CURRICULUM VITAE



SURNAME: Lykakis FIRST NAME: Ioannis SCIENTIFIC EMPLOYMENT: Professor BIRTHPLACE Iraklion Crete, Greece **BIRTHRATE**: June 18, 1975 lykakis@chem.auth.gr e-mail: Tel.; Mobile: 00302310997871; 00306973328202 ORCID ID https://orcid.org/0000-0001-8165-5604 Personal Webpage: https://lykakis.webpages.auth.gr/ https://www.chem.auth.gr/en/staff/lykakis-ioannis/

EDUCATION

November 1997	Bachelor of Science degree in Chemistry
	Department of Chemistry, University of Crete.
November 2000	Master in Organic Chemistry
	Department of Chemistry, University of Crete.
	Supervisor: Prof. Michael Orfanopoulos
	Title: Photosensitized oxidation of fatty acid methyl esters.
December 2003	Doctor of Philosophy in Organic Chemistry
	Department of Chemistry, University of Crete.
	Supervisor: Prof. Michael Orfanopoulos
	Title: Decatungstate catalyzed photooxidation of organic compounds:
	Mechanisms and synthetic applications.

SCIENTIFIC AND RESEARCH EMPLOYMENT

2023-today	Professor
	Department of Chemistry, Aristotle University of Thessaloniki
2018-2023	Associate Professor
	Department of Chemistry, Aristotle Univeristy of Thessaloniki
2014-2018	Assistant Professor
	Department of Chemistry, Aristotle Univeristy of Thessaloniki
2011-2014	Lecturer
	Department of Chemistry, Aristotle Univeristy of Thessaloniki

2007-2011	Visiting Assistant Professor (PD407/80)
	(no permanent position) Department of Chemistry and Department of Materials
	Science, University of Crete
2007-2009	Scientific collaborators
	(no permanent position) Department of Plant Sciences, School of Agriculture
	Technology, Technological Educational Institute of Crete
2006-2007	Postdoctoral Research Fellow
	Department of Chemistry, Organic Chemistry, University of Crete, Greece
	Supervisor: Prof. Manolis Stratakis
2005-2006	Postdoctoral Research Fellow
	Istituto per la Sintesi Organica e la Fotoreattivita (I.S.O.F.), Consiglio Nazionale
	delle Ricerche (C.N.R.), Bologna, Italy, with a Marie Curie Network
	[SULFRAD]
	Supervisor: Dr. Chryssostomos Chatgilialoglu
2004-2005	Military services working as Chemistry in fuels department
2000-2003	PhD, in Organic Chemistry, Department of Chemistry, University of Crete

TEACHING EXPERIENCE

Teaching of undergraduate lessons, Chemistry Department, AUTh:
Organic Chemistry III (AYTh, 2016-today)
Laboratory Organic Chemistry I (AUTh, 2011-today)
Laboratory Organic Chemistry II (AUTh, 2011-2013, 2022-today)
Laboratory Organic Chemistry IV (AUTh, 2013-2015)
Organic Reaction Mechanisms (AUTh, 2012-2016)
Organic Reaction Mechanisms-Herocyclic Compounds Chemistry (AUTh, 2012-2016)
Green Chemistry (AUTh, 2014-2015)
Spectroscopy of Organic Compounds (AUTh, 2016-2017)
Chemistry of Materials (AUTh, 2020-today)
Teaching of undergraduate lessons, School of Agriculture, AUTh:
Organic Chemistry (AUTh, 2014-2020)
Teaching of undergraduate lessons, Chemistry Department, UoC:
General Chemistry I (UoC, 2007-2008)
Organic Photochemistry (UoC, 2007-2008)
Food Chemistry (UoC, 2008-2011)
Teaching of undergraduate lessons, Materials Science Department, UoC:
Laboratory of Materials (UoC, 2009-2011)
Teaching of undergraduate lessons, School of Agriculture, Food and Nutrition, TEIoC:

Laboratory of Agriculture Chemistry (TEIoC, 2006-2009) <u>Teaching of postgraduate lessons, Chemistry Department, AUTh</u>: Physical Organic Chemistry (AUTh, 2011-today) Spectroscopy of Organic Compounds (AUTh, 2017-2018) <u>Teaching of postgraduate lessons, Chemistry Department, UoC</u>: Laboratory of Isolations and Synthesis of Natural Products (UoC, 2001-2003) <u>Co-teaching of undergraduate lessons, Chemistry Department, UoC</u>: Organic Chemistry I & II (UoC, 1999-2001) Laboratory of Organic Chemistry (UoC, 1998-1999)

TEACHING EXPERIENCE ABROAD

- Associate teaching member in the program «ΠΕΓΑ-Εφαρμογή Σύγχρονων Αναλυτικών τεχνικών στην ανάλυση χημικών ουσιών και υλικών.» code K.A. 421, which is implemented under the Action "Reinforcement of the Research and Innovation Infrastructure" «Εκπαίδευση και Δια Βίου Μάθηση», co-financed by Greece and the European Union (Α.Π.Θ. from 28/04/2015 until 31/10/2015)
- Associate teaching member in the Hellenic Open University, in the post-graduate student program «Environmental Catalyst for Anti-pollution and Clean Energy Production», Teaching the lesson «Catalysis (ΚΠΠ70)» (from 10-2017 until 08-2018)

SCHOLARSHIPS-AWARDS

2022 Award for the excellent teaching by the Faculty of Sciences, AUTH
2018 Empeirikeion Academe Awards – Financial Support, Financial Support from Empeirikeion Academe for research coordination, with the title: "Photocatalytic Green Chemistry Procedures in the presence of new hybrids of polyoxomelates and Au and Ag nanoparticles."
2012 Zervas Award, from the Academy of Athens, for the prototype publication in Organic Chemistry, J. Am. Chem. Soc. 2011, 133, 10426, with title: "Oxidative Cycloaddition of 1,1,3,3-Tetramethyldisiloxane to Alkynes Catalyzed by Supported Gold Nanoparticles."
(Highlighted as SYNFACTS of the month, SYNFACT, 2011, 10, 1137.)".

- 2005-2006 **Marie Curie Network** fellowship "Sulfur radical chemistry of biological significance: the protective and damaging roles of thiol and thioether radicals [SULFRAD]"
- 2000-2002 '**Platon**' Greek-French research fellowship.
- 1998-2000 **EPEAEK fellowship** «Isolation and Synthesis of Natural Products with Biological Activity».
- 1997-1998 **State Scholarships Foundation (I.K.Y.) Award** for academic excellence as postgraduate student (ranked 1st).
- 1994-1995 Fellow of Ministry of Marine Award for academic excellence as graduate student.
- 1993-1995 **State Scholarships Foundation (I.K.Y.) Award** for academic excellence as graduate student for two years (Praise).

