

CURRICULUM VITAE

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PROFESSIONAL AND TEACHING EXPERIENCE

- 1/10/2011-today** **Senior researcher.** Member of the research group of professor George Vassilikogiannakis, financed by ERC starting grant (SYNOXYGEN-277588). Program title “Advancing the Green Chemistry of Singlet Oxygen and Applying it to Synthetic Challenges”.
- 16/3/2013-31/7/2013** **Visiting Assistant Professor (no permanent position),** in the Food Chemistry course, Department of Chemistry, University of Crete.
- 1/3/2012-15/7/2012** **Visiting Assistant Professor (no permanent position),** in the Food Chemistry course, Department of Chemistry, University of Crete.
- 1/6/2008 – 31/8/2011** **Postdoctoral researcher** in the field of chemoenzymatic synthesis of biologically active natural products.
- 1/2/2011-31/8/2011** **Visiting Assistant Professor (no permanent position),** in the Food Chemistry course, Department of Chemistry, University of Crete.
- 1/9/2010-31/1/2011** **Visiting Assistant Professor (no permanent position),** in the Organic Chemistry Laboratory I course, Department of Chemistry, University of Crete.
- 1/3/2010-31/8/2010** **Visiting Assistant Professor (no permanent position),** in the Organic Chemistry Laboratory II course, Department of Chemistry, University of Crete.
- 1/8/2006-31/10/2006** **Scientific Collaborator–Researcher,** EPEAEK «Pythagoras I». Program title «immobilized enzymes in asymmetric organic synthesis».
- 2004-2005** **Teaching assistant** in the Organic Chemistry I course.
- 2003-2004** **Teaching assistant** in the undergraduate Organic Chemistry laboratory.

EDUCATION

- 1998-2002** Bachelor’s of Science degree in Chemistry, Department of Chemistry, University of Crete.
- 2001** Undergraduate diploma thesis “Photooxygenation of chiral alkenes by zeolite confinement” elaborated under the supervision of prof. M. Stratakis, Organic Chemistry Laboratory, Department of Chemistry, University of Crete.
- 2005** Master Thesis “Stereoselective reduction of α -alkyl-1,3-diketones and α -alkyl- β -keto esters catalyzed by 20 isolated NADPH-dependent ketoreductases” elaborated under the supervision of Prof. I. Smonou, Organic Chemistry Laboratory, Department of Chemistry, University of Crete.
- 2006** PhD thesis “Enzymatic asymmetric synthesis of chiral intermediates and natural pheromones by isolated ketoreductases” elaborated under the supervision of Prof. I. Smonou, Organic Chemistry Laboratory, Department of Chemistry, University of Crete.

RESEARCH INTERESTS

- Development of Sustainable methodologies in Organic Synthesis.
- Application of Singlet Oxygen in Organic Synthesis.
- Biocatalysis-Biotransformations in Organic Synthesis.
- Application of Asymmetric Organocatalysis in Organic Synthesis.

SCHOLARSHIPS& AWARDS

- National Scholarships Foundation (**IKY**) for 3 years graduate studies (2003-2006), upon national examinations.
- National Scholarships Foundation (**IKY**) for 1 year post doctoral research (2010-2011).
- "Hildegard, widow of Leonidas Zervas" award from the Academy of Athens in organic chemistry (2014).

PATENTS

- "METHOD OF MAKING (+)-SITOPHILURE" US. Patent application No. 60/75,877, with Biocatalytics, International Publication Number WO 2007/076109, Application number PCT/US2006/049225.

