

CURRICULUM VITAE

Dr. IOULIA SMONOU

Position: Associate Professor
Affiliation: Department of Chemistry
University of Crete
Heraklion-Voutes Campus, Crete 71003, GREECE
Date of Birth: 11/4/1957 Place of Birth: Athens
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EDUCATION

1980 **B.Sc.** in Chemistry, University of Athens, Greece.
1985 **Ph.D** in Organic Chemistry, University of Athens-National Hellenic Research Foundation

PROFESSIONAL

1985-1986: **Postdoctoral research fellow**
University of California, Los Angeles
With Professor M. E. Jung
1986-1989 : **Research associate**
Department of Chemistry, University of Crete, Greece
June-Sept.1987: **Postdoctoral research fellow**
University of California, Los Angeles
With Professor C. S. Foote
Nov.1989-May1992: **Instructor of Organic Chemistry**
Department of Chemistry, University of Crete, Greece
May1992-Apr1999: **Lecturer in Organic Chemistry**
Department of Chemistry, University of Crete, Greece
Apr1999-2002 : **Assistant Professor in Organic Chemistry**
Department of Chemistry, University of Crete, Greece
2003-2005: **Tenured Assistant Professor in Organic Chemistry**
Department of Chemistry, University of Crete, Greece
2005- present : **Associate Professor in Organic Chemistry**
Department of Chemistry, University of Crete, Greece
Feb.2006-Aug.2006: **Visiting Professor**
California Institute of Technology (CALTECH)
Department of Chemistry & Chemical Engineering
Professor F. H. Arnold

RESEARCH INTERESTS

- Biocatalysis-Biotransformations in Organic Synthesis
- Asymmetric synthesis of bioactive compounds using biocatalytic methods
- Enzymes in Organic Chemistry: Mechanisms, Stereoselectivity, Synthetic Applications
- Applied Biocatalysis
- Mechanisms of Organic Reactions.

Associate Editor of CHEMICAL PAPERS since August 15, 2017

<http://www.springer.com/chemistry/journal/11696?detailsPage=editorialBoard>

Guest Editor of a special issue entitled “Biocatalysis and Biotransformations in Organic Synthesis” in *Molecules* (ISSN 1420-3049, <http://www.mdpi.com/journal/molecules>).

ADVISORY AND TEACHING ACTIVITIES

1992-present: *Research advisor* for 3 post-doctoral fellows, 5 PhD students (PhD Theses), 10 graduate students (MSc. Theses) and 16 senior undergraduate students (Diploma Research, Independent Research courses, Senior Theses).

Member in evaluation committees for 18 M.Sc. dissertations and 10 Ph.D. dissertations of Department of Chemistry.

Course instructor for:

CHEM201: Organic Chemistry I (1993-2000)

CHEM202: Organic Chemistry II (1993-2000)

CHEM262: Biological Chemistry (2011-present)

2001-2010: Enzymes in Synthetic Organic Chemistry, selective course

1998-present: *Member of Interdepartmental Graduate Program* “Isolation and Synthesis of Natural Products with Biological Activity”, Department of Chemistry, University of Crete (EPEAEK).

Teaching part of the graduate courses: “Structure, Stereochemistry and Chemical Reactions Dynamics” and “Synthetic Methodology and Structure Determination”.

MEMBERSHIP IN DEPARTMENTAL COMMITTEES

1992-2003: Member of NMR Facilities committee

1996-1999: Member of Public Relations committee

1997-2000: Member of Undergraduate Studies committee

1998-2005: Financial support committee for undergraduate students

2008-present: Member of Graduate Programs committee

ADMINISTRATIVE POSITIONS

2008-2010 : **Vice-Chair** of Chemistry Department

2009-2011 : Organizing Committee of the 17th European Symposium on Organic Chemistry, ESOC2011, held on July 10-15, 2011, Crete, Greece

2014-2016 : **Vice-Chair** of Chemistry Department

MEMBERSHIP IN PROFESSIONAL/SCIENTIFIC ASSOCIATIONS

Greek Chemical Society

American Chemical Society-Division of Organic Chemistry

European Federation of Biotechnology

Hellenic Green Chemistry Network

MC member of the **COST Action CM0701** entitled: Cascade Chemo-Enzymatic Processes: New Synergies between Chemistry and Biochemistry, CASCAT, 2010-2012

Member of the **COST Action CM1201** entitled: Biomimetic Radical Chemistry, 6-12-2012 to 5-12-2016

MC member of the **COST Action CM1303** entitled: Systems Biocatalysis, 2014-2017

STUDY GUIDE NOTES AND BOOKS

- Notes for Laboratory Practice of Organic Chemistry, Dept. of Chemistry, University of Crete, 1990

- A. Varvoglis, M. Orfanopoulos, I. Smonou and M. Stratakis. “John McMurry, ORGANIC CHEMISTRY”. Translation in Greek, Crete University Press, Volume I, **1998**. Volume II, **1999**.