SCIENTIFIC PROGRAMS (>2.5 million Euro)

- 2019-2021 ESPA 2014–2020: Human Resources Development, Education and Lifelong Learning", EDBM103, (MIS: 5033021) (National Strategic Reference Framework, NSRF 2014-2020), title: "New catalytic photochemical reaction for the sustainable synthesis of N-heterocycle organic compounds", Action of the Operation Program "Support Postdocs Researchers/Researchers-B". Dr. M. Kallitsakis (Postdoc researcher) and Assoc. Prof. I. N. Lykakis (PI and Scientific Coordinator, AUTh).
- 2020-2021 ESPA 2014–2020: Human Resources Development, Education and Lifelong Learning", *EDBM103*, "*PhotoTransform*" (MIS: 5047897) *for researchers with emphasis on young researchers-cycle B*, (National Strategic Reference Framework, NSRF 2014-2020), (KA99007), Action of the Operation Program "*Support Researchers/Academic Staff cycle-B*", «EΠ ANAΔ-EΔBM», (1157). MIS 5047897. Assoc. Prof. I. N. Lykakis (PI and Scientific Coordinator, AUTh).
- 2019-2022 **ELIDEK (HFRI):** the Action "1st Call for Proposals for Research Projects ELIDEK to support Postdoctoral Researchers", a project that received funding from the Hellenic Foundation for Research and Innovation (HFRI) and the General Secretariat for Research and Technology (GSRT), under grant agreement No 776 (*PhotoDaLu*)" (KA97507). Dr. M. Terzidis (PI), A.U.Th.) and Assoc. Prof. I. N. Lykakis (Scientific co-PI and member).
- 2018-2020 **ESPA 2014-2020:** the Action "*Reinforcement of the Research and Innovation Infrastructure*", an Open-Access Research Infrastructure of Chemical Biology and Target-Based Screening Technologies for Human and Animal Health, Agriculture

and the Environment (*OPENSCREEN-GR*)" (MIS 5002691), funded by the Operational Programme "Competitiveness, Entrepreneurship and Innovation" ((National Strategic Reference Framework, NSRF 2014-2020) and co-financed by Greece and the European Union (KA94150). Assist. Prof. V. Sarli (Scientific PI), A.U.Th.) and Assist. Prof. I Lykakis (Scientific member).

- 2017-2019 **ELIDEK (HFRI)-Fellowships**, program foundation for graduate students, title: *"Organic Catalytic Transformations with the use of Cu and Zn complexes as catalysts"*, HFRI: The action of program foundation for graduate students (MIS: 2355) (KA95055), D. Andreou (PhD candidate, scholar) and Assist. Prof. I. Lykakis (Scientific Coordinator, PI).
- 2017-2018 ESPA 2014-2020-Fellowships for graduate students, "Organic Catalytic Transformations using Metal Nanoparticles" (MIS 5003404) S. Fountoulaki (PhD candidate, scholar) and Assist. Prof. I. Lykakis (Scientific Coordinator, PI).
- 2017-2018 **ESPA 2014-2020-Fellowships for graduate students**, D. Iordanidou (PhD candidate, scholar) and Assist. Prof. I. Lykakis (Scientific Coordinator, PI).
- 2016-2017 **IKY-SIEMENS Aristeia** program foundation, with the title *«Novelty in drug delivery using nanoporous materials»* Prof. G. Frudakis (Scientific Supervisor, PI), Assist. Prof. I. Lykakis and Prof. K. Litinas (Scientific Collaborators).
- 2015-2017 **IKY-SIEMENS** program foundation for postdocs, with the title *«Catalytic transformations for the synthesis of organic biomolecules using Cu nanoparticles and hybrids of tetranuclear complexes of CuII»* Assist. Prof. I. Lykakis (Scientific Supervisor, PI) and Dr. M. Kallitsakis (postdoc fellowship).
- 2014-2016 **IKY-SIEMENS** program foundation for postdocs, *«Green Catalytic transformations in Chemistry using new hybrids of catalytic systems of Au nanoparticles»* NSRF 2014-2020 SR 22963, MIS: 12106, Assist. Prof. I. N. Lykakis (Scientific Supervisor, PI) and Dr. T. Symeonidis (postdoc fellowship).
- 2012-2016 **COST actions CM1201** *«Biomimetic Radical Chemistry»* Assist. Prof. I. Lykakis (Member of the Management Committee of Greece), Dr. C. Chatgilialoglu (Coordinator). <u>http://biomimetic-rad-chem.eu/</u>.
- 2013-2015 Aristeia I «Rational Design of Mesoporous Polynuclear Transition-Metal Organic Frameworks as Green Catalysts in Organic Chemistry», MESOPTMOFs, (NSRF 2013-2017 - MIS: 2691) Assoc. Prof. G. Armatas (Coordinator, PI), Assist. Prof. I. Lykakis (Scientific Collaborator).

- 2012-2015 ERC-Grant "MESOPOROUS NPs" «Periodically Order Mesoporous Metal and Metal-Oxide Nanoparticle Assemblies for Catalytic and Gas Separation Applications (ERC-09)» funded by the Operational Programme "Competitiveness, Entrepreneurship and Innovation" (NSRF 2007-2013) and co-financed by Greece and the European Union. Assoc. Prof. G. Armatas (Coordinator, PI), Assist. Prof. I. Lykakis (Scientific Collaborator).
- 2013-2014 **Program foundation ARISTEIA** for postdoctoral scholarship from the Research Committee of AUTH, with title: "*Catalytic oxidation of amines using novel catalytic systems in the area of Green Chemistry*", Dr. P. Gkizis (postdoc fellowship) and Assist. Prof. I. N. Lykakis, (Scientific supervisor).
- 2012-2013 **Program foundation ARISTEIA** from the Research Committee of AUTH, with title: "Catalytic reduction of nitro compounds using Au nanoparticles supported on mesoporous materials and hydrazine or 1,1,3,3-tetramethyldisiloxane as hydrogen donor molecules", Assist. Prof. I. N. Lykakis, (Scientific PI).
- 2012-2013 Program foundation ARISTEIA for postdoctoral scholarship from the Research Committee of AUTH, with title: "Direct Photosensitized Green Oxidation of Alkenes Catalyzed by Au-nanoparticles Supported on Mesoporous Materials", Dr. C. Raptis (postdoc fellowship) and Asist. Prof. I. N. Lykakis, (Scientific supervisor).
- 2009-2010 **Program foundation** from the Research Committee of UOC with title: "*Hydrogen* sulfide and free radicals of sulfur under oxidative stress [ELKE 2750]" Dr. I. N. Lykakis (Scientific PI).
- 2005-2006 Marie Curie Network "Sulfur radical chemistry of biological significance: the protective and damaging roles of thiol and thioether radicals [SULFRAD]" (Dr. I. Lykakis, Postdoc fellowship)

REFEREE IN PEER REVIEWED INTERNATIONAL JOURNALS

Journal of the Organic Chemistry, Organic Letter, Journal of Materials Chemistry, Photochemistry and Photobiology, Tetrahedron, Tetrahedron Letter, ChemCutChem, Current Organic Chemistry, Current Organic Synthesis, Journal of Catalysis, Applied Catalysis, Catalysis Today, Journal of Molecular Catalysis A, Chemical Communication, Chemical Reviews, Chemosphere, Macromolecules, Catalysis Communication, RSC Advances, ACS Catalysis, ACS Applied Nano Materials, Catalysis Letter, Green Chemistry, Nanomaterials, Molecules, Organics, Catalysts, Advanced Synthesis & Catalysis, Chemical Science, Scientific Reports, Angew. Chem. Int. Ed.

