrrolidine-1-carboxylic acid benzyl esters as novel cysteine protease inhibitors , *Zeitschrift fur Naturforschung - Section B Journal of Chemical Sciences* 2008, 63 (2), pp. 210-216
5. Application of bioreduction by microorganisms in the enantioselective synthesis of alpha-substituted-1-phenylethanols, Andrade, L.H., Polak, R., Porto, A.L.M., Schoenlein-Crusius, I.H., Comasseto, J.V. *Letters in Organic Chemistry* 2006, 3 (8), pp. 613-618

Baker's yeast mediated preparation of (10-alkyl-10H-phenothiazin-3-yl)methanols *Journal of Molecular Catalysis - B Enzymatic* 2002, 17 (6), pp. 241-248

1. Experimental and quantum chemical study on the vibrational spectroscopy of N-methylphenothiazines: Part 1, Endrédi, H., Billes, F., Toşa, M., Majdik, C., Irimie, F.D. *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy* 2006, 63 (2), pp. 349-360
2. Synthesis and photophysical properties of phenothiazine-labeled conjugated dendrimers , Zhang, X.-H., Choi, S.-H., Dong, H.C., Ahn, K.-H. *Tetrahedron Letters* 2005, 46 (32), pp. 5273-5276

Vibrational spectroscopic investigations of 5-(4-fluor-phenyl)-furan-2 carbaldehyde *Vibrational Spectroscopy* 2002, 29 (1-2), pp. 235-239

1. Surface enhanced Raman spectroscopy of 5-(4-fluor-phenyl)-furan-2 carbaldehide adsorbed on silver colloid, Iliescu, T., Irimie, F.D., Bolboaca, M., Paisz, Cs., Kiefer, W. *Vibrational Spectroscopy* 2002, 29 (1-2), pp. 251-255

Surface enhanced Raman spectroscopy of 5-(4-fluor-phenyl)-furan-2 carbaldehide adsorbed on silver colloid *Vibrational Spectroscopy* 2002, 29 (1-2), pp. 251-255

1. Synthesis of silver particles with different sizes and morphologies, Martínez-Castañón, G.A., Niño-Martínez, N., Loyola-Rodríguez, J.P., Patiño-Marín, N., Martínez-Mendoza, J.R., Ruiz, F. *Materials Letters* 2009, 63 (15), pp. 1266-1268
2. Surface-enhanced Raman scattering and DFT computational studies of a benzotriazole derivative , Li, M.-Y., Liao, Q., Zhang, M., Ai, X.-C., Li, F.-Y. *Journal of Molecular Structure* 2008, 888 (1-3), pp. 2-6
3. Surface-enhanced Raman scattering of single-walled carbon nanotubes on modified silver electrode , Hou, X., Fang, Y. *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy* 2008, 69 (4), pp. 1140-1145
4. A study of surface enhanced Raman scattering for furfural adsorbed on silver surface , Jia, T.-j., Li, P.-w., Shang, Z.-g., Zhang, L., He, T.-c., Mo, Y.-j. *Journal of Molecular Structure* 2008, 873 (1-3), pp. 1-4
5. Surface-enhanced Raman scattering and DFT computational studies of a cyanuric chloride derivative, Liao, Q., Li, M.-Y., Hao, R., Ai, X.-C., Zhang, J.-P., Wang, Y. *Vibrational Spectroscopy* 2007, 44 (2), pp. 351-356
6. An investigation of the surface enhanced Raman scattering (SERS) from a new substrate of silver-modified silver electrode by magnetron sputtering , Li, J., Fang, Y. *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy2007,* 66 (4-5), pp. 994-1000
7. Surface-enhanced Raman scattering system of sample molecules in silver-modified silver film , Niu, Z., Fang, Y. *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy* 2007, 66 (3), pp. 712-716
8. Surface-enhanced Raman scattering of single-walled carbon nanotubes on silver-coated and gold-coated filter paper . Niu, Z.Q., Fang, Y. *Journal of Colloid and Interface Science* 2006, 303 (1), pp. 224-228

9. An investigation of the surface-enhanced Raman scattering (SERS) effect from a new substrate of silver-modified silver electrode , Wen, R., Fang, Y. *Journal of Colloid and Interface Science 2005,* 292 (2), pp. 469-475