PATENTS

“METHOD OF MAKING (+)-SITOPHILURE” US.Patent application No. 60/75,877, with Biocatalytics, International Publication Number WO 2007/076109 with Biocatalytics.

REFeree IN SCIENTIFIC JOURNALS

Tetrahedron Letters, Tetrahedron Asymmetry, Journal of Organic Chemistry, Advanced Synthesis and Catalysis, European Journal of Organic Chemistry, Journal of Molecular Catalysis B: Enzymatic, Protein Engineering, Design and Selection, Journal of Biotechnology, Enzyme and Microbial Technology

PUBLICATIONS

1. C. G. Screttas and I. Smonou *J. Org. Chem.* **1988**, *53*, 893.
"Ring Size Dependent Orientation in Dehydration of 1-(Ethoxycarbonyl)-methyl cycloalkanols".
2. C. G. Screttas and I. Smonou *J. Organometallic Chem.* **1988**, *342*, 1043-52.
"Preparation of Allylic Lithium Reagents with Allyl Groups partly incorporated into Carbocyclic Rings".
3. M. Orfanopoulos, C. S. Foote and I. Smonou *Tetrahedron Lett.* **1987**, *28*, 15.
"Stereochemical Dependence of Isotope Effects in the Ene Reaction of N-Phenyl-1,2,4-triazoline-3,5-dione with Isomers of 2-Butene-d₃".
4. M. Orfanopoulos and I. Smonou *Synth. Comm.* **1988**, *18*, 833.
"Selective Reaction of Diaryl or Aryl alkyl Alcohols in the Presence of Ester or Primary Hydroxyl Groups, through the use of Et₃SiH-BF₃.Et₂O System".
5. I. Smonou and M. Orfanopoulos *Tetrahedron Lett.* **1988**, *29*, 5793.
"Stereoisotopic Studies of the Reduction of 1-Phenylethanol by Etherated Boron Trifluoride-Triethylsilane System".
6. I. Smonou, M. Orfanopoulos and C. S. Foote *Tetrahedron Lett.* **1988**, *29*, 2769.
"Reaction of 4-Phenyl-1,2,4-triazoline-3,5-dione with Substituted Indenes".
7. M. Orfanopoulos, I. Smonou and C. S. Foote *J. Am. Chem. Soc.* **1990**, *112*, 3607.
"Intermediate in the Ene Reactions of Singlet Oxygen and N-Phenyl-1,2,4-Triazoline-3,5-Dione with Olefins".
8. I. Smonou and M. Orfanopoulos *Synth. Comm.* **1990**, *20*, 1387.
"Convenient Synthetic Sequence for the Preparation of Indanones".
9. M. Orfanopoulos, M. Stratakis, Y. Elemes and I. Smonou *Stud. Surf. Sc. Catal.* **1991**, *66*, 565-571.
"Regioselectivity of singlet oxygen ene reactions. The non-bonding large group effect".
10. I. Smonou* *Tetrahedron Lett.* **1994**, *35*, 2071.
"Reductions with Organosilanes. Primary and Secondary Isotope Effects in the Reduction of p-Trifluoromethylacetophenone with Organosilanes".
11. I. Smonou* *Synth. Comm.* **1994**, *24*, 1999.
"One step Reduction of Diaryl Ketones to Hydrocarbons by Etherated Boron Trifluoride-Triethylsilane System".
12. I. Smonou, S. Khan, C. S. Foote, Y. Elemes, I. M. Mavridis, A. Pantidou and M. Orfanopoulos *J. Am. Chem. Soc.* **1995**, *117*, 7081.
"Reactions of Phenyltriazolinedione with Alkenes. Stereochemistry of Methanol Adducts to Aziridinium Imide".
13. Y. S. Angelis and I. Smonou* *Tetrahedron Lett.* **1997**, *38*, 8109.
"Enzymatic Hydrolysis of Acylals. A Promising Route to Chiral Aldehydes".
14. Y. S. Angelis and I. Smonou* *Tetrahedron Lett.* **1998**, *39*, 2823.
"Enantioselectivity and Diastereoselectivity in the Hydrolysis of Acylals and Structurally Related Esters of Secondary Alcohols with *Candida Rugosa* Lipase".
15. I. Tsigos, K. Velonia, I. Smonou* and V. Bouriotis* *Eur. J. Biochem.* **1998**, *254*(2), 356.
"Purification and Characterization of an Alcohol Dehydrogenase from the Antarctic Psychrophile *Moraxella* sp. TAE 123".
16. K. Velonia, I. Tsigos, V. Bouriotis* and I. Smonou* *Bioorg. & Med. Chem. Lett.* **1999**, *9*(1), 65-68.
"Stereospecificity of Hydrogen Transfer by the NAD⁺-linked Alcohol Dehydrogenase from the Antarctic Psychrophile *Moraxella* sp.TAE 123".
17. Y. S. Angelis and I. Smonou* *J. Chem. Res. (S)* **2000**, 488-490.
"Stereospecific Oxygen Rearrangement in the Reduction of Optically Pure Methyl Mandelate to Phenylethanol Isomers".
18. K. Velonia and I. Smonou* *J. Chem. Soc., Perkin Trans. I*, **2000**, 2283-2287.
"Dismutation of Aldehydes Catalyzed by Alcohol Dehydrogenases".
19. Y. S. Angelis, N. S. Hatzakis, I. Smonou and M. Orfanopoulos *Tetrahedron Lett.* **2001**, *42*, 3753-3756.
"Oxidation of Benzyl Alcohols by Dimethyldioxirane. The Question of Concerted versus Stepwise Mechanisms probed by Kinetic Isotope Effects".
20. I. Smonou* and K. Velonia *Tetrahedron Asymmetry* **2001**, *12*:22, 3119-3123.