SUPERVISOR OF POSTDOCTORAL STUDENTS

C. Raptis (AUTH, 2012-2013), P. Gkizis (AUTH, 2012-2014), T. Symeonidis (AUTH, 2014-2015),
M. Kallitsakis (AUTH, 2015-2022), S. Fountoulaki (AUTH, 2019-2022), D. Andreou (AUTH, 2021-2022)

SUPERVISOR OF PhD THESES

S. Fountoulaki (PhD Thesis, 2013-2018), D. Iordanidou (PhD Thesis, 2014-2019), D. Andreou (PhD Thesis, 2015-2021), M. Tzani (PhD Thesis, 2018-2022), M. Minadakis (PhD Thesis in co-supervision with Dr. N. Tagmatarchis, 2021-today), A. Chaidali (PhD Thesis, 2023-today).

SUPERVISOR OF M.Sc.

S. Fountoulaki (M.Sc. AUTh, 2012-2013), D. Andreou (M.Sc. AUTh, 2013-2014), E. Charistoudi (M.Sc. AUTh, 2015-2016), V. Daikopoulou (M.Sc. AUTh, 2016-2017), M. Tzani (M.Sc. AUTh, 2016-2018), K. Pappa (M.Sc. AUTh, 2016-2018), K. Lotidou (M.Sc. AUTh, 2017-2020), E. Kaminioti (M.Sc. AUTh, 2017-2020), V. Papazoglou (M.Sc. AUTh, 2017-2020), D. Ioannou (M.Sc. AUTh, 2018-2020), D. Georgantas (M.Sc. AUTh, 2018-2022), A. Bena (M.Sc. AUTh, 2019-2021), N. Siakavaras (M.Sc. AUTh, 2019-2022), A. Chaidali (M.Sc. AUTh, 2021-2023), A. Kouvelas (M.Sc. 2021-today), C. Triantafyllidis (M.Sc., 2021-today).

SUPERVISOR OF BACHELOR Theses

More than 30 undergraduate Bachelor Theses

MEMBER OF THE ADVISORY COMMITTEE OF M.Sc. AND PhD THESES

More than 30 PhD Theses and more than 40 Master Theses

SCIENTIFIC COLLABORATIONS

Prof. M. Armatas, Department of Materials Science, University of Crete; Catalytic applications in Organic synthesis with POM-AuNPs-MOx mesoporous materials.

Prof. K. Litinas, Department of Chemistry, Aristotle University of Thessaloniki; *Catalytic* applications in synthesis of heterocyclic compounds with AgNPs.

Prof. K. Triantafyllidis, Department of Chemistry, Aristotle University of Thessaloniki; Organic transformations catalyzed by Polyoxometallate/AuNPs /LDH catalytic systems.

Dr. G. Kostakis, Department of Chemistry, University of Sussex, UK; Polynuclear transitions metal complexes in catalysis of organic reactions.

Prof. P. Angaridis, Department of Chemistry, Aristotle University of Thessaloniki; Synthesis and applications of Co and Cu-based N,P-liganded photocatalysts

Prof. A. Domling, Department of Drug Design, University of Groningen, Antonius Deusinglaan 1, 9713 AV Groningen, The Netherlands; *Selective Reduction processes on MCR products catalyzed by Noble metal nanoparticles*

Prof. M. Stratakis, Department of Chemistry, University of Crete; Gold Catalysis

Dr. Y. M. A. Yamada, Deputy Team Leader RIKEN Center for Sustainable Resource Science, Hirosawa, Wako, Japan; *Polymeric-hybrids of POMs in catalysis*.

Dr. C. Chatgilialoglu, Institute of Organic Chemistry, CNR, Bologna, Italy; *Biomimetic studies on trans phospholipids formation with thiyl radicals*.

Prof. A. Georgakilas, Biophysics/DNA damage and Repair Lab, National Technical University of Athens, Physics Department; *DNA Damage and ROS species in cells using photoiirradiation studies in the presence of AuNPs*.

Assist. Prof. M. Terzidis, Department of Nutritional Sciences and Dietetics, International Hellenic University, Sindos Campus 57400, Thessaloniki; *Chemiluminescence and catalysis in redox procedures of several natural products*.

Assist. Prof. M. Koukaras, Department of Chemistry, Aristotle University of Thessaloniki; Synthesis, characterization, and catalytic application of 3D graphene-based diamine cross-linking materials.

MEMBER OF COMMITTEES AND UNIONS

- Member of the Association of Greek Chemists (1997-today)
- Member of the American Chemical Society (2013-2019)
- Evaluator of IKY and ESPA Scientific Programs (2016-today)
- Member of the Undergraduate Program Committee, Department of Chemistry, AUTh (2014-2016)
- Member, Management Committee for Greece, COST actions CM1201 "Biomimetic Radical Chemistry" <u>http://biomimetic-rad-chem.eu/</u> (2012-2015).
- Member of the Committee for Security and Crisis Management of Faculty of Sciences of AUTh, 2018-2022.
- Member of the Committee for Cleaning, Infrastructure Maintenance-Building Supervisors of Faculty of Sciences of AUTh, 2018-2022.
- > Director of Organic Chemistry Laboratory, Department of Chemistry, AUTh, 2020-2023.

- Nominated from the Association of Greek Chemists to be member of the EuChemS Professional Network 2021 - Division of Organic Chemistry, 2022-2025.
- Editorial Board Member, Organics-MDPI, <u>https://www.mdpi.com/journal/organics/editors</u>, (2019-today).
- Associate Editor, in Frontiers, Green and Sustainable Chemistry, 2022, https://www.frontiersin.org/journals/chemistry/sections/green-and-sustainable-chemistry/editors

PUBLICATIONS IN PEER REVIEWED JOURNALS (h=30, citations=2649 (Google Scholar), h=28, citations=2265 (Scopus))

[1] Adam, W.; Bottke, N.; Krebs, O.; Lykakis, I. N.; Orfanopoulos, M.; Stratakis, M. J. Am. Chem. Soc. 2002, 124, 14403. "Ene Reaction of Singlet Oxygen, Triazolinedione, and Nitrosoarene with Chiral Deuterium-Labeled Allylic Alcohols: The Interdependence of Diastereoselectivity and Regioselectivity Discloses Mechanistic Insights into the Hydroxy-Group Directivity."

http://pubs.acs.org/doi/pdf/10.1021/ja027800p

[2] Lykakis I. N.; Orfanopoulos M.; Tanielian, C. Org. Lett. 2003, 5, 2875. "Decatungstate Photocatalyzed Oxidation of Aryl Alkanols. Electron Transfer or Hydrogen Abstraction Mechanism?"

http://pubs.acs.org/doi/pdf/10.1021/ol0349211

[3] Lykakis I. N.; Lestakis, S.; Orfanopoulos, M. Tetrahedron Lett. 2003, 44, 6247. "9,10-Dicyanoanthracene Photosensitized Oxidation of aryl alkanols: evidence of an electron transfer mechanism."

http://www.sciencedirect.com/science/article/pii/S0040403903015491

- [4] Lykakis I. N.; Orfanopoulos, M. Synlett 2004, 2131. "Lone Selectivity of the Decatungstate-Sensitized Photooxidation of 1-Substituted Cycloalkenes." https://www.thieme-connect.de/DOI/DOI?10.1055/s-2004-832803
- [5] Lykakis I. N.; Orfanopoulos, M. Tetrahedron Lett. 2004, 7645. "Photooxidation of aryl alkanes by a decatungstate / triethylsilane system in the presence of molecular oxygen." <u>http://www.sciencedirect.com/science/article/pii/S0040403904018076</u>
- [6] Lykakis I. N.; Orfanopoulos, M. Tetrahedron Lett. 2005, 46, 7835. "Deuterium kinetic isotope effects in homogeneous decatungstate catalyzed photooxygenation of 1,1-diphenylethane and 9-methyl-9H-fluorene: evidence for a hydrogen abstraction mechanism." http://www.sciencedirect.com/science/article/pii/S0040403905019726