PUBLICATIONS

1. Stratakis, M.; **Kalaitzakis, D.**; Stavroulakis, D.; Kosmas, G.; Tsagkarakis, K. "Remarkable Change of the Diastereoselection in the Dye-Sensitized Ene Hydroperoxidation of Chiral Alkenes by Zeolite Confinement" *Org. Lett.* **2003**, 5, 3471-3474.
2. **Kalaitzakis, D.**; Rozzell, J. D.; Kambourakis, S.; Smonou, I. "Highly Stereoselective Reductions of α -Alkyl-1,3-diketones and α -Alkyl- β -keto Esters Catalyzed by Isolated NADPH-Dependent Ketoreductases" *Org. Lett.* **2005**, 7, 4799-4801.
3. **Kalaitzakis, D.**; Rozzell, J. D.; Kambourakis, S.; Smonou, I. "A Two-Step Chemoenzymatic Synthesis of the Natural Pheromone (+)-Sitophilure Utilizing Isolated, NADPH-Dependent Ketoreductases" *Eur. J. Org. Chem.* **2006**, 2309-2313.
4. **Kalaitzakis, D.**; Rozzell, J. D.; Kambourakis, S.; Smonou, I. "Synthesis of Valuable Chiral Intermediates by Isolated Ketoreductases: Application in the Synthesis of α -Alkyl- β -hydroxy Ketones and 1,3 Diols" *Adv. Synth. Catal.* **2006**, 348, 1958-1969.
5. Stratakis, M.; Raptis, C.; Sofikiti, N.; Tsangarakis, C.; Kosmas, G.; Zaravinos, I. P.; **Kalaitzakis, D.**; Stavroulakis, D.; Baskakis, C.; Stathouloupoulou, A. "Intrazeolite Photooxygenation of Chiral Alkenes. Control of Facial Selectivity by Confinement and Cation- π Interactions" *Tetrahedron* **2006**, 62, 10623-10632.
6. **Kalaitzakis, D.**; Kambourakis, S.; Smonou, I. "Stereoselective Chemoenzymatic Synthesis of Sitophilate: A Natural Pheromone" *Tetrahedron: Asymmetry* **2007**, 18, 2418-2426.
7. **Kalaitzakis, D.**; Smonou, I. "Assignment of Relative Configuration of Small Acyclic α -Alkyl- β -hydroxy Carbonyl Compounds by Proton Nuclear Magnetic Resonance" *J. Org. Chem.* **2008**, 73, 3919-3921.

