



◀ CURRICULUM VITAE ▶

Georgios E. Vassilikogiannakis – Assistant Professor, University of Crete.

ADDRESS: Department of Chemistry
University of Crete
Vasilika Vouton 71003,
Heraklion, Crete, Greece

TEL: (+30) –2810–545074 (office)
(+30)–2810–545086 (laboratory)

FAX: (+30)–2810–545001

E-MAIL: vasil@chemistry.uoc.gr

DATE OF BIRTH: November 26th 1970

PLACE OF BIRTH: Heraklion, Crete, Greece

EDUCATION

1994 – 1998: **Ph. D.** at the University of Crete (Greece) under the supervision of Pr. Michael Orfanopoulos, thesis title – Mechanistic comparison of the electrophilic additions of C₆₀, ¹O₂, TCNE and RTAD to unsaturated substrates.

1989 – 1993: **B. Sc.** in Chemistry, at the University of Crete (Greece). Grade 8.6/10 - Highest grade awarded across the entire School of Natural Sciences.

POSITIONS HELD – EXPERIENCE

Aug 2008 – Current: Associate Professor at the University of Crete.

Sep 2002 – Aug 2008: Assistant Professor at the University of Crete.

Jan 1999 – Sep 2002: Post-doctoral fellow at the Scripps Research Institute in the group of Pr. K. C. Nicolaou. Research undertaken in the field of natural product synthesis.

Jun 1997 – Sep 1997: Fellowship for study at the University of California, Los Angeles during graduate studies. Collaboration with Pr. C. S. Foote in the field of Fullerene and Singlet Oxygen Chemistry.

SCHOLARSHIPS – AWARDS

- 1992: V. Xanthopoulos and S. Pneumaticos undergraduate award.
- 1990, 1992 and 1993: Greek National Scholarships Foundation (IKY) fellowship for undergraduate studies.
- 1993: Bachelor's Degree Valedictorian for School of Natural Sciences.
- 1995 – 1998: Three-year graduate fellowship from Greek Secretariat of Research and Technology, awarded competitively.

RESEARCH INTERESTS

- a. Total syntheses of bioactive natural products that possess unique architectures.
- b. The development and application of new and enabling methodologies for synthesis (e.g. stereoselective olefin metathesis, asymmetric cycloadditions).

FUNDING PROCURED

- 2003 – 2007: Scientist-in-charge of a 9-member working group of European academics funded by the COST D28/007 program of the European Science Foundation (total program funds € 280,000). Funds available for student exchange and conference organization. Proposal title – “The development of new and enabling technologies for application in the synthesis of bioactive molecules (designed and natural products).” For more information, see <http://costchemistry.epfl.ch/docs/D28/d28-07-03.htm>.
- 2004 – 2007: Scientist-in-charge of a grant co-funded, through the Pythagoras 1 program, by the Greek Ministry of Education and the European Union (total funds € 70,000). Proposal title “Total synthesis and biological evaluation of natural products with anticancer and anti-HIV activity.”
- 2005 – 2007: Co-scientist-in-charge of a grant co-funded, through the Pythagoras 2 program, by the Greek Ministry of Education and the European Union (total funds € 50,000). Proposal title “Biomimetic cyclizations of terpenoids by encapsulation in Zeolite Y.”
- 2005 – 2007: Scientist-in-charge of a Marie Curie IntraEuropean Fellowship funded by the European Union under the 6th European Community Framework Program (total funds € 138,536). Proposal title “New and Environmentally Friendly Methods for Making Compounds with Medicinal Importance: Novel Singlet Oxygen Chemistry Combined with Cascade Reactions for Synthesis of Bioactive Natural Products.”
- 2006 – 2009: Matching funds for the above mentioned Marie Curie program from the Greek Secretariat of Research and Technology (funds until now € 22,493)

2006 – 2009: Participant in a Greek-Cypriot Interreg. IIIA collaborative program funded from EU Regional Development Funds (€ 210,000). The project title is “Education and Research in Nanomaterials and Nanotechnology subjects: Design, development and applications.”