“Stereospecificity of Hydride Transfer During the Dismutation of Aldehydes Catalyzed by Alcohol Dehydrogenases”.

21. I. Smonou* and D. J. Bougioukou *Tetrahedron Lett*, **2002**, *43*, 339-342.
“Chloroperoxidase –Catalyzed Oxidation of Conjugated Dienoic Esters”.
22. D. J. Bougioukou and I. Smonou* *J. Mol. Cat. B: Enzymatic*. **2002**, *17*, 257-259.
“Chloroperoxidase-catalyzed cyclodimerization of methyl (2E)-2,4-pentadienoate: a [4+2] cycloaddition product”.
23. D. J. Bougioukou and I. Smonou* *Tetrahedron Lett*. **2002**, *43*, 4511-4514.
“Mixed peroxides from the chloroperoxidase-catalyzed oxidation of conjugated dienoic esters with trisubstituted terminal double bond”.
24. I. Smonou*, D. Dafnomili and N. S. Hatzakis *J. Mol. Cat. B: Enzymatic* **2002**, *21*, 309-311.
“Ferulic acid esterase from *Humicola Insolens* catalyzes enantioselective transesterification of secondary alcohols”.
25. N. Hatzakis and I. Smonou*, *Tetrahedron Letters*, **2004**, *45/13* , 2755-2757.
“Enantioselectivity and diastereoselectivity in the transesterification of secondary alcohols mediated by feruloyl esterase from *Humicola insolens*”.
26. M. Lindstrom, S. Bouilly, K. Velonia, I. Smonou, E. Hedenstrom, *Tetrahedron Asymmetry* **2005**, *16*, 1355-1360.
“Synthesis of diastereo- and enantiomerically pure *anti*-3-methyl-1,4-pentanediol *via* lipase catalyzed acylation”.
27. N. Hatzakis and I. Smonou*, *Bioorganic Chemistry* **2005**, *33*, 325-337.
“Asymmetric transesterification of secondary alcohols catalyzed by feruloyl esterase from *Humicola Insolens*”.
28. D. Kalaitzakis, D. J. Rozzell, S. Kambourakis and I. Smonou*, *Org. Lett.* **2005**, *7*, 4799-4801.
“Highly Stereoselective Reductions of α -alkyl-1,3-diketones and α -alkyl- β -keto esters catalyzed by isolated NADPH-dependent Ketoreductases”.
29. D. Kalaitzakis, D. J. Rozzell, S. Kambourakis and I. Smonou*, *Eur. J. Org. Chem.* **2006**, 2309-2313.
“A two-step chemoenzymatic synthesis of the natural pheromone (+)-Sitophilure utilizing an isolated, NADPH-dependent ketoreductase”.
30. D. Kalaitzakis, D. J. Rozzell, S. Kambourakis and I. Smonou*, *Adv. Synth. Cat* **2006**, *348*, 1958-1969.
“Synthesis of Valuable Chiral Intermediates by Isolated Ketoreductases: Application in the Synthesis of α -Alkyl- β -hydroxy Ketones and 1,3-Diols”.