8. **Kalaitzakis, D.**; Smonou, I. "High Diastereoselective Synthesis of 2-Substituted-1,3-diols Catalyzed by Ketoreductases" *Tetrahedron* **2010**, *66*, 9431-9439.
9. **Kalaitzakis, D.**; Smonou, I. "A Two Step, One-Pot Enzymatic Synthesis of 2-Substituted 1,3-Diols" *J. Org. Chem.* **2010**, *75*, 8658-8661.
10. Kallergi, M.; **Kalaitzakis, D.**; Smonou, I. "Enzymatic Total Synthesis of Banana Volatile (*S*)-2-Pentyl (*R*)-3-Hydroxyhexanoate" *Eur. J. Org. Chem.* **2011**, 3946-3950.
11. **Kalaitzakis, D.**; Smonou, I. "Chemoenzymatic Synthesis of Stegobinone and Stegobiol, the Natural Pheromone of the Drugstore Beetle (*Stegobium paniceum* L.)" *Eur. J. Org. Chem.* **2012**, 43-46.
[HIGHLIGHTED on the Front Cover of *European Journal of Organic Chemistry* volume **2012**, issue **1**]
12. Bariotaki, A.; **Kalaitzakis, D.**; Smonou, I. "Enzymatic Reductions for the Regio- and Stereoselective Synthesis of Hydroxy Keto Esters and Dihydroxy Esters" *Org. Lett.* **2012**, *14*, 1792-1795.
13. **Kalaitzakis, D.**; Montagnon, T.; Alexopoulou, I.; Vassilikogiannakis, G. "A Versatile Synthesis of Meyers' Bicyclic Lactams from Furans: Singlet-Oxygen-Initiated Reaction Cascade" *Angew. Chem. Int. Ed.* **2012**, *51*, 8868-8871.
[AWARDED by the Academy of Athens "Hildegard, widow of Leonidas Zervas" award (2014)]
14. Kouridaki, A.; Montagnon, T.; **Kalaitzakis, D.**; Vassilikogiannakis, G. "Using Singlet Oxygen to Synthesize the CDE-ring System of the Pectenotoxins" *Org. Biomol. Chem.* **2013**, *11*, 537-541.
15. **Kalaitzakis, D.**; Montagnon, T.; Antonatou, E.; Bardaji, N.; Vassilikogiannakis, G. "From Simple Furans to Complex Nitrogen-Bearing Aromatic Polycycles by Means of a Flexible and General Reaction Sequence Initiated by Singlet Oxygen" *Chem. Eur. J.* **2013**, *19*, 10119-10123.
[HIGHLIGHTED in *Chemistry Views* **2013**, http://www.chemistryviews.org/details/ezone/4963871/Nitrogen-Containing_Polycycles_from_Furans.html]
16. **Kalaitzakis, D.**; Montagnon, T.; Antonatou, E.; Vassilikogiannakis, G. "One-pot Synthesis of the Tetracyclic Framework of the Aromatic *Erythrina* Alkaloids from Simple Furans" *Org. Lett.* **2013**, *15*, 3714-3717.
17. **Kalaitzakis, D.**; Antonatou, E.; Vassilikogiannakis, G. "One-pot Synthesis of 1-Azaspiro Frameworks Initiated by Photooxidation of Simple Furans" *Chem. Commun.* **2014**, *50*, 400-402.
[HIGHLIGHTED on the Front Cover of *Chemical Communications* volume **50** (2014), issue **4**]
18. Montagnon, T.; **Kalaitzakis, D.**; Triantafyllakis, M.; Vassilikogiannakis, G. "Furans and Singlet Oxygen – Why There is More to Come from this Powerful and Sustainable Partnership". *Chem. Commun.* **2014**, *50*, 15480-15498 (Review Article).
[HIGHLIGHTED on the Front Cover of *Chemical communications* volume **50** (2014), issue **98**]
19. **Kalaitzakis, D.**; Triantafyllakis, M.; Alexopoulou, I.; Sofiadis, M.; Vassilikogiannakis, G. "One-pot Transformation of Simple Furans into 4-Hydroxy-2-cyclopentenones in Water" *Angew. Chem. Int. Ed.* **2014**, *53*, 13201-13205.
[HIGHLIGHTED in *HOT TOPICS in sustainable chemistry* by WILEY-VCH]
20. **Kalaitzakis, D.**; Montagnon, T.; Ioannou, G. I.; Antonatou, E.; Vassilikogiannakis, G. "Singlet Oxygen-Mediated Transformation of Furans into Aromatic Nitrogen-containing Polycycles in Water" *ARCIVOC* **2015** (iii), 154-166.