PUBLICATIONS

1. **Vassilikogiannakis, G.**; Orfanopoulos, M. *Tetrahedron Lett.* **1996**, *37*, 3057 – 3078. “Remote α -secondary isotope effect in the reaction of tetracyanoethylene with 2,5-dimethyl-2,4-hexadiene. A step-wise mechanism”
2. **Vassilikogiannakis, G.**; Stratakis, M.; Karabatsos, G. J.; Orfanopoulos, M. *J. Heterocyclic Chem.* **1996**, *33*, 993 – 995. “Mechanistic studies in the reaction of 4-phenyl-1,2,4-triazoline-3,5-dione (PTAD) with 2,5-dimethyl-2,4-hexadiene”
3. **Vassilikogiannakis, G.**; Orfanopoulos, M. *Tetrahedron Lett.* **1997**, *38*, 4323 – 4326. “[2 + 2] photocycloadditions of *cis/trans*-4-propenylanisole to C₆₀. A step-wise mechanism”
4. **Vassilikogiannakis, G.**; Orfanopoulos, M. *J. Am. Chem. Soc.* **1997**, *119*, 7394 – 7395. “Stereochemistry and isotope effects of the [2 + 2] photocycloadditions of arylalkenes to C₆₀”
5. Stratakis, M.; **Vassilikogiannakis, G.**; Orfanopoulos, M. *Tetrahedron Lett.* **1998**, *39*, 2393 – 2396. “Diastereoselective ene reactions of triazolinediones with chiral allylic alcohols. Evidence for a hydroxyl-enophile steering effect”
6. **Vassilikogiannakis, G.**; Stratakis M; Orfanopoulos, M. *J. Org. Chem.* **1998**, *63*, 6390 – 6393. “Primary and secondary isotope effects in the photooxidation of 2,5-dimethyl-2,4-hexadiene. Elucidation of the reaction energy profile”
7. **Vassilikogiannakis, G.**; Chronakis, N.; Orfanopoulos, M. *J. Am. Chem. Soc.* **1998**, *120*, 9911 – 9920. “A new [2 + 2] functionalization of C₆₀ with alkyl substituted 1,3-butadienes: A mechanistic approach. Stereochemistry and isotope effects”
8. **Vassilikogiannakis, G.**; Orfanopoulos, M. *Tetrahedron Lett.* **1998**, *39*, 8891 – 8894. “A mechanistic comparison between [2 + 2] and [4 + 2] cycloadditions of tetracyanoethylene to 2,7-dimethyl-2,*trans*-4,6-octatriene. A very remote secondary H/D isotope effect”
9. **Vassilikogiannakis, G.**; Stratakis, M.; Orfanopoulos, M.; Foote, C. S. *J. Org. Chem.* **1999**, *64*, 4130 – 4139. “Stereochemistry in the ene reaction of singlet oxygen and triazolinediones with allylic alcohols. A mechanistic comparison”