31. D. Kalaitzakis, D. J. Rozzell, S. Kambourakis and I. Smonou*, *Tetrahedron Asymmetry*, **2007**, *18*, 2418-2426.
“Stereoselective Chemoenzymatic Synthesis of Sitophilate: A Natural Pheromone”.
32. Kalaitzakis, D.; Smonou, I. *J. Org. Chem.* **2008**, *73*, 3919-3921.
“A Convenient Method for the Assignment of Relative Configuration of Acyclic α -Alkyl- β -hydroxy Carbonyl Compounds by ^1H NMR”.
33. Kalaitzakis, D.; Smonou, I. “Practical Methods in Biocatalysis and Biotransformations” **2010**, Wiley, eds. Whittall J., Sutton, P. W., pp.278-283.
“Enzyme-catalyzed synthesis of α -alkyl- β -hydroxy ketones and esters by isolated ketoreductases”
34. Kalaitzakis, D.; Smonou, I. *Tetrahedron* **2010**, *66*, 9431-9439.
“High diastereoselective synthesis of 2-substituted-1,3-diols catalyzed by ketoreductases”
35. Kalaitzakis, D.; Smonou, I. *J. Org. Chem.* **2010**, *75*, 8658-8661.
“A two-step, one-pot enzymatic synthesis of 2-substituted-1,3-diols”
36. Kallergi, M.; Kalaitzakis, D.; Smonou, I. *Eur. J. Org. Chem.* **2011**, 3946-3950. *Special Issue Women in Chemistry*.
“Enzymatic Total Synthesis of Banana Volatile (S)-2-Pentyl (R)-3-Hydroxyhexanoate”
37. Kalaitzakis, D.; Smonou, I. *Eur. J. Org. Chem.* **2012**, 43-46.
«Chemoenzymatic Synthesis of Stegobinone and Stegobiol, the Natural Sex Pheromone of the Drugstore Beetle (*Stegobium paniceum* L.)»
Cover picture
38. Bariotaki A., Kalaitzakis D., Smonou I. *Org. Lett.* **2012**, *14*(7), 1792–1795
“Enzymatic Reductions for the Regio- and Stereoselective Synthesis of hydroxy-keto esters and dihydroxy esters”

39. Anastasios Stergiou, Anna Bariotaki, Dimitris Kalaitzakis, Ioulia Smonou *J. Org. Chem.* **2013**, *78*, 7268-7273
"Oxone Mediated Oxidative Cleavage of β -Ketoesters and 1,3-Diketones to α -Ketoesters and 1,2-Diketones in Aqueous Medium"
40. Dimitris Kalaitzakis and Ioulia Smonou "Synthetic Methods for Biologically Active Molecules" **2013**, Wiley, ed. Brenna E., pp.307-327.
"Dynamic Kinetic Resolutions Based on Reduction Processes"
41. Wuyuan Zhang, Anna Bariotaki, Ioulia Smonou, and Frank Hollmann *Green Chemistry*, **2017**, DOI: 10.1039/c7gc00539c
"Visible-Light-Driven Photooxidation of alcohols using surface-doped graphitic carbon nitride"

