

CURRICULUM VITAE

Dr. IOULIA SMONOU

Position: Professor
Affiliation: Department of Chemistry
University of Crete
Heraklion-Voutes Campus, Crete 70013, 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
2005-2019 : **Associate Professor in Organic Chemistry**
Department of Chemistry, University of Crete, Greece
2020-present: **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
- Biocatalytic reaction cascades (multi-enzymatic and chemo-enzymatic)
- Asymmetric synthesis of bioactive compounds using biocatalytic methods
- Immobilization of enzymes
- 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*, IF 3.098, (2017), (ISSN 1420-3049, <http://www.mdpi.com/journal/molecules/special/issues>).

Guest Editor of a special issue entitled "Biocatalysis-Biotransformations in Organic Synthesis" in *Catalysts*, IF 3.465 (2019), (ISSN 2073-4344, https://www.mdpi.com/journal/catalysts/special_issues/biotransformation)

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:

Undergraduate courses

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

Graduate courses

GMP88: Biocatalysis-Applications in Organic Synthesis 2019

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

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 (OMEA)

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 17th 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 4th edition, Crete University Press, Volume I, **1998**. Volume II, **1999**.
- Scientific Editor together with Prof. M. Stratakis, Translation in Greek of the 9th 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, Catalysis Letters, ACS Omega

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**, *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"
44. Apostolos Chatzoudis, Vasileios Giannopoulos, Frank Hollmann and Ioulia Smonou *Catalysts* **2019**, *9*, 639.
"Surface-Doped Graphitic Carbon Nitride Catalyzed Photooxidation of Olefins and Dienes: Chemical Evidence for Electron Transfer and Singlet Oxygen Mechanisms".

SCIENTIFIC PRESENTATIONS AND INVITED TALKS

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. **Poster presentation**
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". **Poster presentation**
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". **Poster presentation**
5. 5th European Symposium on Organic Reactivity ESOR V, Santiago de Compostela, Spain, July 16-21, **1995**.
I. Smonou, abst. p.109. **Poster presentation**
"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 **Poster presentation**
"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 **Poster presentation**
"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 **Poster presentation**
"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. **Oral presentation**
"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 **Poster presentation**
"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. **Poster presentation**
"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. **Poster presentation**
"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. **Poster presentation**
"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. **Oral presentation**
"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. **Poster presentation**
"*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. **Poster presentation**
« Stereochemical Studies with the NAD⁺-linked Alcohol Dehydrogenase from the Antarctic Psychrophile *Moraxella* sp.TAE123».
b) K. Velonia and I. Smonou, abst. p. 229. **Poster presentation**
«Dismutation of Aldehydes Catalyzed by Alcohol Dehydrogenases. Stereospecificity Studies»
17. Greek National Conference of Biochemistry and Molecular Biology, Athens, December **1999**. **Oral presentation**
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. **Poster presentation**
"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 **Poster presentation**
"Primary and β -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 **Poster presentation**
«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 **Poster presentation**
« 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 **Poster presentation**
«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 **Poster presentation**
“Stereoselective reductions of α -alkyl-1,3-diketones catalyzed by isolated ketoreductases”.
24. KISPOC 11, Fukuoka, Japan, September 20-24, **2005**.
I. Smonou **Invited speaker**
“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. **Oral presentation**
“Synthesis of valuable chiral intermediates by isolated ketoreductases: application in the synthesis of the natural pheromone (+)-Sitophilure”.
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. **Poster presentation**
29. 4th International Conference of Biotechnology, February 2-3, **2008**, Athens. I. Smonou and D. Kalaitzakis. **Oral presentation**
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 **Poster presentation**
“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 **Poster presentation**
“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. **Poster presentation**
“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. **Poster presentation**
“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. **Poster presentation**
“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 **Poster presentation**
"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 **Poster presentation**
"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 **Poster presentation**
"Enzymatic reductions of α,γ -disubstituted- β,δ -diketo esters"
45. COST Action CM1201: Biomimetic Radical Chemistry / 1st WG1 Meeting, Newcastle upon Tyne, UK, October 5-8, **2013 Oral presentation**
"Enzymatic reductions of α,β -unsaturated carbonyl compounds and alkyl substituted- β,δ -diketo esters"
46. 3rd Multistep Enzyme Catalyzed Processes (MECP14), April 7-10, **2014**, Madrid, Spain.
"Biocatalytic reductions of α,β -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 **Poster presentation**
«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 **Poster presentation**
"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 **Poster presentation**
"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 **Poster presentation**
"Synthesis of α -OH-1,3-diketones with the environmentally friendly Oxone®/AlCl₃ oxidation 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 **Poster presentation**
"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 **Poster presentation**
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 **Poster presentation**
57. BIOTRANS 2015, July 26-30, **2015**, Vienna, Austria
 “Immobilization of redox enzymes”
 Martin Rebroša*, Ioulia Smonou, Michal Rosenberg **Poster presentation**
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” **Poster presentation**
 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 **Poster presentation**
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” **Poster presentation**
 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 **Poster presentation**
63. 5th 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”.
64. Green Chemistry and Sustainable Development, 6th Panhellenic Symposium, Oct. 18-20 **2019**, Athens, Greece
Vasileios Giannopoulos and Ioulia Smonou
 “Carbon nanodot graphitic carbon nitride (CD-g-C₃N₄) Photooxidation of Aryl Alkanols – Mechanistic studies”. **Oral presentation**
65. Green Chemistry and Sustainable Development, 6th Panhellenic Symposium, Oct. 18-20 **2019**, Athens, Greece
Kamela Myrtollari, Theodore Tyrikos-Ergas, Ioulia Smonou
 “Stereoselective reductions of α -cyanoalkyl- β -keto esters catalyzed by NADPH-dependent ketoreductases”. **Oral presentation**
66. Green Chemistry and Sustainable Development, 6th Panhellenic Symposium, Oct. 18-20 **2019**, Athens, Greece
 Apostolos Chatzoudis, Alexis Theodorou, Kelly Velonia, Ioulia Smonou
 “Encapsulation of a reducing enzyme in protein-polymer nanoparticles: Study of the catalytic activity of the new nanoreactor”. **Poster presentation**
67. Green Chemistry and Sustainable Development, 6th Panhellenic Symposium, Oct. 18-20 **2019**, Athens, Greece
 Sofia Melampianaki, Ioulia Smonou **Poster presentation**
 “Stereoselective enzymatic synthesis of α -fluoro- β -hydroxy esters”. **Poster**
68. 5th Edition on Global Conference on Catalysis, Chemical Engineering & Technology, CAT2019, Sep 16-18, **2019** London, UK
 Ioulia Smonou, Vasileios Giannopoulos, Kamela Mirtollari, Apostolos Hatzoudis
 “Stereocontrolled Biocatalytic Reductions of Carbonyl Compounds”. **E-Poster**