10. **Vassilikogiannakis, G.**; Orfanopoulos, M. *J. Org. Chem.* **1999**, *64*, 3392 – 3393. Regio- and stereoselectivity of the [2 + 2] photocycloaddition of acyclic enones to C₆₀”
11. K. C. Nicolaou; Jautelat, R.; **Vassilikogiannakis, G.**; Baran, P. S.; Simonsen, K. B. *Chemistry a European Journal* **1999**, *5*, 3651 – 3665. “Studies towards Trichodimerol: Novel cascade reactions and polycyclic frameworks”
12. K. C. Nicolaou; Simonsen, K. B.; **Vassilikogiannakis, G.**; Baran, P. S.; Vidali, V. P.; Pitsinos, E. N.; Couladouros, E. A. *Angewandte Chem. Int Ed.*, **1999**, *38*, 3555 – 3559. “Biomimetic explorations towards the bisorbicillinoids: Total synthesis of bisorbicillinol, bisorbibutenolide and trichodimerol”.
13. Hatzimarinaki, M.; **Vassilikogiannakis, G.**; Orfanopoulos, M. *Tetrahedron Lett.* **2000**, *41*, 4667 – 4670. “Stereochemistry and isotope effects on the [2 + 2] photocycloaddition of β,β -dimethyl-*p*-methoxystyrene to C₆₀. The nature of the transition state structures”
14. **Vassilikogiannakis, G.**; Stratakis, M.; Orfanopoulos, M. *Organic Lett.* **2000**, *2*, 2245 – 2248. “Isotope effects and *syn* selectivity in the ene reaction of triazolinediones with conjugated enones: Aziridinium imide or an open intermediate mechanism?”
15. **Vassilikogiannakis, G.**; Elemen, Y.; Orfanopoulos, M. *J. Am. Chem. Soc.* **2000**, *122*, 9540 – 9541. “Stereochemistry of triazolinedione-alkene ene reaction: A stereospecific suprafacial transformation”
16. **Vassilikogiannakis, G.**; Hatzimarinaki M; Orfanopoulos, M. *J. Org. Chem.* **2000**, *65*, 8180 – 8187. “Mechanism of the [2 + 2] photocycloaddition of fullerene C₆₀ with styrenes”
17. Greer, A.; **Vassilikogiannakis, G.**; Lee, K. C.; Koffas, T. S.; Nahm, K.; Foote, C. S. *J. Org. Chem.* **2000**, *65*, 6876 – 6878. “Reaction of singlet oxygen with *trans*-4-propenylanisole. Formation of [2 + 2] products with added acid.”
18. K. C. Nicolaou; **Vassilikogiannakis, G.**; Simonsen, K. B.; Baran P. S.; Zhong, Y. L.; Vidali, V. P.; Pitsinos, E. N.; Couladouros, E. A. *J. Am. Chem. Soc.* **2000**, *122*, 3071 – 3079. “Biomimetic total synthesis of Bisorbicillinol, Bisorbibutenolide, Trichodimerol and designed analogs of the Bisorbicillinoids”
19. K.C. Nicolaou; **Vassilikogiannakis, G.**; Kranich, R.; Baran, P. S.; Zhong Y-L.; Natarajan S. *Organic Lett.* **2000**, *2*, 1895 – 1898. “New synthetic technology for the mild and selective one-carbon homologation of hindered aldehydes in the presence of ketones”
20. K. C. Nicolaou; **Vassilikogiannakis, G.**; Magerlein, W.; Kranich, R. *Angewandte Chem. Int. Ed.* **2001**, *40*, 2482 – 2486. “Total synthesis of colombiasin A”
21. K. C. Nicolaou; **Vassilikogiannakis, G.**; Magerlein, W.; Kranich, R. *Chemistry a European Journal* **2001**, *7*, 5359 – 5371. “Total synthesis of colombiasin A and determination of its absolute configuration”

22. K. C. Nicolaou; Vega, J. A.; **Vassilikogiannakis, G.** *Angewandte Chem. Int. Ed.* **2001**, *40*, 4441 – 4445. “*cis*-3,4-dichlorocyclobutene as a versatile synthon in organic synthesis. Rapid entry into complex polycyclic systems via remarkably stereospecific reactions”
23. **Vassilikogiannakis, G.**; Stratakis, M.; Orfanopoulos, M. *Arkivoc* **2002**, *xiii*, 9 – 16. “Primary and secondary H/D isotope effects in the addition of triazolinedione to 2,5-dimethyl-2,4-hexadiene. Mechanistic insights into the reaction pathways”
24. K. C. Nicolaou; Snyder, S. A.; Montagnon T.; **Vassilikogiannakis, G.** REVIEW ARTICLE, *Angewandte Chem. Int. Ed.* **2002**, *41*, 1669 – 1698. “The Diels-Alder reaction in total synthesis”
25. K. C. Nicolaou; **Vassilikogiannakis, G.**; Montagnon, T. *Angewandte Chem. Int. Ed.* **2002**, *41*, 3276 – 3281. “The total synthesis of coleophomones B and C”
26. K. C. Nicolaou; Montagnon, T.; **Vassilikogiannakis, G.**; *Chem. Commun.* **2002**, 2478 – 2479. “Total synthesis of coleophomones D”
27. K. C. Nicolaou; Montagnon, T.; **Vassilikogiannakis, G.** *BIO* **2003**, *5*, 22 – 30. “Natural products and total synthesis for the development of cancer chemotherapy”