NATIONAL AND INTERNATIONAL CONFERENCES

1. 11th Greek National Conference of Chemistry, Athens, Greece **1986**.
I. Smonou, Abst. p.23.
"Methodology on the total synthesis of Reserpine"
2. 4th International Symposium on Activation of Dioxygen and Homogeneous Catalytic Oxidation, Sept. 10-14, **1990**, Balatonfured, Hungary.
3. 15th Greek National Conference of Chemistry, Thessaloniki, Greece, Dec. 6-10, **1994**.
I. Smonou, Abst. p.797.
"Stereospecific trapping of aziridinium imide (AI) intermediate of the reaction of 4-phenyl-1,2,4-triazoline-3,5-dione with indenenes in methanol".
4. 15th Greek National Conference of Chemistry, Thessaloniki, Greece, Dec. 6-10, **1994**.
K. Velonia, I. Smonou abst. p.844.
"Studies on the limits of stereoselectivity of Horse Liver Alcohol Dehydrogenase HLADH".
5. 5th European Symposium on Organic Reactivity ESOR V, Santiago de Compostela, Spain, July 16-21, **1995**.
I. Smonou, abst. p.109.
"Stereochemistry of Methanol adducts from 4-phenyl-1,2,4-triazoline-3,5-dione and Indenes".
6. 16th Greek National Conference of Chemistry, Athens, Dec. **1995**.
I. Smonou and Y. Angelis
"Enzymatic hydrolysis of non-natural substrates. Synthesis of optically active carbonyl compounds".
7. 16th Greek National Conference of Chemistry, Athens, Dec. **1995**.
I. Tsigos, K. Velonia, V. Bouriotis and I. Smonou
"Enzymatic oxidoreductions of bulky non-natural substrates-Partial purification of Alcohol Dehydrogenase from Psychrophilic Bacteria".
8. 1st International Congress on Extremophiles, Estoril, Portugal, Aug. **1996**.
I. Tsigos, K. Velonia, I. Smonou, V. Bouriotis
"Purification and Characterization of an Alcohol Dehydrogenase from the Psychrophilic Bacterium TAE123".
9. 5th Chemistry Conference of Greece and Cyprus, Nicosia, Cyprus Sept. **1996**.
I. Smonou, Y. Angelis, abst.p.318.
"Enzymatic Synthesis of Optically Active Carbonyl Compounds".
10. 17th Greek National Conference of Chemistry, Patras, Greece, Dec. **1996**.
"K. Velonia, I. Tsigos, V. Bouriotis and I. Smonou
"Stereochemical Studies of the Type of Alcohol Dehydrogenase from Psychrophilic Bacterium Moraxella sp.TAE 123".
11. 6th European Symposium on Organic Reactivity, ESOR VI, Louvain-la-Neuve, Belgium, July 16-21, **1997**.
I. Smonou and Y. Angelis, abst. P. 169.
"Enzymatic hydrolysis of non natural substrates. Synthesis of optically active carbonyl compounds".