Separation of N-alkyl phenothiazine sulfones by HPTLC using an optimum mobile phase *Journal of Pharmaceutical and Biomedical Analysis* 2002,28 (2), pp. 385-389

1. The behavior of some phenothiazines and their demethylated derivatives in reversed-phase liquid chromatography , Le, D.C., Beljean, M., Siouffi, A.-M. *Journal of Chromatographic Science* 2006, 44 (1), pp. 49-54

Synthesis of optically active 3-substituted-10-alkyl-10H-phenothiazine-5-oxides by enantioselective biotransformations *Tetrahedron Asymmetry 2002,* 13 (2), pp. 211-221

1. Synthesis and structure of new 3,7,10-substituted-phenothiazine derivatives, Turdean, R., Bogdan, E., Terec, A., Petran, A., Vlase, L., Turcu, I., Grosu, I. *Central European Journal of Chemistry* 2009, 7 (1), pp. 111-117
2. (E)-3-(2-Alkyl-10H-phenothiazin-3-yl)-1-arylprop-2-en-1-ones: Preparative, IR, NMR and DFT study on their substituent-dependent reactivity in hydrazinolysis and sonication-assisted oxidation with copper(II)nitrate, Găină, L., Csámpai, A., Túrós, G., Lovász, T., Zsoldos-Mády, V., Silberg, I.A., Sohár, P. *Organic and Biomolecular Chemistry* 2006, 4 (23), pp. 4375-4386
3. Lipase-catalyzed deacylation by alcoholysis: A selective, useful transesterification reaction, Santaniello, E., Casati, S., Ciuffreda, P. *Current Organic Chemistry* 2006, 10 (10), pp. 1095-1123
4. Experimental and quantum chemical study on the vibrational spectroscopy of N-methylphenothiazines: Part 1 , Endrédi, H., Billes, F., Toşa, M., Majdik, C., Irimie, F.D. *Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy* 2006, 63 (2), pp. 349-360

Selective oxidaton methods for preparation of N-alkylphenothiazine sulfoxides and sulfones *Heterocyclic Communications* 2001, 7 (3), pp. 277-282

1. Microwave-assisted synthesis of Phenothiazine sulfoxide derivatives, Găină, L., Surducan, M., Cristea, C., Silaghi-Dumitrescu, L. *Studia Universitatis Babes-Bolyai Chemia* 2002, 2, pp. 65-71
2. (E)-3-(2-Alkyl-10H-phenothiazin-3-yl)-1-arylprop-2-en-1-ones: Preparative, IR, NMR and DFT study on their substituent-dependent reactivity in hydrazinolysis and sonication-assisted oxidation with copper(II)nitrate, Găină, L., Csámpai, A., Túrós, G., Lovász, T., Zsoldos-Mády, V., Silberg, I.A., Sohár, P. *Organic and Biomolecular Chemistry* 2006, 4 (23), pp. 4375-4386

Synthesis and stereochemistry of some new 1,3-dioxane derivatives obtained from 5-aryl-2-furaldehydes *Revue Roumaine de Chimie* 2000, 45 (9), pp. 877-882

1. Stereochemistry studies of some 1,3-dioxane derivatives by differential mass spectrometry and computational chemistry, Harja, F., Bettendorf, C., Grosu, I., Dinca, N. *NATO Science for Peace and Security Series A: Chemistry and Biology* ,2008, pp. 185-19
2. Stereochemistry studies of some 1,3-dioxane derivatives by differential mass spectrometry and computational chemistry, Harja, F., Bettendorf, C., Grosu, I., Dinca, N. *NATO Security through Science Series C: Environmental Security* , 2008, pp. 185-191

Role of stationary phase and eluent composition on the determination of log P values of N-hydroxyethylamide of aryloxyalkylen and pyridine carboxylic acids by reversed-phase high-performance liquid chromatography *Journal of Chromatography B: Biomedical Applications* 1998, 714 (2), pp. 247-261