Publications after appointment to the University of Crete

28. **Vassilikogiannakis, G.**; Stratakis M. *Angewandte Chem. Int. Ed.* **2003**, *42*, 5465 – 5468. “Biomimetic total synthesis of Litseaverticillols A, C, D, F, and G: Singlet-oxygen initiated cascades”
29. **Vassilikogiannakis, G.**; Margaros, I.; Tofi, M. *Organic Lett.* **2004**, *2*, 205 – 208. “Olefin metathesis: Remote substituents governing the stereoselectivity of 11-membered-ring formation”
30. **Vassilikogiannakis, G.**; Margaros, I.; Montagnon, T. *Organic Lett.* **2004**, *6*, 2039 – 2042. “Biomimetic total synthesis of Litseaverticillols B, E, I, and J and structural reassignment of Litseaverticillol E”
31. K. C. Nicolaou; Montagnon, T.; **Vassilikogiannakis, G.**; Mathison C. *J. Am. Chem. Soc.* **2005**, *127*, 8872 – 8888. “The total syntheses of Coleophomones B, C and D”
32. Sofikiti, N.; Tofi, M.; Montagnon, T.; **Vassilikogiannakis G.**; Stratakis M. *Organic Lett.* **2005**, *7*, 2357 – 2359. “Synthesis of the spirocyclic core of the Prunolides using a singlet oxygen-mediated sequence”
33. **Vassilikogiannakis, G.**; Margaros, I.; Montagnon, T.; Stratakis, M. *Chemistry a European Journal* **2005**, *11*, 5899 – 5907. “Illustrating the power of singlet oxygen chemistry in a synthetic context: Biomimetic syntheses of litseaverticillols A – G, I and J and the structural reassignment of Litseaverticillol E”
34. Tofi, M.; Georgiou, T.; Montagnon, T.; **Vassilikogiannakis G.** *Organic Lett.* **2005**, *7*, 3347 – 3350. “Regioselective ortho lithiation of 3-aryl and 3-styryl furans”

35. Margaros, I.; Montagnon, T.; Tofi, M.; Pavlakos, E.; **Vassilikogiannakis, G.** *Tetrahedron*, **2006**, *62*, 5308 – 5317. “The power of singlet oxygen chemistry in biomimetic syntheses”
36. Georgiou, T.; Tofi, M.; Montagnon, T.; **Vassilikogiannakis, G.** *Organic Lett.* **2006**, *8*, 1945 – 1948. “A versatile and general one-pot method for synthesizing bis-spiroketal motifs”
37. Tofi, M.; Montagnon, T.; Georgiou, T.; **Vassilikogiannakis, G.** *Org. Biomol. Chem.* **2007**, *5*, 772 – 777. “Using singlet oxygen to synthesize a [6,6,5]-bis-spiroketal in one-pot from a simple 2,5-disubstituted furan”
38. Margaros, I.; **Vassilikogiannakis, G.** *J. Org. Chem.* **2007**, *72*, 4826 – 4831. ”Synthesis of Chinensines A – E”
39. Margaros, I.; Montagnon, T.; **Vassilikogiannakis, G.** *Organic Lett.* **2007**, *9*, 5585 – 5588. ”Spiroperoxy lactones from furans in one pot: Synthesis of (+)-Premnalane A”
40. Margaros, I.; **Vassilikogiannakis G.** *J. Org. Chem.* **2008**, *73*, 2021 – 2023. “Synthesis of (+)-Zerumin B using a regioselective singlet oxygen furan oxidation”
41. Montagnon, T.; Tofi, M.; **Vassilikogiannakis G.** *Acc. Chem. Res.* **2008**, *41*, 1001 – 1011. “Using singlet oxygen to synthesize polyoxygenated natural products from furans”
42. Alberti, M.; **Vassilikogiannakis G.**; Orfanopoulos M. *Organic Lett.* **2008**, *10*, 3997 – 4000. “Stereochemistry of the singlet oxygenation of simple alkenes: A stereospecific transformation”
43. Tofi, M.; Koltsida, K.; **Vassilikogiannakis, G.** *Organic Lett.* **2009**, *11*, 313 – 316. “Singlet-oxygen-mediated one-pot synthesis of 3-keto-tetrahydrofurans from 2-(β -hydroxyalkyl) furans”
44. Pavlakos, E. Georgiou, T.; Tofi, M.; Montagnon, T.; **Vassilikogiannakis, G.** *Organic Lett.* **2009**, ASAP. “ γ -Spiroketal γ -lactones from 2-(γ -hydroxyalkyl)furans: Syntheses of *epi*-pyrenolides D and crassalactone D”