[7] Vougioukalakis G. C.; Hatzimarinaki, M.; Lykakis I. N.; Orfanopoulos, M. J. Org. Chem.
2006, 71, 829. "Reaction of Aza[60]fullerene Radical with Diphenylmethanes and Fluorenes: A Mechanistic Approach."

http://pubs.acs.org/doi/pdf/10.1021/jo051838d

- [8] Chatgilialoglu, C; Ferreri, C.; Lykakis, I. N; Wardman, P. Bioorg. Med. Chem. 2006, 14, 6144. "Trans fatty acids and radical stress: what are the real culprits?" <u>http://www.sciencedirect.com/science/article/pii/S0968089606004275</u>
- [9] Lykakis I. N.; Vougioukalakis G. C.; Orfanopoulos, M. J. Org. Chem. 2006, 71, 8740.
 "Homogeneous Decatungstate Catalyzed Photooxygenation of Tetrasubstituted Alkenes. Kinetic Isotope Effect Study."

http://pubs.acs.org/doi/pdf/10.1021/jo061238u

- [10] Tanielian, C.; Lykakis, I. N.; Seghrouchni, R.; Cougnon, F.; Orfanopoulos, M. J. Mol Catal. A 2007, 262, 170. "Mechanism of Decatungstate Photocatalyzed Oxygenation of Aromatic Alcohols: Part I. Continuous Photolysis and Laser Flash Photolysis Studies." <u>http://www.sciencedirect.com/science/article/pii/S1381116906011915</u>
- [11] Lykakis, I. N.; Tanielian, C.; Seghrouchni, R.; Orfanopoulos, M. J. Mol Catal. A 2007, 262, 176. "Mechanism of Decatungstate Photocatalyzed Oxygenation of Aromatic Alcohols: Part II. Kinetic Isotope Effects Studies." http://www.sciencedirect.com/science/article/pii/S138111690601140X
- [12] Lykakis, I. N.; Ferreri, C.; Chatgilialoglu, C. Angew. Chem. Int. Ed. 2007, 46, 1914. Angew. Chem. 2007, 119, 1946. "Sulfydryl radical (HS•/S•): a contender for the isomerization of membrane lipid double bonds." <u>http://onlinelibrary.wiley.com/doi/10.1002/anie.200604525/abstract;jsessionid=DC39D5BC6</u> <u>BC5B4C23F67EDA7A488F2CC.d03t03</u>
- [13] Tzirakis, M. D.; Lykakis I. N.; Panagiotou, G.; Bourikas, K.; Lycourghiotis, A.; Kordoulis, C.; Orfanopoulos, M. J. Catal. 2007, 272, 178. "Decatungstate Catalyst Supported on Silica and γ-Alumina at Different pH Values: Efficient Photocatalytic Oxidation of Benzyl Alcohols."

http://www.sciencedirect.com/science/article/pii/S0021951707003739

[14] Perchyonok, V. T. and Lykakis, I. N. Mini Rev. Org. Chem. 2008, 5, 19. "Recent Advances in Free Radical Chemistry of C-C Bond Formation in Aqueous Media: From Mechanistic Origin to Applications."

http://www.eurekaselect.com/82232/article



Green Chemistry

[15] Perchyonok, V. T.; Lykakis, I. N.; Tuck, K. L. Green Chem. 2008, 10, 153. "Recent Advances in C-H Bond Formation in Aqueous Media: A Mechanistic Perspective." (Cover picture of the issue)

http://pubs.rsc.org/en/content/articlelanding/2008/gc/b709047a

- [16] Tsangarakis, C.; Lykakis, I. N.; Stratakis, M., J. Org. Chem. 2008, 73, 2905. "Zeolite NaY-Promoted Cyclization of Farnesal: A Short Route to Nanaimoal." <u>http://pubs.acs.org/doi/pdf/10.1021/jo7024527</u>
- [17] Efe, C.; Tsangarakis, C.; Lykakis, I. N.; Raptis, C.; Stratakis, M., Synlett, 2008, 11, 1635.
 "Zeolite NaY-promoted tandem 1,5-diene/carbonyl-ene dicyclization of α-geranyl substituted carbonyl compounds."

https://www.thieme-connect.de/DOI/DOI?10.1055/s-2008-1078490

[18] Ferreri, C.; Anagnostopoulos, D.; Lykakis, I. N.; Chatgilialoglu, C.; Siafaka-Kapadai, A., Biorg. Med. Chem. 2008, 16, 8359. "Synthesis of all-trans anandamide: a substrate for Fatty Acid Amide Hydrolase with dual effects on rabbit platelet activation." <u>http://www.sciencedirect.com/science/article/pii/S0968089608007852</u>

Publications (after my election as Lecturer)

[19] Lykakis, I. N.; Zaravinos, I.-P.; Raptis, C.; Stratakis, M., J. Org. Chem., 2009, 74, 6339.
"Divergent synthesis of the co-isolated mycotoxins longianone, isopatulin, and (Z)-ascladiol via furan oxidation."

http://pubs.acs.org/doi/pdf/10.1021/jo900855e

- [20] Perchyonok, V. T.; Lykakis, I. N., Curr. Org. Chem. 2009, 13, 573. "Radical Reactions in Aqueous Media: Origins, Reason and Applications." <u>http://www.eurekaselect.com/69017/article</u>
- [21] Arkoudis, E.; Lykakis, I. N.; Gryparis, C.; Stratakis, M., Org. Lett. 2009, 11, 2988.
 "Biomimetic Synthesis of Dimeric Metabolite Acremine G via a Highly Regioselective and Stereoselective Diels-Alder Reaction." http://pubs.acs.org/doi/pdf/10.1021/o1901004e
- [22] Tzirakis, M. D.; Lykakis, I. N.; Orfanopoulos, M., Chem. Soc. Rev. 2009, 38, 2609.
 "Decatungstate as an efficient photo-catalyst in organic chemistry." http://pubs.rsc.org/en/content/articlelanding/2009/cs/b812100c
- [23] Raptis, C.; Lykakis, I. N.; Tsangarakis, C.; Stratakis, M., Chem. Eur. J., 2009, 15, 11918. "Acid-catalyzed cyclization of terpenes under homogeneous and heterogeneous conditions as probed through stereoisotopic studies: A concerted process with competing preorganized chair and boat transition states."

http://onlinelibrary.wiley.com/doi/10.1002/chem.200901563/abstract

[24] Lykakis, I. N.; Orfanopoulos, M., Curr. Org. Chem. 2009, 13, 1737. "Decatungstate-Catalyzed Photooxygenation of S-2-Phenylbutane and Cumene via a Free Carbon-Radical Intermediate."

http://www.eurekaselect.com/70264/article

[25] Lykakis, I. N.; Ferreri, C.; Grabovskiy, S. A.; Chatgilialoglu, C., Tetrahedron, 2010, 66, 2203. "Silver zeolite as a promising material for separation of cis/trans isomer mixtures of fatty acid methyl esters."
 http://www.sciencedirect.com/science/article/pii/S0040402010000645

