

## 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  
Group of Professor F. H. Arnold (Nobel Laureate 2018)

### RESEARCH INTERESTS

- Biocatalysis-Biotransformations in Organic Synthesis
- Asymmetric synthesis of bioactive compounds using biocatalytic methods
- Applied Biocatalysis
- Redox enzymes and their applications toward the synthesis of useful chiral intermediates
- Green Chemistry
- Photocatalytic reactions of Carbon Nitride

### EDITORIAL BOARD APPOINTMENTS FOR SCIENTIFIC JOURNALS

Associate Editor of CHEMICAL PAPERS: August 15, 2017 – Sept 2018

<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 ACTIVITIES

1992-present: *Research supervisor* for 3 post-doctoral fellows, 6 PhD students (PhD Theses), 14 graduate students (MSc. Theses) and 18 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.

#### TEACHING ACTIVITIES

*Course instructor for:*

CHEM201: Organic Chemistry I (1993-2000), (2012-2014), (2016-2017)

CHEM202: Organic Chemistry II (1993-2000), (2012-2014), (2016-2017)

CHEM602: Enzymes in Synthetic Organic Chemistry, selective course 2001-2010

CHEM151: Biocatalysis in Organic Synthesis, selective course, 2011-present

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

*Graduate Courses:* part of "Structure, Stereochemistry and Chemical Reactions Dynamics" and part of "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

2008-2015: Member or Chair of the Postgraduate Committee of the Department of Chemistry, UoC

2012-present: Chair of the Internal Evaluation Group

2013-2017: Chair of the Students Welfare committee of UoC

#### ADMINISTRATIVE POSITIONS

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

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

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

#### ORGANIZATION OF INTERNATIONAL CONFERENCE

Member of the Organizing and Scientific committee of the 17th European Symposium on Organic Chemistry (ESOC 2011), organized in Crete, Greece July 10-15, 2011.

#### 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 of the 4<sup>th</sup> edition, Crete University Press, Volume I, **1998**. Volume II, **1999**.
- Scientific Editor together with Prof. M. Stratakis, Translation in Greek of the 9<sup>th</sup> edition, "John McMurry, ORGANIC CHEMISTRY", Crete University Press, **2018**.

#### **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**

Journal of the American Chemical Society, Organic Letters, Journal of Organic Chemistry, European Journal of Organic Chemistry, Tetrahedron Letters, Tetrahedron Asymmetry, Advanced Synthesis and Catalysis, Journal of Molecular Catalysis B: Enzymatic, Protein Engineering, Design and Selection, Journal of Biotechnology, Enzyme and Microbial Technology, Catalysts, Molecules.

## 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-d<sub>3</sub>".
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 Et<sub>3</sub>SiH-BF<sub>3</sub>.Et<sub>2</sub>O 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<sup>+</sup>-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  $\alpha$ -alkyl-1,3-diketones and  $\alpha$ -alkyl- $\beta$ -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  $\alpha$ -Alkyl- $\beta$ -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  $\alpha$ -Alkyl- $\beta$ -hydroxy Carbonyl Compounds by  $^1\text{H}$  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  $\alpha$ -alkyl- $\beta$ -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  $\beta$ -Ketoesters and 1,3-Diketones to  $\alpha$ -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**, *19*, 2096-2100.  
"Visible-Light-Driven Photooxidation of alcohols using surface-doped graphitic carbon nitride"
42. T Tyrikos-Ergas, V Giannopoulos, I Smonou *Molecules* **2018**, *23* (3), 640  
"An Efficient Chemoenzymatic Approach towards the Synthesis of Rugulactone".
43. T Petrovičová, K Markošová, Z Hegyi, I Smonou, M Rosenberg, M Rebroš *Catalysts* **2018**, *8* (4), 168.  
"Co-Immobilization of Ketoreductase and Glucose Dehydrogenase"