1. Investigating biological activity spectrum for novel styrylquinazoline analogues, Jampilek, J., Musiol, R., Finster, J., Pesko, M., Carroll, J., Kralova, K., Vejsova, M., (...), Polanski, J. *Molecules* 2009, 14 (10), pp. 4246-4265
2. Rhodanineacetic acid derivatives as potential drugs: Preparation, hydrophobic properties and antifungal activity of (5-arylalkylidene-4-oxo-2- thioxo-1,3-thiazolidin-3-yl)acetic acids, Dolezel, J., Hirsova, P., Opletalova, V., Dohnal, J., Marcela, V., Kunes, J., Jampilek, J.*Molecules* 2009, 14 (10), pp. 4197-4212
3. Analysis of anabolic steroids in hair: Time courses in guinea pigs, Shen, M., Xiang, P., Yan, H., Shen, B., Wang, M. *Steroids* 2009, 74 (9), pp. 773-778
4. Optimization of Chromatographic Systems for Determination of Lipophilicity for Selected Isoquinoline Alkaloids , Petruczynik, A. *Journal of Liquid Chromatography and Related Technologies* 2009, 32 (15), pp. 2265-2280
5. RP-HPLC determination of lipophilicity in series of quinoline derivatives, Musiol, R., Jampilek, J., Podeszwa, B., Finster, J., Tabak, D., Dohnal, J., Polanski, J. *Central European Journal of Chemistry* 2009, 7 (3), pp. 586-597
6. RP-HPLC determination of the lipophilicity of bispyridinium reactivators of acetylcholinesterase bearing a but-2-ene connecting linker , Musilek, K., Jampilek, J., Dohnal, J., Jun, D., Gunn-Moore, F., Dolezal, M., Kuca, K. *Analytical and Bioanalytical Chemistry* 2008, 391 (1), pp. 367-372
7. Investigating biological activity spectrum for novel quinoline analogues 2: Hydroxyquinolinecarboxamides with photosynthesis-inhibiting activity, Musiol, R., Tabak, D., Niedbala, H., Podeszwa, B., Jampilek, J., Kralova, K., Dohnal, J., (...), Polanski, J. *Bioorganic and Medicinal Chemistry* 2008, 16 (8), pp. 4490-4499

8. Current state of the art in HPLC methodology for lipophilicity assessment of basic drugs. A review, Giaginis, C., Tsantili-Kakoulidou, A. *Journal of Liquid Chromatography and Related Technologies* 2008, 31 (1), pp. 79-96
9. Characterization of high-pressure liquid chromatography columns using chromatographic methods, Jandera, P., Novotná, K. *Analytical Letters* 2006, 39 (10), pp. 2095-2152
10. Development and optimization of a rapid HPLC method for analysis of ricobendazole and albendazole sulfone in sheep plasma , Wu, Z., Medlicott, N.J., Razzak, M., Tucker, I.G. *Journal of Pharmaceutical and Biomedical Analysis* 2005, 39 (1-2), pp. 225-232

Prediction of the lipophilicity of some N-hydroxyethylamides of aryloxyalkylene and pyridine carboxylic acids by reversed-phase thin-layer chromatography *Journal of Planar Chromatography - Modern TLC* 1998, 11 (5), pp. 342-345

1. Prediction of the lipophilicity of some plant growth stimulators by RP-TLC and relationship between slope and intercept of TLC equations , Gocan, S., Cobzac, S., Grinberg, N. *Journal of Liquid Chromatography and Related Technologies* 2007, 30 (11), pp. 1669-1676
2. Determination of the lipophilicity of potential antituberculotic compounds by RP-TLC, Mrkvičková, Z., Kovaříková, P., Klimeš, J., Doležal, M. *Journal of Planar Chromatography - Modern TLC* 2006, 19 (112), pp. 422-426
3. Reversed-phase thin-layer chromatographic determination of the lipophilicity of potential antituberculotic compounds, *Journal of Planar Chromatography - Modern TLC* Kresta, J., Kastner, P., Klimeš, J., Klimešová, V. 2005, 18 (106), pp. 450-454

Bakers' yeast-mediated reductions of some nitro-dibenzofurans *Heterocyclic Communications* 1997, 3 (6), pp. 549-553

1. New ways for old structures Irimie, F.D., Paizs, C., Tosa, M., Podea, P. *Studia Universitatis Babes-Bolyai Chemia* 2009, 4 (1), pp. 7-16

Prediction of the lipophilicity of some plant growth-stimulating amido esters of ethanolamine using reversed-phase thin-layer chromatography *Journal of Chromatography A* 1994, 675 (1-2), pp. 282-285