- 21. Kalaitzakis, D.;** Kouridaki, A.; Noutsias, D.; Montagnon, T.; Vassilikogiannakis, G. "Methylene Blue as Photosensitizer and Redox Agent: Synthesis of 5-Hydroxy-1*H*-pyrrol-2(5*H*)-ones from Furans" *Angew. Chem. Int. Ed.* **2015**, *54*, 6283-6287.
[HIGHLIGHTED in *HOT TOPICS in sustainable chemistry by WILEY-VCH*]
- 22. Kalaitzakis, D.;** Noutsias, D.; Vassilikogiannakis, G. "First Total Synthesis of Pandamarine" *Org. Lett.* **2015**, *17*, 3596-3599.
[HIGHLIGHTED and Front Cover in *Synfacts 2015*, *11*, 1013]
- 23. Kalaitzakis, D.;** Triantafyllakis, M.; Sofiadis, M.; Noutsias, D.; Vassilikogiannakis, G. "Photooxygenation of Furylalkylamines: An Easy Access to Pyrrolizidine and Indolizidine Scaffolds" *Angew. Chem. Int. Ed.* **2016**, *55*, 4605-4609.
[HIGHLIGHTED in *Synfacts 2016*, *12*, 570]
- 24. Antonatou, E.;** Hoogewijs, K.; **Kalaitzakis, D.;** Baudot, A.; Vassilikogiannakis, G.; Madder, A. "Singlet Oxygen Induced Furan Oxidation for Site-Specific and Chemoselective Peptide Ligation" *Chem. Eur. J.* **2016**, *22*, 8457-8461.
- 25. Ioannou, G. I.;** **Kalaitzakis, D.;** Vassilikogiannakis, G. "Singlet Oxygen Initiated Tandem Transformation of 2-Hexylfuran to the Natural Alkaloids Glochidine and Glochidicine" *Eur. J. Org. Chem.* **2016**, 3304-3306.
- 26. Montagnon, T.;** **Kalaitzakis, D.;** Sofiadis, M.; Vassilikogiannakis, G. "Chemoselective Photooxygenations of Furans Bearing Unprotected Amines: Their Use in Alkaloid Synthesis" *Org. Biomol. Chem.* **2016**, *14*, 8636-8640 (Perspective Article).
- 27. Ioannou, G. I.;** Montagnon, T.; **Kalaitzakis, D.;** Pergantis, S. A.; Vassilikogiannakis, G. "A Novel Nebulizer-Based Continuous Flow Reactor: Introducing the Use of Pneumatically Generated Aerosols for Highly Productive Photooxidations" *ChemPhotoChem* **2017**, *1*, 173-177.
- 28. Kalaitzakis, D.;** Triantafyllakis, M.; Ioannou, G. I.; Vassilikogiannakis, G. "One-pot Transformation of Simple Furans into Octahydroindole Scaffolds" *Angew. Chem. Int. Ed.* **2017**, *56*, 4020-4023.
[HIGHLIGHTED in *Org. Process Res. Dev.* **2017**, *21*, 675]
- 29. Ioannou, G. I.;** Montagnon, T.; **Kalaitzakis, D.;** Pergantis, S. A.; Vassilikogiannakis, G. "Synthesis of Cyclopent-2-enones from Furans Using a Nebulizer-based Continuous Flow Photoreactor" *Org. Biomol. Chem.* **2017**, *15*, 10151-10155.
- 30. Kalaitzakis, D.;** Sofiadis, M.; Triantafyllakis, M.; Daskalakis, K.; Vassilikogiannakis, G. "Asymmetric and Site-Selective [3+2]-Annulations for the Synthesis of High Value Bicyclic Lactams" *Org. Lett.* **2018**, *20*, 1146-1149.
[HIGHLIGHTED by the ACS Editors' Choice]
[HIGHLIGHTED in *Organic Chemistry Highlights of Organic Chemistry Portal*: <https://www.organic-chemistry.org/Highlights/2018/12November.shtm>]
[HIGHLIGHTED in *Organic Letters Global Enterprise Virtual Issue (2018)*: <https://pubs.acs.org/page/orlef7/vi/orglett-globalreach2018.html>]
- 31. Ioannou, G. I.;** Montagnon, T.; **Kalaitzakis, D.;** Pergantis, S. A.; Vassilikogiannakis, G. "One-pot Synthesis of Diverse γ -Lactam Scaffolds Facilitated by a Nebulizer-based Continuous Flow Photoreactor" *ChemPhotoChem* **2018**, *2*, 860-864.