12. 1st International Conference of the Chemical Societies of the South-East European Countries, Halkidiki, Greece, June 1-4, **1998**.
I.Smonou and Y. Angelis, abst. p. OR39.
"Enantio- and Diastereoselective Enzymatic Reactions: Hydrolysis of Acylals and Structurally Related compounds with *Candida Rugosa Lipase*".
13. 1st International Conference of the Chemical Societies of the South-East European Countries, Halkidiki, Greece, June 1-4, **1998**.
K. Velonia and I. Smonou, abst. p. PO276.
"NAD⁺-linked Alcohol Dehydrogenase from the Antarctic Psychrophile *Moraxella* sp. TAE 123: a Type A dehydrogenase-Stereospecificity Studies".
14. Lipases and Lipids: Structure, Function and Biotechnological Applications, Santorini, Greece, May 6-8, **1999**.
I.Smonou and Y. Angelis, abst. p. 48.
"Hydrolysis of Acylals and Structurally Related Compounds with *Candida Rugosa Lipase*. Enantio- and Diastereoselectivity Studies".
15. 11th European Symposium on Organic Chemistry, ESOC 11, Goteborg, Sweden, July 23-28, **1999**.
I.Smonou and Y. Angelis, abst. p. O27.
"*Candida Rugosa Lipase*: Diastereo- and Enantioselectivity Studies in the Hydrolysis of Acylals and Structurally Similar Compounds".
16. 7th European Symposium on Organic Reactivity, ESOR 7, Ulm, Germany, August 22-27, **1999**.
a) Smonou I. and Velonia K., abst. p.230.
« Stereochemical Studies with the NAD⁺-linked Alcohol Dehydrogenase from the Antarctic Psychrophile *Moraxella* sp.TAE123».
b) K. Velonia and I. Smonou, abst. p. 229.
«Dismutation of Aldehydes Catalyzed by Alcohol Dehydrogenases. Stereospecificity Studies».
17. Greek National Conference of Biochemistry and Molecular Biology, Athens, December **1999**.
18. International Conference on Physical Organic Chemistry (ICPOC) 15, Goteborg, Sweden, July 8-13, **2000**.
I. Smonou, N. Hatzakis and Y. Angelis, abst. p.P93.
"Mechanistic Studies of Dimethyl Dioxirane Oxidation of Isopropyl Benzene. Tunneling Effect?"
19. Pacificchem 2000, Honolulu, Hawaii, USA December 14-19, **2000**.
The 2000 International Chemical Congress of Pacific Basin Societies
I. Smonou, Y. Angelis, N. Hatzakis, abst.1080 p. ORGN 9
"Primary and α -Secondary Kinetic Isotope Effects in Oxidation of Secondary Alcohols with Dioxiranes. Radical or Hydride Transfer Mechanism?"
20. The 12th European Symposium on Organic Chemistry (ESOC 12), Groningen, The Netherlands, July 13-18, **2001**.
I. Smonou and D. Bougioukou, abst. P1-193
«Chloroperoxidase-catalyzed Oxidation of Conjugated Dienoic Esters».
21. International Conference on Reactive Intermediates and Reaction Mechanisms.
Ascona, Switzerland, July 7-12, **2002**.
I. Smonou and D. Bougioukou, abst. p.96
« Chloroperoxidase-catalyzed Oxidation of Conjugated Dienoic Esters:Three interesting Cases».
22. Reaction Mechanisms VII, University College Dublin, Dublin, Ireland, July 4-8, **2004**.
I. Smonou and N. Hatzakis
«Stereochemical studies on the transesterification of secondary alcohols catalyzed by Feruloyl Esterase from *Humicola Insolens*."
23. The 14th European Symposium on Organic Chemistry (ESOC 14), Helsinki, Finland, July 4-8, **2005**. D. Kalaitzakis and I. Smonou
"Stereoselective reductions of α -alkyl-1,3-diketones catalyzed by isolated ketoreductases".
24. KISPOC 11, Fukuoka, Japan , September 20-24, **2005**.
Invited, I. Smonou
"Biocatalytic transformations to optically active α -alkyl keto alcohols".
25. 3rd COST B22 ANNUAL CONGRESS "Drug Discovery and Development for Parasitic Diseases", October 1-4, **2006**, Athens-Greece.