According to ISI, Web of Science, the above mentioned publications have been cited 750 times while according to Scopus 824 times

CONFERENCES

1. **Vassilikogiannakis, G.**; Orfanopoulos, M. *16th Panhellenic Symposium in Chemistry*, Athens, Hellas, December **1995**. “ ϵ -secondary kinetic isotope effects in the reaction of TCNE with 2,5-dimethyl-2,4-hexadiene”

2. **Vassilikogiannakis, G.**; Orfanopoulos, M. *17th Panhellenic Symposium in Chemistry*, Patra, Hellas, December **1996**. “Asymmetric induction due to primary kinetic isotope effect in the ene reaction of PTAD with alkenes”
3. **Vassilikogiannakis, G.**; Orfanopoulos, M. *6th European Symposium of Organic Reactivity, ESOR-VI*, Louvain-la-Neuve, Belgium, July **1997**. “Stereochemistry and isotope effects in the C₆₀/arylalkenes [2 + 2] cycloaddition”
4. **Vassilikogiannakis, G.**; Orfanopoulos, M. *1st International Conference of the Chemical Societies of the South-East European Countries*, Halkidiki, Hellas, June **1998**. “The regio- and stereoselectivity of the [2 + 2] photocycloaddition of acyclic enones to C₆₀”
5. Orfanopoulos M.; **Vassilikogiannakis, G.** *7th European Symposium of Organic Reactivity, ESOR-VII*, Ulm, Germany, August **1999**. “[2 + 2] photocycloadditions of acyclic enones to C₆₀. Regio and Stereoselectivity”
6. Greer, A.; **Vassilikogiannakis, G.**; Lee, K-C.; Nahm, K; Foote, C. S. *Book of Abstracts, 217th ACS National Meeting*, Anaheim, Calif., March **1999**. “Photooxidation of *trans*-4-propenylanisole. Formation of [2+2] products with added acid”
7. Orfanopoulos, M.; **Vassilikogiannakis, G.** *15th International Conference on Physical Organic Chemistry, will be presented in Goteborg, Sweden* July **2000**. “Stereochemistry of the triazolinediones – alkenes ene reaction: Asymmetric induction due to H/D isotopic competition”
8. **Vassilikogiannakis, G.**; Montagnon, T.; Nicolaou, K. C. *19th Panhellenic Symposium in Chemistry*, Heaklion, Hellas, November **2002**. Total synthesis of coleophomones B and C.
9. **Vassilikogiannakis, G.**; Montagnon, T.; Nicolaou, K. C. *1st Cost D28 symposium in natural products as a source for discovery, synthesis, and application of new pharmaceuticals*, Athens December **2002**. “Olefin methathesis at its best. Total syntheses of Coleophomones B, C and D.”
10. **Vassilikogiannakis, G.**; Margaros, I.; Montagnon, T. *3rd Cost D28 symposium in natural products as a source for discovery, synthesis, and application of new pharmaceuticals*, Siena, Italy October **2004**. “Biomimetic total synthesis of Litseaverticillols A, B, C, D, E, F, G, I and J and structural reassignment of litseaverticillol E”
11. Tofi, M.; Georgiou, T.; Montagnon, T.; **Vassilikogiannakis, G.** *20th Panhellenic Symposium in Chemistry*, Ioannina, Hellas, September **2005**. “Regioselective ortho lithiation of 3-aryl and 3-styryl furans.”
12. **Vassilikogiannakis, G.**; Tofi, M; Georgiou, T.; Montagnon, T. *4th Cost D28 symposium in natural products as a source for discovery, synthesis, and application of new pharmaceuticals*, Ischia, Italy October **2005**. “Towards Prunolides: Regioselective ortho lithiation of 3-aryl and 3-styryl furans”