32. Triantafyllakis, M.; Sfakianaki, K.; **Kalaitzakis, D.**; Vassilikogiannakis, G. "The Power of Triplet and Singlet Oxygen in Synthesis: 2-Oxindoles, 3-Hydroxy-2-oxindoles and Isatins from Furans" *Org. Lett.* **2018**, *20*, 3631-3634.
33. Sofiadis, M.; Sarris, J.; Montagnon, T.; **Kalaitzakis, D.**; Vassilikogiannakis, G. "Rapid Access to 3-Acyl-5-alkoxybutyrolactams Using Triplet and Singlet Oxygen" *Eur. J. Org. Chem.* **2018**, 4523-4526.
34. Sofiadis, M.; **Kalaitzakis, D.**; Sarris, J.; Montagnon, T.; Vassilikogiannakis, G. "Vinylogous Reactivity of Cyclic 2-Enones: Organocatalysed Asymmetric Addition to 2-Enals to Synthesize Fused Carbocycles" *Angew. Chem. Int. Ed.* **2019**, *58*, 6742-6746.
35. **Kalaitzakis, D.**; Daskalakis, K.; Triantafyllakis, M.; Sofiadis, M.; Vassilikogiannakis, G. "Singlet-Oxygen-Mediated Synthesis of Pandanusine A and Pandalizine C and Structural Revision of Pandanusine B" *Org. Lett.* **2019**, *21*, 5467-5470.
36. Montagnon, T.; **Kalaitzakis, D.**; Sofiadis, M.; Vassilikogiannakis, G. "The reticent tautomer: exploiting the interesting multisite and multitype reactivity of 4-pyrrolin-2-ones" *Org. Biomol. Chem.* **2020**, *18*, 180-190. (Review Article).
37. **Kalaitzakis, D.**; Sofiadis, M.; Tsopanakis, V.; Montagnon, T.; Vassilikogiannakis, G. "Merging singlet-oxygen induced furan oxidations with organocatalysis: synthesis of enantiopure cyclopentanones and hydrindanes" *Org. Biomol. Chem.* **2020**, *18*, 2817-2822.
38. **Kalaitzakis, D.**; Bosveli, A.; Sfakianaki, K.; Montagnon, T.; Vassilikogiannakis, G. "Multi-Photocatalyst Cascades: Merging Singlet Oxygen Photooxygenations with Photoredox Catalysis for the Synthesis of Alkaloid Frameworks" *Angew. Chem. Int. Ed.* **2021**, *60*, 4335-4341.
39. De Geyter, E.; Antonatou, E.; **Kalaitzakis, D.**; Iyer, A.; Smolen, S.; Tack, L.; Ongenae, E.; Vassilikogiannakis, G.; Madder, A. "5-Hydroxy-Pyrrolone Based Building Blocks as Maleimide Alternatives for Protein Bioconjugation and Single-Site Multi-Functionalization" *Chem. Sci.* **2021**, *12*, 5246-5252.
40. Bosveli, A.; Montagnon, T.; **Kalaitzakis, D.**; Vassilikogiannakis, G. "Eosin: a versatile organic dye whose synthetic uses keep expanding." *Org. Biomol. Chem.* **2021**, *19*, 3303-3317.

Summary (until 13/5/2021)

Number of publications: **40**

Publications as Corresponding Author: **3** (publication No 30, 32 & 33)

Publications as First Author: **22** (publication No 2 - 4, 6 - 9, 11, 13, 15 - 17, 19 - 23, 28, 30, 35, 37 & 38)

Review Articles: **3** (publication No 18, 36 & 40)

Perspective Articles: **1** (publication No 26)

Number of citations:

Google Scholar: **942** h-index: **19**

Scopus: **909** h-index: **20**

Web of Science: **849** h-index: **19**

BOOK CHAPTERS

- **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”.
- **Kalaitzakis, D.;** Smonou, I. “Synthetic Methods for Biologically Active Molecules: Exploiting the Potential of Bioreductions” **2013**, Wiley, ed. Brenna E., pp.307-328. “Dynamic Kinetic Resolutions Based on Reduction Processes”.