[26] Zhang, S.; Chen, J.; Lykakis, I. N.; Perchyonok, V. T., Curr. Org. Synthesis., **2010**, 7, 177. "Streamlining Organic Free Radical Synthesis through Modern Molecular Technology: from

Polymer Supported Synthesis to Microreactors and beyond." http://www.eurekaselect.com/85866/article

- [27] Lykakis, I. N.; Perchyonok, V. T., Curr. Org. Chem. 2010, 14, 1075-1081. "Thiols as an efficient hydrogen atom donor in free radical transformations in aqueous media" http://www.eurekaselect.com/69293/article
- [28] Efe, C.; Lykakis, I. N.; Stratakis, M., Chem. Commun. 2011, 47, 803. "Gold nanoparticles supported on TiO₂ catalyse the cycloisomerisation/oxidative dimerisation of aryl propargyl ethers."

http://pubs.rsc.org/en/content/articlelanding/2011/cc/c0cc03353g

- [29] Lykakis, I. N.; Efe, E.; Gryparis, C.; Stratakis, M., Eur. J. Org. Chem. 2011, 12, 2334.
 "Ph₃PAuNTf₂ as a Superior Catalyst Catalyst for the Selective Synthesis of 2H-Chromenes: Application to the Concise Synthesis of Benzopyran Natural Products." http://onlinelibrary.wiley.com/doi/10.1002/ejoc.201001674/abstract
- [30] Lykakis, I. N.; Psyllaki, A.; Stratakis, M. J. Am. Chem. Soc. 2011, 133, 10426. "Oxidative Cycloaddition of 1,1,3,3-Tetramethyldisiloxane to Alkynes Catalyzed by Supported Gold Nanoparticles". "(Zerva Awards 2012)"

(SYNFACTS Highlights in Current Synthetic Organic Chemistry and Highlighted as SYNFACTS of the month, SYNFACT, 2011, 10, 1137; "Cycloaddition of Tetramethyldisiloxane to Alkynes with [Au]/TiO₂)" http://pubs.acs.org/doi/pdf/10.1021/ja2045502

[31] Gryparis, C.; Lykakis, I. N.; Efe, C.; Zaravinos, I.-P.; Vidali, T.; Kladou, E.; Stratakis, M., Org. Biomol. Chem. 2011, 9, 5655. "3(2H)-Furanones via Singlet Oxygenation of (β-Keto)-2-Substituted Furans: Application to the Biomimetic Synthesis of Merrekentrone C." http://pubs.rsc.org/en/content/articlelanding/2011/ob/c1ob05567d

- [32] Tamiolakis, I.; Lykakis I. N.; Katsoulidis, A. P.; Stratakis, M.; Armatas, G. S., Chem. Mater.
 2011, 23, 4204. "Mesoporous Cr₂O₃-Phosphomolybdic acid solid solution frameworks with catalytic activity." <u>http://pubs.acs.org/doi/pdf/10.1021/cm201547r</u>
- [33] Tamiolakis, I.; Lykakis I. N.; Katsoulidis, A. P.; Malliakas, C. D.; Armatas, G. S., J. Mater. Chem. 2012, 22, 6919. "Ordered Mesoporous Cr₂O₃ Frameworks Incorporating Keggin-type 12-Phosphotungstic Acids as Efficient Catalysts for Oxidation of Benzyl Alcohols". <u>http://pubs.rsc.org/en/content/articlelanding/2012/jm/c2jm16390j</u>
- [34] Gryparis, C.; Efe, C.; Raptis, C.; Lykakis, I. N.; Stratakis, M. Org. Lett. 2012, 14, 2956.
 "Cyclization of 1,6-Enynes Catalyzed by Gold Nanoparticles Supported on TiO₂: Significant Changes in Selectivity and Mechanism, as Compared to Homogeneous Au-Catalysis." http://pubs.acs.org/doi/pdf/10.1021/ol301212j
- [35] Tamiolakis, I.; Lykakis, I. N.; Katsoulidis, A. P.; Armatas, G. S., Chem. Commun. 2012, 48, 6687. "One-pot synthesis of highly crystalline mesoporous TiO₂ nanoparticle assemblies with enhanced photocatalytic activity". http://pubs.rsc.org/en/content/articlelanding/2012/cc/c2cc33122e
- [36] Psyllaki, A.; Lykakis, I. N.; Stratakis, M. Tetrahedron 2012, 68, 8724. "Reaction of Hydrosilanes with Alkynes Catalyzed by Gold Nanoparticles Supported on TiO₂."
 (SYNFACTS Highlights in Current Synthetic Organic Chemistry, SYNFACT 2012, 12, 1382)

http://www.sciencedirect.com/science/article/pii/S0040402012012501

- [37] Lykakis, I. N.; Evgenidou, E.; Orfanopoulos, M. Curr. Org. Chem. 2012, 16, 2400.
 "Photocatalysis and Polyoxo-anion Decatungstate in Organic Chemistry: A Manifold Concept for Green Chemistry."
 http://www.eurekaselect.com/103977/article
- [38] Kotzabasaki, V.; Lykakis, I. N. Gryparis, C.; Psyllaki, A.; Vasilikogiannaki, E.; Stratakis, M. Organometallics 2013, 32, 665. "Gold-Catalyzed Dehydrogenative Cycloaddition of Tethered 1,n-Dihydrodisilanes to Alkynes."
 http://pubs.acs.org/doi/abs/10.1021/om3011678?prevSearch=%255BContrib%253A%2Blykakis%255D&searchHistoryKey
- [39] E. Vasilikogiannaki, C. Gryparis, V. Kotzabasaki, I. N. Lykakis, M. Stratakis, Adv. Synth. Catal. 2013, 355, 907. "Activation of Ammonia-Borane Complex by Gold Nanoparticles: Facile Reduction of Nitroarenes into Anilines and Nitroalkanes into Hydroxylamines."

(SYNFACTS Highlights in Current Synthetic Organic Chemistry, SYNFACT 2013, 9(6), 674)

http://www.sciencedirect.com/science/article/pii/S1566736713000769

Publications (after my election as Assistant Professor)

- [40] Gkizis, P. L.; Stratakis, M.; Lykakis I. N. Catal. Commun. 2013, 36, 48. "Catalytic Activation of Hydrazine Hydrate by Gold Nanoparticles: Chemoselective Reduction of Nitro Compounds into Amines." (In the top cited articles published in Catalysis Communications in 2013 and cited between January 2014 and July 2016, according to Scopus citation counts) http://www.sciencedirect.com/science/article/pii/S1566736713000769
- [41] Symeonidis, T. S.; Lykakis, I. N.; Litinas, K. E. Tetrahedron 2013, 69, 4612. "Synthesis of quinolines and fused pyridocoumarins from N-propargylanilines of propargyl aminocoumarins by catalysis with gold nanoparticles supported on TiO₂." <u>http://www.sciencedirect.com/science/article/pii/S0040402013005528</u>
- [42] Tamiolakis, I.; Fountoulaki, S.; Vordos, N.; Lykakis, I. N.; Armatas, G. S. J. Mater. Chem. A, 2013, 1, 14311. "Mesoporous Au–TiO₂ nanoparticle assemblies as efficient catalysts for the chemoselective reduction of nitro compounds" http://pubs.rsc.org/en/Content/ArticleLanding/2013/TA/c3ta13365f#!divAbstract
- [43] Tamiolakis, I.; Lykakis I. N.; Armatas, G. S. Mater. Res. Soc. Symp. Proc., 2013, 1494, 315-320. "Synthesis and Photocatalytic Properties of High-Surface-Area Mesoporous TiO2 Nanoparticle Assemblies."