- “Synthesis of valuable chiral intermediates by isolated ketoreductases: application in the synthesis of the natural pheromone (+)-Sitophilure”. *Oral presentation*.
26. 8^o International Conference in Medicinal Chemistry, March 15-17, **2007**, University of Patras, Patra, Greece. *Invited speaker*
“Biocatalytic asymmetric reductions for the synthesis of valuable chiral intermediates”.
27. 2nd Greek Symposium on Organic Synthesis- From Chemistry to Biology, Medicine and Materials Science, April 19-21, **2007**, University of Athens, Athens, Greece.
Invited speaker.
“Stereoselective reductions of 1,3-diketones with ketoreductases: application in the synthesis of pheromones”.
28. 15th European Symposium on Organic Chemistry, July 8-13, **2007**, University College Dublin, Ireland., p.383. D. Kalaitzakis and I. Smonou.
29. 4th International Conference of Biotechnology, February 2-3, **2008**, Athens. I. Smonou and D. Kalaitzakis.
30. 13th Greek Symposium in Medicinal Chemistry, March 14-15, **2008**, Athens.
Oral presentation.
“Highly stereoselective biocatalytic transformations for the synthesis of valuable chiral intermediates”.
31. 10^o Conference in Medicinal Chemistry, March 18-20, **2009**, University of Patras, Patras, Greece. I. Smonou, D. Kalaitzakis, I. Samanidis
“A convenient biocatalytic method for the preparation of enantiopure ephedrine analogues”.
32. 16th European Symposium on Organic Chemistry, July 12-16, **2009**, Prague, Czech Republic. p. 529, P2.178, I. Smonou and D. Kalaitzakis
“Biocatalytic Reductions: application in the chemoenzymatic synthesis of pheromones”.
33. 3rd Conference Green Chemistry and Sustainable Development, September 25-27, **2009** Thessaloniki, Greece. D. Kalaitzakis, I. Smonou. *Invited speaker*
“Biocatalytic transformations: application in the synthesis of pheromones”.
34. Kyushu International Symposium on Physical Organic Chemistry (KISPOC-12th), Fukuoka, Japan, December 15-18, **2009**. *Invited speaker*
“A New ¹H NMR Method for the Assignment of Relative Configuration of Acyclic α -Alkyl- β -hydroxy Carbonyl Compounds derived Biocatalytically”
35. 3rd EuCheMS Chemistry Congress, Nuremberg, Germany, Aug 29-Sept. 2, **2010**. *Oral presentation*.
“Asymmetric Enzymatic Cascade Reductions of 1,3-diketones”
36. 17th European Symposium on Organic Chemistry, July 10-15, **2011**, Crete, Greece.
P1 296, Kalaitzakis D. and Smonou I.
“A Two-step, One-Pot Enzymatic Synthesis of 2-Substituted-1,3-Diols”.
37. 17th European Symposium on Organic Chemistry, July 10-15, **2011**, Crete, Greece.
P2 091, Kallergi M., Kalaitzakis D., Smonou I.
“Enzymatic Total Synthesis of Banana Volatile (S)-2-Pentyl (R)-3-Hydroxyhexanoate”.
38. 17th European Symposium on Organic Chemistry, July 10-15, **2011**, Crete, Greece.
P2 315, Bariotaki A., Kalaitzakis D., Smonou I.
“Biocatalytic Reduction of tert-Butyl 3,5-dioxo hexanoate”.
39. BIOTRANS 2011, 2-6 October, **2011**, Giardini Naxos (Messina) Sicily. *Oral presentation*.
“Asymmetric Enzymatic Cascade Reductions of 1,3-diketones”.
40. Multistep Enzyme-Catalyzed Processes 2012 (MECP12), April 10-13, **2012**. University of Graz, Austria.
Bariotaki A., Kalaitzakis D., Smonou I, P. 31
“Enzymatic one-pot synthesis of dihydroxy esters”.
41. Chemistry for Health 2012, Sept.9-14, **2012**, National Hellenic Research Foundation, Athens. *Invited speaker*
“Enzymatic One-pot Synthesis of Pharmaceutical Precursors”
42. COST action CM1201: Biomimetic Radical Chemistry, May 5-7, **2013**, Bologna, Italy. *Invited speaker*
“Biocatalysed reactions and one-pot synthesis of pharmaceutical precursors”
43. 18th European Symposium on Organic Chemistry, July 7-12, **2013**, Marseille, France.
P2-192, I. Smonou, A. Stergiou, A. Bariotaki, D. Kalaitzakis
“A highly efficient Oxone mediated synthesis of α -keto esters and 1,2-diketones”.