CONFERENCES

1. **Kalaitzakis, D.;** Stratakis, M. *Oral presentation in 9^o post-graduate Greek Conference of Chemistry*, June **2003**. “Photooxygenation of chiral alkenes by zeolite confinement”.
2. **Kalaitzakis, D.;** Kambourakis, S.; Smonou, I. *European Symposium in Organic Chemistry (ESOC14)*, Helsinki, Finland, 4-8 July **2005**. “Stereoselective reductions of α -alkyl-1,3-diketones catalyzed by isolated ketoreductases”.
3. **Kalaitzakis, D.;** Smonou, I. *3rd COST B22 ANNUAL CONGRESS*, 1-4 October **2006**, Athens-Greece. “Synthesis of valuable chiral intermediates by isolated ketoreductases: application in the synthesis of the natural pheromone (+)-Sitophilure”.
4. **Kalaitzakis, D.;** Smonou, I. *8th International Conference in Medicinal Chemistry*, 15-17 March **2007**, University of Patra “Biocatalytic asymmetric reductions for the synthesis of valuable chiral intermediates”.
5. **Kalaitzakis, D.;** Smonou, I. *2nd Greek Symposium in Organic Chemistry*, 19-21 April **2007**, University of Athens. “Stereoselective reductions of 1,3-diketones utilizing ketoreductases: application in the synthesis of pheromones”.
6. **Kalaitzakis, D.;** Smonou, I. *15th European Symposium on Organic Chemistry*, 8-13 July **2007**, University College Dublin, Ireland. Poster, p.383. “Highly Stereoselective Biocatalytic Reductions for the Synthesis of Chiral Intermediates”.
7. Smonou, I.; **Kalaitzakis, D.;** Papaioannou, M.; Markou, C. *4th International Conference of Biotechnology*, 2-3 February, **2008**, Athens. “Enzyme-catalyzed synthesis of α -alkyl- β -hydroxy ketones and esters by isolated ketoreductases: Application in the synthesis of Pheromones”.
8. Smonou, I.; **Kalaitzakis, D.** *4th International Conference of Biotechnology*, 2-3 February, **2008**, Athens. “Highly stereoselective biocatalytic synthesis of α -alkyl- β -hydroxy esters by isolated NADPH-dependent ketoreductases”.
9. Smonou, I.; **Kalaitzakis, D.** *13th Greek Symposium in Medicinal Chemistry*, 14-15 March, **2008**, Athens. “Highly stereoselective biocatalytic transformations for the synthesis of valuable chiral intermediates”.
10. Smonou, I.; **Kalaitzakis, D.;** Samanidis, I. *10th Conference in Medicinal Chemistry*, 18-20 March **2009**, University of Patras, Patras, Greece. “A convenient biocatalytic method for the preparation of enantiopure ephedrine analogues”.
11. Smonou, I.; **Kalaitzakis, D.** *16th European Symposium on Organic Chemistry*, 12-16 July **2009**, Prague, Czech Republic. “Biocatalytic Reductions: application in the chemoenzymatic synthesis of pheromones”.