 $\underline{http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=8808562$

- [44] Skliri, E.; Lykakis, I. N.; Armatas, G. S. RSC Advances 2014, 4, 46170. "Ordered mesoporous V₂O₅/WO₃ composite catalysts for efficient oxidation of aryl alcohols" <u>http://pubs.rsc.org/en/Content/ArticleLanding/2014/RA/C4RA07850K#!divAbstract</u>
- [45] Gkizis, P. L.; Kalara-Lafkioti, I.; Varelas, D.; Tamiolakis, I.; Armatas, G. S.; Lykakis, I. N. Biointerface Res. Applied Chem. 2014, 4, 857. "Efficient and selective oxidation of aromatic amines into nitrosoarenes catalyzed by supported polyoxometalates." http://biointerfaceresearch.com/?page_id=829
- [46] Chatgilialoglu, C.; Ferreri, C.; Lykakis. I. N.; Mihaljevic, B. Israel J. Chem. 2014, 54, 242.
 "Biomimetic Thiyl Radical Chemistry by γ-Irradiation of Micelles and Vesicles Containing Unsaturated Fatty Acids."
 http://onlinelibrary.wiley.com/doi/10.1002/ijch.201300091/pdf

- [47] Tamiolakis, I.; Lykakis I. N.; Armatas, G. S. Mater. Res. Soc. Symp. Proc., 2014, 1641, DOI: http://dx.doi.org/10.1557/opl.2014.327. "Mesoporous Au-TiO₂ nanoparticle assemblies as efficient catalysts for the chemoselective reduction of nitro compounds." <u>https://www.cambridge.org/core/journals/mrs-online-proceedings-library-</u> <u>archive/article/mesoporous-autio2-nanoparticle-assemblies-as-efficient-catalysts-for-thechemoselective-reduction-of-nitro-compounds/A3D9324C1E08848B60E155EA7F53DD05</u>
- [48] Skliri, E.; Lykakis, I. N.; Armatas, G. S. RSC Advances 2014, 4, 8402. "Heteropolytungstic acids incorporated in an ordered mesoporous zirconia framework as efficient oxidation catalysts"

http://pubs.rsc.org/en/content/articlelanding/2014/ra/c3ra46421k#!divAbstract

- [49] Kornarakis, I.; Lykakis, I. N.; Vordos, N.; Armatas, G. S. Nanoscale 2014, 6, 8694. "Efficient visible-light photocatalytic activity by band alignment in mesoporous ternary polyoxometalate-Ag₂S-CdS semiconductors." http://pubs.rsc.org/en/content/articlelanding/2014/nr/c4nr01094a/unauth#!divAbstract
- [50] Vasilikogiannaki, E.; Titilas, I.; Gryparis, C.; Louka, A. Lykakis, I. N.; Stratakis, M. *Tetrahedron* 2014, 70, 6106-6113. "*Efficient hydrosilylation of carbonyl compounds by* 1,1,3,3-tetramethyldisiloxane catalyzed by Au/TiO₂." https://doi.org/10.1016/j.tet.2014.03.094
- [51] Fountoulaki, S.; Daikopoulou, V.; Gkizis, P. L.; Tamiolakis, I.; Armatas, G. S.; Lykakis, I. N. ACS Catalysis 2014, 4, 3504. "Mechanistic studies of the reduction of nitroarenes by NaBH₄ or hydrosilanes catalyzed by supported gold nanoparticles." http://pubs.acs.org/doi/abs/10.1021/cs500379u
- [52] Papadas, I.; Fountoulaki, S.; Lykakis I. N.; Armatas, G. S. Mater. Res. Soc. Symp. Proc.,
 2015, 1749, 1-6; DOI: 10.1557/opl.2014.929 "Mesoporous Au-loaded Fe2O3 Nanoparticle Assemblies for Chemoselective Reduction of Nitroarenes" <u>https://www.cambridge.org/core/journals/mrs-online-proceedings-library-</u> <u>archive/article/mesoporous-auloaded-fe2O3-nanoparticle-assemblies-for-chemoselective-</u> reduction-of-nitroarenes/CD4655C7B222870282D56C6F5F03356F
- [53] Lykakis, I. N.; Ferreri, C.; Chatgilialoglu, C. Arkivoc 2015, (iii), 140-153 "Biomimetic chemistry on the protection of cis phospholipid from the thiyl radical isomerization by common antioxidants". (Highly cited papers published in Arkivoc since 2015) http://www.arkat-usa.org/arkivoc-journal/browse-arkivoc/2015/3/

- [54] Symeonidis, T. S.; Tamiolakis, I.; Armatas, G. S.; Lykakis, I. N. Photochem. Photobiol. Sci.
 2015, 14, 563-568. "Green photocatalytic organic transformations by polyoxometalates vs. mesoporous TiO₂ nanoparticles: selective aerobic oxidation of alcohols." http://pubs.rsc.org/en/content/articlelanding/2015/pp/c4pp00268g#!divAbstract
- [55] Tamiolakis, I.; Lykakis, I. N.; Armatas, G. S. Catal. Today, 2015, 250, 180-186. "Mesoporous CdS-sensitized TiO₂ nanoparticle assemblies with enhanced photocatalytic properties: Selective aerobic oxidation of benzyl alcohols." https://doi.org/10.1016/j.cattod.2014.03.047
- [56] Papadas, T. I.; Fountoulaki, S.; Lykakis, I. N.; Armatas, G. S. Chem. Eur. J., 2016, 22, 4600-4607. "Controllable Synthesis of Mesoporous Iron Oxide Nanoparticle Assemblies for Chemoselective Catalytic Reduction of Nitroarenes." http://onlinelibrary.wiley.com/doi/10.1002/chem.201504685/full
- [57] Andreou, D.; Iordanidou, D.; Tamiolakis, I.; Armatas, G. S.; Lykakis, I. N. Nanomaterials, 2016, 6, 54. "Reduction of nitroarenes into arylamines and N-aryl hydroxylamines via activation of NaBH₄ and ammonia-borane complexes by Ag/TiO₂ Catalyst" (Cover Image for the Special Issue Book, "Nanoparticles for Catalysis", MDPI) http://www.mdpi.com/2079-4991/6/3/54
- [58] Fountoulaki, S.; Gkizis, P. L.; Symeonidis, T. S.; Kaminioti, E.; Karina, A.; Tamiolakis, I.; Armatas, G. S.; Lykakis, I. N. Adv. Synth. Catal., 2016, 358, 1500. "Titania-Supported Gold Nanoparticles Catalyze the Selective Oxidation of Amines into Nitroso Compounds in the Presence of Hydrogen Peroxide" (SYNFACTS Highlights in Current Synthetic Organic Chemistry, SYNFACT 2016, 12(08), 0876)

http://onlinelibrary.wiley.com/doi/10.1002/adsc.201500957/full

- [59] Skliri, E.; Papadogiorgakis, S.; Lykakis, I. N. Armatas, G. S. ChemPlusChem. 2017, 82, 136.
 "Mesoporous Assembled Mn₃O₄ Nanoparticle Networks as Efficient Catalysts for Selective Oxidation of Alkenes and Aryl Alkanes"
 http://onlinelibrary.wiley.com/doi/10.1002/cplu.201600460/full
- [60] Kallitsakis, M. G.; Loukopoulos, E.; Abdul-Sada, A.; Tizzard, G. J.; Coles, S. J.; Kostakis, G. E.; Lykakis, I. N. Adv. Synth. Catal. 2017, 359, 138. "A copper-benzotriazole based coordination polymer catalyzes the efficient one-pot synthesis of (N'-substituted)-hydrazo-4aryl-1,4-dihydropyridines from azines" http://onlinelibrary.wiley.com/doi/10.1002/adsc.201601072/full