1. Effect of the physicochemical properties of N,N-disubstituted-2- phenylacetamide derivatives on their retention behavior in RP-T, Perišić-Janjić, N., Vastag, G., Tomić, J., Petrović, S. *Journal of Planar Chromatography - Modern TLC* 2007, 20 (5), pp. 353-359
2. Prediction of the lipophilicity of some plant growth stimulators by RP-TLC and relationship between slope and intercept of TLC equations, Gocan, S., Cobzac, S., Grinberg, N. *Journal of Liquid Chromatography and Related Technologies* 2007, 30 (11), pp. 1669-1676
3. RP TLC of some newly synthesized azo-dye derivatives, Perišić-Janjić, N.U., Ušćumlić, G.S., Mijin, D.Ž. *Journal of Planar Chromatography - Modern TLC* 2006, 19 (108), pp. 98-103

4. Distincţii, premii şi alte recunoaşteri naţionale şi internaţionale

5. Studenţi naţionali atraşi (activităţi de coordonare ştiinţifică şi didactică)

Doctoranzi inmatriculati:
1. Bencze Laszlo Csaba
2. Brem Jurgen
3. Isprava Laura
4. Mot Augusrin
5. Chis Laura
6. Marcovici Adriana
7. Muncean Anca
8. Trif Maria
9. Vulcu Adriana Elena
10. Tudoran Oana Mihaela

Doctoranzi cu teza finalizata
1. Podea Paula Veronica (2008)

7. Membru in comitetul de redacţie la reviste ISI

Studia Unibversitatis Babes-Bolyai, Chemia
Croatica Chimica Acta

8. Membru in comitetul de redacţie la reviste BDI

Progress in Catalysis

9. Participări la programe/granturi de cercetare finanţate din sursă internaţională (se menţionează şi valoarea)

10. Participări la programe/granturi finanţate din sursă naţională (se menţionează şi valoarea)

Nr.	Titlu	Functie
1	*Metoda noua de separare a compusilor enantiopuri utilizand anticorpi selectivi (2004-2006), Contract CERES 532/2004*	Responsabil UBB Irimie 2003-2005
2	*Metododologie biocatalitica de obtinere selectiva a unor sintoni chirali pentru sinteza de compusi cu activitate biologica (2003-2005), Contract Ceres 189/2003*	Director ICIA Irimie 2003-2005
3	*Model experimental bioreactor-extractor pentru obtinerea enzimatica a unor compusi anti-sida (2003-2005), Contract Ceres 1990/2003*	Director ICIA Irimie 2003-2005
4	*Tehnologie de transesterificare enzimatica destinata obtinerii de biocarburanti de generatia a 2-a PNCD II*	Responsabil UBB Irimie 2008-2010
5	*Sinteza enzimatică a unor amino- şi hidroxiacizi heterociclici nenaturali.*	membru 2006-2008
6	*Investigarea mecanismului de actiune al histidin- si fenilalanin-amoniac liazelor, CNCSIS Idei II*	membru 2009-2011

11. Coordonări de programe/granturi finanţate din sursă internaţională (se menţionează şi valoarea)

Coordonatorul Programului CEEPUS HU-0010, Teaching and Learning Bio-Analysis. Mobilitati al vadrelor didactice si studentilor, cel putin 4 cadre si 2 studenti annual. Valoarea burselor depinde de tara.

12. Coordonări de programe/granturi finanţate din sursă naţională (se menţionează şi valoarea)

13. Profesor invitat la universitati de prestigiu, cu titlu oficial

1. Universitatea din Rouen, Franţa 2009
2. Universitatea din Zagreb, Croatia 2007
3. Universitatea de medicină Karl Franzens Graz, Austria, 2006
3 Universitatea din Budapesta, Ungaria, 2007, 2008, 2009