12. **Kalaitzakis, D.**; Smonou, I. *3rd Conference Green Chemistry and Sustainable Development*, 25-27 September **2009**, Thessaloniki, Greece. "Biocatalytic transformations: application in the synthesis of pheromones".
13. Smonou, I.; **Kalaitzakis, D.** *Conference on Biocatalysis for Chemical Synthesis*, 18-19 March **2010**, Graz, Austria. "Highly stereoselective biocatalytic reductions for the chemoenzymatic synthesis of pheromones".
14. Smonou, I.; **Kalaitzakis, D.**; Kallergi, M.; Bariotaki, A.; Markou, C. *3rd EuCheMS Chemistry Congress*, Nuremberg, Germany, Aug 29-Sept. 2, **2010**, "Asymmetric Enzymatic Cascade Reductions of 1,3-diketones".
15. **Kalaitzakis, D.**; Smonou, I. *17th Greek Symposium in Medicinal Chemistry*, 10-15 July, **2011**, Crete, Greece, "A two-step, one-pot enzymatic synthesis of 2-substituted-1,3-diols".
16. Kallergi, M.; **Kalaitzakis, D.**; Smonou, I. *17th European Symposium on Organic Chemistry*, 10-15 July **2011**, Crete, Greece. "Enzymatic Total Synthesis of Banana Volatile (S)-2-Pentyl (R)-3-Hydroxyhexanoate".
17. Bariotaki A.; **Kalaitzakis D.**; Smonou I. *17th European Symposium on Organic Chemistry*, 10-15 July **2011**, Crete, Greece. "Biocatalytic Reduction of tert-Butyl 3,5-dioxo hexanoate".
18. Bariotaki A.; **Kalaitzakis D.**; Smonou I. *Multistep Enzyme-Catalyzed Processes 2012 (MECPI2)*, April 10-13, **2012**, University of Graz, Austria. "Enzymatic one-pot synthesis of dihydroxy esters".
19. **Kalaitzakis D.**; Montagnon, T.; Alexopoulou, I.; Vassilikogiannakis, G. *18th European Symposium on Organic Chemistry (ESOC-2013)*, Marseille France, July 7-12, **2013**. "The singlet oxygen strategy: Sustainable oxidation procedures for applications in the synthesis of Meyers' bicyclic lactams".
20. Kouridaki, A.; Montagnon, T.; **Kalaitzakis D.**; Vassilikogiannakis, G. *18th European Symposium on Organic Chemistry (ESOC-2013)*, Marseille France, July 7-12, **2013**. "Using singlet oxygen to synthesise the CDE-ring system of the pectenotoxins".
21. Smonou, I.; Stergiou, A.; Bariotaki, A.; **Kalaitzakis D.** *18th European Symposium on Organic Chemistry (ESOC-2013)*, Marseille France, July 7-12, **2013**. "A highly efficient Oxone mediated synthesis of α -keto esters and 1,2-diketones".
22. Bariotaki, A.; **Kalaitzakis D.**; Smonou, I. *18th European Symposium on Organic Chemistry (ESOC-2013)*, Marseille France, July 7-12, **2013**. "Enzymatic reductions of α,γ -disubstituted- β,δ -diketo esters".
23. Bariotaki, A.; Stergiou, A.; **Kalaitzakis D.**; Smonou, I. *3rd Multistep Enzyme Catalyzed Processes Congress (MECPI4)*, 7-10 April **2014**, Madrid, Spain. "Exploring the potential of bioreductions for the synthesis of high-added value compounds".
24. **Kalaitzakis D.**; Montagnon, T.; Antonatou, E.; Vassilikogiannakis, G. *15th Tetrahedron Symposium*, London UK, June 24-27, **2014**. "Singlet oxygen initiated one-pot synthesis of 1-azaspirocycles and the tetracyclic framework of the aromatic *erythrina* alkaloids from simple furans".
25. **Kalaitzakis D.**; Montagnon, T.; Antonatou, E.; Bardají, N.; Vassilikogiannakis, G. *15th Tetrahedron Symposium*, London UK, June 24-27, **2014**. "From simple furans to complex *N*-bearing aromatic polycycles via a flexible and general reaction sequence initiated by singlet oxygen".
26. Smonou, I.; Bariotaki, A.; Stergiou, A.; **Kalaitzakis, D.** *4th Panhellenic Conference of Green Chemistry and Sustainable Development*, 30 Oct.-1 Nov. **2014**, Ioannina, Greece. "Biocatalytic reductions for the synthesis of high-added value organic compounds".