[61] Loukopoulos, E.; Kallitsakis, M. G.; Tsoureas, N.; Abdul-Sada, A.; Chilton, N. F. Lykakis, I. N.; Kostakis, G. E. *Inorg. Chem.* 2017, 56, 4898. "Cu(II) Coordination Polymers as Vehicles in the A3 Coupling."

http://pubs.acs.org/doi/abs/10.1021/acs.inorgchem.6b03084

[62] Charistoudi, E.; Kallitsakis, M. G.; Charisteidis, I.; Triantafyllidis, K. S.; Lykakis, I. N. Adv. Synth. Catal. 2017, 359, 2949-2960. "Selective reduction of azines to benzyl hydrazones with NaBH₄ catalyzed by mesoporous silica supported silver nanoparticles: A catalytic route towards pyrazole synthesis."

http://onlinelibrary.wiley.com/doi/10.1002/adsc.201700442/full

- [63] Nikolaos M. Dimitriou, George Tsekenis, Evangelos C. Balanikas, Athanasia Pavlopoulou, Melina Mitsiogianni, Theodora Mantso, George Pashos, Andreas G. Boudouvis, Ioannis N. Lykakis, Georgios Tsigaridas, Mihalis I. Panayiotidis, Vassilios Yannopapas, Alexandros G. Georgakilas, *Pharmacology & Therapeutics*, **2017**, *178*, 1-17. "Gold nanoparticles, radiations and the immune system: Current insights into the physical mechanisms and the biological interactions of this new alliance towards cancer therapy." https://doi.org/10.1016/j.pharmthera.2017.03.006
- [64] Symeonidis, T. S.; Athanasoulis, A.; Ishii, R.; Uozumi, Y.; Yamada, Y. M. A.; Lykakis, I. N. ChemPhotoChem. 2017, 10, 479-484. "Photocatalytic aerobic oxidation of alkenes into epoxides or chlorohydrins promoted by polymer supported decatungstate catalyst." http://onlinelibrary.wiley.com/doi/10.1002/cptc.201700079/full
- [65] Kallitsakis, M. G.; Tancini, P.; Dixit, M.; Mpourmpakis, G.; Lykakis, I. N. J. Org. Chem.
 2018, 83, 1176–1184. "Mechanistic studies on the Michael addition of amines and hydrazines to nitrostyrenes: Nitroalkane elimination via a retro-aza-Henry type process" Highlighted in Organic Chemistry Portal, https://www.organic-chemistry.org/abstracts/lit6/190.shtm
 http://pubs.acs.org/doi/abs/10.1021/acs.joc.7b02637
- [66] Andreou, D.; Kallitsakis, M. G.; Loukopoulos, E.; Gabriel, C.; Kostakis, G. E.; Lykakis, I. N. J. Org. Chem. 2018, 83, 2104. "Copper-promoted regioselective synthesis of polysubstituted pyrroles from aldehydes, amines and nitroalkenes via 1,2-phenyl/alkyl migration" Highlighted in Organic Chemistry Portal, column on ''Heteroaromatic Construction'', <u>https://www.organic-chemistry.org/Highlights/2018/15October.shtm</u> Highlighted in Organic Chemistry Portal, <u>https://www.organic-chemistry.org/Abstracts/lit6/222.shtm</u> <u>http://pubs.acs.org/doi/10.1021/acs.joc.7b03051</u>

Publications (after my election as Associate Professor)

- [67] Loukopoulos, E.; Abdul-Sada, A.; Csire, G.; Kállay, C.; Brookfield, A.; Tizzard, C. J.; Coles, S. J.; Lykakis, I. N.; Kostakis, G. E. Dalton Trans., 2018, 47, 10491. "Copper(II)-benzotriazole coordination compounds in click chemistry: a diagnostic reactivity study." https://pubs.rsc.org/en/content/articlelanding/2018/DT/C8DT01256C
- [68] Loukopoulos, E.; Abdul-Sada, A.; Viseux, E. M. E.; Lykakis, I. N.; Kostakis, G. E. Cryst. Growth Des. 2018, 18, 5638. "Structural Diversity and Catalytic Properties in a Family of Ag(I)-Benzotriazole Based Coordination Compounds." https://pubs.acs.org/doi/10.1021/acs.cgd.8b00960
- [69] Iordanidou, D.; Zarganes-Tzitzikas, T.; Neochoritis, C. G.; Dömling, A.; Lykakis, I. N. ACS Omega, 2018, 3, 16005. "Application of Silver Nanoparticles in the Multicomponent Reaction Domain: A Combined Catalytic Reduction Methodology to Efficiently Access Potential Hypertension or Inflammation Inhibitors." https://pubs.acs.org/doi/10.1021/acsomega.8b02749
- [70] Tzani, M. A.; Kallitsakis, M. G.; Symeonidis, T. S.; Lykakis, I. N. ACS Omega, 2018, 11, 17947. "Alumina Supported Gold Nanoparticles as a Bifunctional Catalyst for the Synthesis of 2-Amino-3-arylimidazo[1,2-a]pyridines." https://pubs.acs.org/doi/10.1021/acsomega.8b03047
- [71] M. Stratakis, I. N. Lykakis, Synthesis, 2019, 51, 2435. "Nanogold(0)-Catalyzed Addition of Heteroelement σ Linkages to Functional Groups." <u>https://www.thieme-connect.de/products/ejournals/abstract/10.1055/s-0037-1611789</u>
- [72] Kallitsakis, M. G.; Ioannou, D. I.; Terzidis, M. A.; Kostakis, G. E.; Lykakis, I. N. Org. Lett., 2020, 22, 4339. "Selective photoinduced reduction of nitroarenes to N-arylhydroxylamines." *Highlighted in Organic Chemistry Portal, column on ''Reduction''*, <u>https://www.organic-chemistry.org/Highlights/2021/15March.shtm</u> https://pubs.acs.org/doi/10.1021/acs.orglett.0c01367
- [73] Tzani, A. M.; Gabriel, C.; Lykakis I. N. Nanomaterials, 2020, 10, 2405. "Selective Synthesis of Benzimidazoles from o-Phenylenediamine and Aldehydes Promoted by Supported Gold Nanoparticles."

https://www.mdpi.com/2079-4991/10/12/2405

[74] Ioannou, D. I.; Gioftsidou, D. K.; Tsina, V. E.; Kallitsakis, M. G.; Hatzidimitriou, A. G.; Terzidis, M. A.; Angaridis, P. A.; Lykakis, I. N. J. Org. Chem. 2021, 86, 2895, "Selective Reduction of Nitroarenes to Arylamines by the Cooperative Action of Methylhydrazine and a Tris(N-heterocyclic thioamidate) Cobalt(III) Complex." https://pubs.acs.org/doi/10.1021/acs.joc.0c02814