#### NATIONAL AND INTERNATIONAL CONFERENCES

1. 11<sup>th</sup> Greek National Conference of Chemistry, Athens, Greece **1986**.  
I. Smonou, Abst. p.23.  
"Methodology on the total synthesis of Reserpine"
2. 4<sup>th</sup> International Symposium on Activation of Dioxygen and Homogeneous Catalytic Oxidation, Sept. 10-14, **1990**, Balatonfured, Hungary.
3. 15<sup>th</sup> 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. 15<sup>th</sup> 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. 5<sup>th</sup> 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. 16<sup>th</sup> 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. 16<sup>th</sup> 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. 1<sup>st</sup> 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. 5<sup>th</sup> 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. 17<sup>th</sup> 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. 6<sup>th</sup> 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. 1<sup>st</sup> 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. 1<sup>st</sup> 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<sup>+</sup>-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. 11<sup>th</sup> 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. 7<sup>th</sup> 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<sup>+</sup>-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  $\beta$ -Secondary Kinetic Isotope Effects in Oxidation of Secondary Alcohols with Dioxiranes. Radical or Hydride Transfer Mechanism?"
20. The 12<sup>th</sup> 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 14<sup>th</sup> European Symposium on Organic Chemistry (ESOC 14), Helsinki, Finland, July 4-8, **2005**. D. Kalaitzakis and I. Smonou  
 "Stereoselective reductions of  $\beta$ -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  $\beta$ -alkyl keto alcohols".

25. 3<sup>rd</sup> 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<sup>o</sup> 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. 2<sup>nd</sup> 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. 15<sup>th</sup> European Symposium on Organic Chemistry, July 8-13, **2007**, University College Dublin, Ireland., p.383. D. Kalaitzakis and I. Smonou.
29. 4<sup>th</sup> International Conference of Biotechnology, February 2-3, **2008**, Athens. I. Smonou and D. Kalaitzakis.
30. 13<sup>th</sup> 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<sup>o</sup> 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. 16<sup>th</sup> 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. 3<sup>rd</sup> 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-12<sup>th</sup>), Fukuoka, Japan, December 15-18, **2009**. *Invited speaker*  
“A New <sup>1</sup>H NMR Method for the Assignment of Relative Configuration of Acyclic  $\alpha$ -Alkyl- $\beta$ -hydroxy Carbonyl Compounds derived Biocatalytically”
35. 3<sup>rd</sup> EuCheMS Chemistry Congress, Nuremberg, Germany, Aug 29-Sept. 2, **2010**. *Oral presentation*.  
“Asymmetric Enzymatic Cascade Reductions of 1,3-diketones”
36. 17<sup>th</sup> 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. 17<sup>th</sup> 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. 17<sup>th</sup> 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. 18<sup>th</sup> 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  $\alpha$ -keto esters and 1,2-diketones”.
44. 18<sup>th</sup> European Symposium on Organic Chemistry, July 7-12, **2013**, Marseille, France.  
 P1-033, A. Bariotaki, D. Kalaitzakis, I. Smonou  
 “Enzymatic reductions of  $\alpha,\gamma$ -disubstituted- $\beta,\delta$ -diketo esters”
45. COST Action CM1201: Biomimetic Radical Chemistry / 1st WG1 Meeting, Newcastle upon Tyne, UK, October 5-8, **2013**  
 “Enzymatic reductions of  $\alpha,\beta$ -unsaturated carbonyl compounds and alkyl substituted- $\beta,\delta$ -diketo esters”
46. 3<sup>rd</sup> Multistep Enzyme Catalyzed Processes (MECP14), April 7-10, **2014**, Madrid, Spain.  
 “Biocatalytic reductions of  $\alpha,\beta$ -unsaturated carbonyl compounds” *Oral presentation*
47. 3<sup>rd</sup> 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. 4<sup>th</sup> 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. 4<sup>th</sup> 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. 4<sup>th</sup> 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  $\alpha$ -OH-1,3-diketones with the environmentally friendly Oxone<sup>®</sup>/AlCl<sub>3</sub> oxidation system”
51. 4<sup>th</sup> 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. 12<sup>th</sup> Chemistry Conference of Greece and Cyprus, May 8-10, **2015**, Thessaloniki  
 “Biocatalytic processes for one-pot synthesis of pharmaceutical precursors”  
*Invited Oral presentation*
53. 12<sup>th</sup> 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, 3<sup>rd</sup> Annual Meeting, Athens, May 11-13, **2015**  
 “Exploring the potential of bioreductions for the synthesis of high-added value compounds.”  
*Plenary lecture*
55. 42<sup>nd</sup> 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”  
 Rebroš 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. 5<sup>th</sup> 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. 5<sup>th</sup> Panhellenic Conference Green Chemistry and Sustainable Development, Oct 20-22, **2017**, Patras, Greece, *Oral presentation*  
I. Smonou, T. Tyrikos-Ergas, V. Giannopoulos, M. Zoidi, K. Mirtollari  
" Biocatalytic Processes and Green Chemistry: Synthesis of Biologically Active Natural Products"