27. Smonou, I.; Bariotaki, A.; **Kalaitzakis, D.** *4th Panhellenic Conference of Green Chemistry and Sustainable Development*, 30 Oct.-1 Nov. **2014**, Ioannina, Greece. "Synthesis of the natural product (R)-Goniothalamine using ketoreductases".
28. Smonou, I.; Stergiou, A.; Bariotaki, A.; Tzanakaki, A.; **Kalaitzakis, D.** *4th Panhellenic Conference of Green Chemistry and Sustainable Development*, 30 Oct.-1 Nov. **2014**, Ioannina, Greece. "Synthesis of α -OH-1,3-diketones with the environmentally friendly Oxone[®]/AlCl₃ oxidation system".
29. Smonou, I.; Bariotaki, A.; Stergiou, A.; **Kalaitzakis, D.** *4th International Conference on Novel Enzymes*, 14-17 October, **2014**, Ghent, Belgium. "Asymmetric enzymatic reductions: applications in the synthesis of high-added value compounds".
30. **Kalaitzakis D.**; Kouridaki, A.; Noutsias, D.; Montagnon, T.; Vassilikogiannakis, G. *24th International Symposium: Synthesis in Organic Chemistry*, Cambridge UK, July 20-23, **2015**. "Methylene blue as photosensitizer and redox agent: Synthesis of 5-hydroxy-1H-pyrrol-2(5H)-ones from furans".
31. **Kalaitzakis D.**; Montagnon, T.; Ioannou, G. I.; Triantafyllakis, M.; Alexopoulou, I.; Sofiadis, M.; Antonatou, E.; Vassilikogiannakis, G. *24th International Symposium: Synthesis in Organic Chemistry*, Cambridge UK, July 20-23, **2015**. "Singlet oxygen-mediated transformation of furans into aromatic nitrogen-containing polycycles and 4-hydroxy-2-cyclopentenones in water".
32. **Kalaitzakis D.** *Invited speaker in 18th Chemistry Postgraduate Conference*, University of Crete, Crete, March 26-27, **2016**. "Application of Singlet Oxygen to the synthesis of nitrogen-containing heterocycles".
33. Sofiadis, M.; **Kalaitzakis D.**; Triantafyllakis, M.; Noutsias, D.; Vassilikogiannakis, G. *16th IUPAC International Conference on Polymers and Organic Chemistry* Hersonissos Crete, Greece, June 13-16, **2016**. "Synthesis of pyrrolizidine and indolizidine alkaloids initiated by photooxidation of furylalkylamines".
34. Ioannou, G. I.; **Kalaitzakis D.**; Montagnon, T.; Antonatou, E.; Vassilikogiannakis, G. *International Conference on the Singlet Oxygen Strategy: From Singlet Oxygen to Sustainable Oxidation*, Gent Belgium, June 15-17, **2016**. "Singlet oxygen-mediated transformation of furans into aromatic nitrogen-containing polycycles in water: Synthesis of imidazole alkaloids Glochidine and Glochidicine".
35. Ioannou, G. I.; **Kalaitzakis D.**; Montagnon, T.; Antonatou, E.; Vassilikogiannakis, G. *6th EuCheMS Chemistry Congress*, Seville Spain, September 11-15, **2016**. "Singlet oxygen-mediated transformation of furans into aromatic nitrogen-containing polycycles in water: Synthesis of imidazole alkaloids Glochidine and Glochidicine".
36. **Kalaitzakis D.** *Invited speaker in Chemistry Symposium in memory of Dr. Maria Hatzimarinaki*, University of Crete, Crete, November 25-26, **2016**. "Application of Singlet Oxygen to the synthesis of nitrogen-containing heterocycles".
37. **Kalaitzakis D.**; Ioannou, G. I.; Kouridaki, A.; Noutsias, D.; Montagnon, T.; Vassilikogiannakis, G. *Oral presentation in the 22nd Panhellenic Symposium in Chemistry*, Thessaloniki Greece, December 2-4, **2016**. "Methylene blue as photosensitizer and oxidizing agent: Synthesis of natural products glochidine and glochidicine".
38. **Kalaitzakis, D.**; Montagnon, T.; Ioannou, G. I.; Triantafyllakis, M.; Sofiadis, M.; Vassilikogiannakis, G. *22nd Panhellenic Symposium in Chemistry*, Thessaloniki Greece, December 2 - 4, **2016**. "Development of singlet oxygen based sustainable synthetic methodologies and their application in organic synthesis".

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