15. Conferinţe invitate internaţionale

1. Moldovan, P., Paizs, Cs., Tosa M., Majdik, C., Daniela Let, D., **Florin Dan Irimie**,. (2006): *Dynamic enzymatic resolution of some non-proteinogenic amino acids,* 1st European Chemistry Congress*,* 27-31 August, Budapest, Hungary 546.
2. Moldovan, P., Paizs, Cs., Tosa M., Majdik, C., Daniela Let, D., **Florin Dan Irimie**, F. D. (2006): *Optically active 1-(indole-3'-yl)ethane-1,2-diols by enantiotopic selective bioreductions*, 33rd International Conference of Slovak Society of Chemical Engineering, Tatranske Matliare, Slovakia, 22-26 May, 2006, 228.
3. Majdik, C., Toşa, M., Moldovan, P., Pénzes, A., Let, D., Paizs, Cs., **Irimie, F. D**. (2006): *Application of immobilization techniques for heavy metals biosorption with Saccharomyces cerevisiae cells*, 33rd International Conference of Slovak Society of Chemical Engineering*,* Tatranske Matliare, Slovakia, 22-26 May, 2006, 230.
4. Moldovan, P., Paizs, Cs., Tosa M., Majdik, C., Daniela Let, D., **Florin Dan Irimie**, F. D. (2006): *Dynamic enzymatic resolution of some non-proteinogenic amino acids,* 33rd International Conference of Slovak Society of Chemical Engineering, Tatranske Matliare, Slovakia, 22-26 May, 2006, 229.
5. **Irimie, F.D**., Paizs, Cs., Tosa, M.I., Majdik, C. (2006): *Selectivity of biocatalysts. Applications in organic synthesis.* 33rd International Conference of Slovak Society of Chemical Engineering, Tatranske Matliare, Slovakia, 22- 26 May, 2006, 231.
6. **Florin Dan Irimie**, Csaba Paizs, Monica Toşa, Paula Podea, Enzyme dynamic kinetic resolution, as a valuable tool for enantiopure compounds synthesis. process and monitoring, International Symposium and Summer School:*„Development of Bioanalytical Methods and Actual Applications*", Nitra 2008, Slovacia

16. **Membru în comitete de organizare sau ştiinţifice ale unor conferinţe internaţionale**
Nitra, Slovacia, 2008; Sofia, 2006

III. Realizare remarcabilă

Direcția de dezvoltare asumată de grupul nostru in domeniul sintezei organice selective asistate biocatalitic, aceea de a crea tehnologii alternative noi, de principiu, care să poată fi utilizate intr-o gamă cât mai mare de aplicații concrete. Consecvent acestei direcții, **am demarat, la inițiativa personală un proiect în colaborare cu IRCOF (Institut de Recherche en Chimie Organique Fine) Rouen, Franța**.

Proiectul, considerat de subsemnatul ca realizarea cea mai relevantă din ultimii cinci ani, are ca obiectiv construirea unor componente de schelet de tip 2-hidroximetil și 2-aminometilazol, de înaltă enantiopuritate. Aceste elemente moleculare de construcție au capacitatea dovedită de a avea acțiuni biologice interesante precum citotoxicitate selectivă, inhibiție selectivă de proteosinteză bacteriană, inhibiție pentru formele de rezistență medicamentoasă multiplă.

Proiectul constă in sinteza in compun, în laboratoarele partenere a motivelor heterociclice, și în realizarea etapei înalt stereoselective (enantiomer sau enantiotop-) în laboratoarele grupului coordonat se subsemnatul.

Valoarea proiectului constă, pe lângă rezultatele substanțiale previzionate la limita certitudinii, în implicarea a doi doctoranzi ai subsemnatului dintre care unul este îndrumat in cotutelă, cu șeful grupului omolog din Franța. De asemenea în realizarea proiectului sunt implicați și doi masteranzi.

Anticipăm elaborarea, inițială a unor brevete in comun și ulterior a unor publicații relevante privind aceste structuri natural-mimetice. Ulterior vom trece la o etapă superioară, aceea de asamblare a acestor elemente in construcția bioactiv selectivă și testarea acesteia in vederea elaborării propunerii de validare.

Această realizare, a fost posibilă în condițiile existenței grupului de cercetare „Biotransformări ale substraturilor organice” acreditat CNCSIS din 2005 și a nucleului de cercetare validat prin rezultatele anaxate, compus din Conf. Dr. PAIZS Csaba, Monica-Ioana TOSA și Paula PODEA, alături de subsemnatul.

Pe lângă cele de mai sus consider tot ca realizare remarcabilă monografia ”**Biotransformări în sinteza organică – aspecte fundamentale**” elaborată împreună cu cei doi colaboratori PAIZS Csaba și Monica Ioana TOSA în 2006, la Editura Napoca-Star, o sinteză unică, în țară dar și pe plan internațional, a experienței grupului de autori, și a celor mai relevante jaloane ale domeniului.

Data: Semnătura:

Certific validitatea datelor prezentate
Sef de catedră,