44. 18th European Symposium on Organic Chemistry, July 7-12, **2013**, Marseille, France.
P1-033, A. Bariotaki, D. Kalaitzakis, I. Smonou
“Enzymatic reductions of a,g-disubstituted-b,d-diketo esters”
45. COST Action CM1201: Biomimetic Radical Chemistry / 1st WG1 Meeting, Newcastle upon Tyne, UK,
October 5-8, **2013**
“Enzymatic reductions of a,b-unsaturated carbonyl compounds and alkyl substituted-b,d-diketo esters”
46. 3rd Multistep Enzyme Catalyzed Processes (MECP14), April 7-10, **2014**, Madrid, Spain.
“Biocatalytic reductions of a,b-unsaturated carbonyl compounds” *Oral presentation*
47. 3rd Multistep Enzyme Catalyzed Processes Congress (MECP14), April 7-10, **2014**, Madrid, Spain
A. Bariotaki, A. Stergiou, D. Kalaitzakis and I. Smonou
«Exploring the potential of bioreductions for the synthesis of high-added value compounds»
48. 4th Panhellenic Conference of Green Chemistry and Sustainable Development, Oct 30- Nov 1, **2014**,
Ioannina, Greece
P26, p.162-163, I. Smonou, A. Bariotaki, A. Stergiou, D. Kalaitzakis
“Biocatalytic reductions for the synthesis of high-added value organic compounds”
49. 4th Panhellenic Conference of Green Chemistry and Sustainable Development, Oct 30- Nov 1, **2014**,
Ioannina, Greece
P6, p.120-121, I. Smonou, A. Bariotaki, D. Kalaitzakis
“Synthesis of the natural product (R)-Goniothalamine using ketoreductases”
50. 4th Panhellenic Conference of Green Chemistry and Sustainable Development, Oct 30- Nov 1, **2014**,
Ioannina, Greece
P29, p 168-169, I. Smonou, A. Stergiou, A. Bariotaki, A. Tzanakaki, D. Kalaitzakis
“Synthesis of a-OH-1,3-diketones with the environmentally friendly Oxone® /AlCl₃oxidation system”
51. 4th International Conference on Novel Enzymes, October 14-17, **2014**, Ghent, Belgium
P-EA-20, p. 95, I. Smonou, A. Bariotaki, A. Stergiou, D. Kalaitzakis
“Asymmetric enzymatic reductions: applications in the synthesis of high-added value compounds”
52. 12th Chemistry Conference of Greece and Cyprus, May 8-10, **2015**, Thessaloniki
“Biocatalytic processes for one-pot synthesis of pharmaceutical precursors”
Invited Oral presentation
53. 12th Chemistry Conference of Greece and Cyprus, May 8-10, **2015**, Thessaloniki
“Biocatalytic application in the chemoenzymatic synthesis of *Rhynchophorus* spp. Pheromones”
C. Dionysopoulou, M. Kallergi, A. Bariotaki, I. Smonou
54. COST CM1201-Biomimetic Radical Chemistry, 3rd Annual Meeting, Athens, May 11-13, **2015**
“Exploring the potential of bioreductions for the synthesis of high-added value compounds.”
Plenary lecture
55. 42nd International Conference of Slovak Society of Chemical Engineering, May 25-29, **2015**
High Tatras, Slovakia
“Highly stereoselective bioreductions for the synthesis of high-added value compounds “
Plenary lecture
56. BIOTRANS 2015, July 26-30, **2015**, Vienna, Austria
“HIGHLY STEREOSELECTIVE BIOREDUCTIONS OF METHYL SUBSTITUTED DIKETO ESTERS”
PO 122, A. Bariotaki, V. Giannopoulos, Theodore Tyrikos-Ergas and I. Smonou
57. BIOTRANS 2015, July 26-30, **2015**, Vienna, Austria
“Immobilization of redox enzymes”
Martin Rebroša*, Ioulia Smonou, Michal Rosenberg
58. COST CM1201-Biomimetic Radical Chemistry, WG1/WG3 Meeting, Lodz, Poland, Sept 9-11, **2015**
“Enzyme-catalyzed reductions for the synthesis of valuable chiral intermediates”
Ioulia Smonou, Anna Bariotaki, Theodore Tyrikos-Ergas and Vasileios Giannopoulos
Invited lecture
59. 8th European Meeting on OxiZymes, OXIZYMES 2016, July 3–6, **2016**, Wageningen, The
Netherlands
“Redox biocatalysis with immobilized cells and enzymes”
Rebros M., Markosova K., Stloukal R., Smonou I., Rosenberg M.
60. 8th European Meeting on OxiZymes, OXIZYMES 2016, July 3–6, **2016**, Wageningen, The
Netherlands

"A case study of ketoreductases catalyzing reduction and oxidation processes"

I. Smonou, A. Bariotaki

61. 5th International Conference on Novel Enzymes, October 11-14, **2016** Groningen, The Netherlands

"Bioreductions as the key step for the synthesis of biologically active natural products"

Smonou I. 1, Tzanakaki A., Tyrikos-Ergas T., Giannopoulos V.

62. BIOTRANS 2017, July 09-13, **2017**, Budapest, Hungary

"Stereocontrolled enzymatic transformations of di- and tricarbonyl compounds"

Ioulia Smonou, Vasileios Giannopoulos, Theodore Tyrikos-Ergas, Angeliki Tzanakaki and Margarita Zoidi

63. 5th Panhellenic Conference of Green Chemistry and Sustainable Development, Oct 20-22, **2017**, Patras, Greece

Smonou Ioulia, Theodore-Tyrikos-Ergas, Vasileios Giannopoulos, Margarita Zoidi, Kamela Mirtollari

"Biocatalytic processes and green chemistry: Synthesis of biologically active natural products"

Oral presentation