13. **Vassilikogiannakis, G.**; Tofi, M; Georgiou, T.; Montagnon, T. *7th Conference on Medicinal Chemistry: Drug Discovery and Design*, Patras, Greece, March **2006**. "Synthesis of the bis-Spirocyclic Core of the Prunolides, Pinnatoxins, and Pteriatoxins Using a Singlet Oxygen-Mediated Cascade Sequence."
14. Georgiou, T.; Tofi, M.; Montagnon, T.; **Vassilikogiannakis, G.** *International Symposium on Chemistry, Biology and Medicine*, Paphos, Cyprus, May 28 – June 01, **2006**. "A versatile and general one-pot method for synthesizing bis-spiroketal motifs."
15. **Vassilikogiannakis, G.**; Montagnon T.; Tofi, M; Georgiou, T. *1st Cost D28-007 working group meeting in natural products as a source for discovery, synthesis, and application of new pharmaceuticals*, Heraklion, Greece 22 – 24 June, **2006**. "Developing biomimetic synthetic strategies for making the spiroketal motifs present in a slew of bioactive natural products"
16. **Vassilikogiannakis, G.**; Montagnon T.; Tofi, M; Georgiou, T. *Greynog Conference in Organic Chemistry*, Greynog, Wales, September 29 –October 01, **2006**. "The power of singlet oxygen chemistry in bio mimetic syntheses." Invited lecture.
17. Margaros I.; **Vassilikogiannakis G.** *2nd Hellenic Symposium on Organic Synthesis*, Athens 19 – 21 April **2007**. "Total synthesis of Chinensines A – D and *epi*-Premnalene."
18. **Vassilikogiannakis, G.** *Invited lecture in the National Institute of Research (EIE)*, Athens 08 May **2007**. "Singlet Oxygen: A powerful tool in natural product synthesis"
19. **Vassilikogiannakis, G.**; Margaros, I. *Invited lecture in the 13th Hellenic Symposium of Pharmaceutical Chemistry*, Athens 13 – 14 March **2008**. "Total synthesis of biologically active natural products Chinensines A – E, (+)-Zerumin B and (+)-Premnalane A"
20. **Vassilikogiannakis G.** *Invited lecture in the colloquium of the Department of Chemistry of the University of Birmingham*, Birmingham 18 March **2008**. "The Power of Molecular Oxygen in Natural Product Synthesis"
21. **Vassilikogiannakis G.** *Invited Lecture in a Chemistry Symposium featuring Europe's up and coming academics*, Nottingham 19 March **2008**. "Using singlet oxygen to synthesize polyoxygenated natural products from furans"
22. **Vassilikogiannakis G.** *Invited Lecture in a Symposium in Natural Products Chemistry Biology and Medicine*, Acquafredda di Maratea, Italy 18 – 23 May **2008**. "The use of singlet oxygen in natural product synthesis"
23. Vassilikogiannakis, G.; **Tofi, M.**; Montagnon, T. *10th Conference on Medicinal Chemistry: Drug Discovery and Design*, Patras, Greece, March 18 – 20, **2009**. "From Simple Furans to Bioactive Polyoxygenated Natural Products"