- [75] Andreou D.; Essien, N. B.; Pubill-Ulldemolins, C.; Terzidis, M. A.; Papadopoulos, A. N.; Kostakis, G. E.; Lykakis, I. N. Org. Lett. 2021, 23, 6685. "Skeletally Tunable Seven-Membered-Ring Fused Pyrroles." https://pubs.acs.org/doi/10.1021/acs.orglett.1c02251
- [76] Kallitsakis, M. G.; Gioftsidou, D. K.; Tzani, M. A.; Angaridis, P. A.; Terzidis, M. A.; Lykakis, I. N. J. Org. Chem. 2021, 86, 13503, "Selective C-H Allylic Oxygenation of Cycloalkenes and Terpenoids Photosensitized by [Cu(Xantphos)(neoc)]BF₄" (Selected for the Issue Cover Page, Art Figure (jo-2021-01591t))



https://pubs.acs.org/doi/10.1021/acs.joc.1c01591

- [77] Tzani, M. A.; Gioftsidou, D. K.;Kallitsakis, M. G.; Pliatsios, N. V.; Kalogiouri, N. P.; Angaridis, P. A.; Lykakis, I. N.; Terzidis, M. A. Molecules, 2021, 26, 7664. "Direct and Indirect Chemiluminescence: Reactions, Mechanisms and Challenges." https://www.mdpi.com/1420-3049/26/24/7664
- [78] Daikopoulou, V.; Skliri, E.; Koutsouroubi, E. D.; Armatas, G. S.; Lykakis, I. N. ChemPlusChem 2022, 87 e202100413 "Selective Mild Oxidation of Anilines into Nitroarenes by Catalytic Activation of Mesoporous Frameworks Linked with Gold-Loaded Mn3O4 Nanoparticles."

https://chemistry-europe.onlinelibrary.wiley.com/doi/epdf/10.1002/cplu.202100413

- [79] Tzani, M. A.; Fountoulaki, S.; Lykakis, I. N. J. Org. Chem. 2022, 87, 2601, "Polyoxometalate-Driven Ease Conversion of Valuable Furfural to trans-N,N-4,5- Diaminocyclopenten-2-ones." <u>https://pubs.acs.org/doi/10.1021/acs.joc.1c02550</u>
- [80] Kallitsakis, M. G.; Gioftsidou, D. K.; Tzani, M. A.; Angaridis, P. A.; Terzidis, M. A.; Lykakis, I. N. Organics, 2022, 3, 173–186. DOI: organics-1744920: "Mo₂C as pre-catalyst for the C-H allylic oxygenation of alkenes and terpenoids in the presence of H₂O₂" https://doi.org/10.3390/org3030014
- [81] Farhi, J.; Lykakis, I. N.; Kostakis, G. E. Catalysts, 2022, 12, 660. DOI: catalysts-1755651,
 "Metal Catalysed A3 Coupling Methodologies: Classification and Visualisation" https://www.mdpi.com/2073-4344/12/6/660
- [82] Iordanidou, D.; Kallitsakis, M. G. Tzani, M. A.; Ioannou, D. I.; Zarganes-Tzitzikas, T.; Neochoritis, C.G.; Dömling, A.; Terzidis, M. A.; Lykakis, I. N. Molecules, 2022, 27(14), 4395 "Supported gold nanoparticle catalyzed of heterocyclic 3,4-dihydroquinoxalin-2-ones one-pot synthesis from aromatic nitro precursors."

https://doi.org/10.3390/molecules27144395

[83] Tremi, I.; Havaki, S.; Georgitsopoulou, S.; Terzoudi, G.; Lykakis, I. N.; Iliakis, G.; Georgakilas, V.; Gorgoulis, V. G.; Georgakilas, A. G. Biological Response of Human Cancer Cells to Ionizing Radiation in Combination with Gold Nanoparticles, Cancers, 2022, 14, 5086.

https://www.mdpi.com/2072-6694/14/20/5086

Publications (after my election as Professor)

[84] Tzani, M.A.; Lykakis, I.N.; Gold(III) Chloride-Mediated Transformation of Furfural to the *trans-N,N-4,5-diaminocyclopent-2-enones in the Presence of Anilines*, *Chemistry* 2023, 05, 393–405.

https://doi.org/10.3390/chemistry5010029

- [85] Chaidali, A.G.; Ioannis N. Lykakis, I.N.; Simple Synthetic Approach to N-(Pyridin-2-yl)imidates from Nitrostyrenes and 2-Aminopyridines via the *N*-(Pyridin-2-yl)iminonitriles as Intermediates, *Molecules* 2023, 28, 3321.
 https://doi.org/10.3390/molecules28083321
- [86] Bena, A. R.; Sigalas, M. M.; Bakalbassis, E. G., Lykakis, I. N. J. Org. Chem. 2023, resubmitted. Manuscript ID: jo-2023-00067e.R1. Metal-Free Approach to 3-Carboxyl and 3-Keto-Pyridines in Aqueous Media.

SPECIAL ISSUE

• Special Issue "*Noble Metal Nanoparticles in Catalysis*" in Nanomaterials (ISSN 2079-4991), Guest Editors: I. N. Lykakis and G. S. Armatas, 2017.

http://www.mdpi.com/journal/nanomaterials/special_issues/noble_metal_nanoparticles_catalysis

• Special Issue "*Photocatalysis and Free Radicals in Organic Synthesis*" in Organics (ISSN 2673-401X) Guest Editor: I. N. Lykakis, 2022.

https://www.mdpi.com/journal/organics/special_issues/Photocatalysis_Radicals

BOOKS-RESEARCH MONOGRAPHS

Book chapter 38.6, with title: "Allylic Peroxides", in "Science of Synthesis", Thieme Chemistry, 2008, 38, 205-230. Volume title: "Peroxides", Editor: A. Berkessel, Authors: Ioannis N. Lykakis and Manolis Stratakis.



http://www.thieme-chemistry.com/en/products/reference-works/science-ofsynthesis/format/print-edition/category/5/vol-38.html

- 2. **Notes** with title *"Laboratory Organic Chemistry II"*, Department of Chemistry. University of Crete, Authors: Ioannis Lykakis and Agathopoulos Katahanakis.
- 3. **Notes** with title "*Organic photochemistry*", Department of Chemistry. University of Crete, Authors: Ioannis Lykakis and Michael Orfanopoulos.
- 4. **Book-report** for the European Program "Aquatex" with title: "*Singlet Oxygen and other Reactive Oxygen Species for the Decomposition of Organic Pollutants*." Authors: Ioannis Lykakis and Manolis Stratakis.
- Book chapter 4, with title: "Classical Synthetic Free Radical Transformations in Alternative Media: Supercritical CO₂, Ionic Liquids and Fluorous Media." In: Organic Radical Reactions in Water and Alternative Media; Editor Dr Al. Postigo, Nova Publishing, USA, 2011; Authors: Lykakis, I. N. and Perchyonok, V. T.



https://www.novapublishers.com/catalog/product_info.php?products_id=21875

 Book chapter 5, with title: "Artificial Enzymes and Free Radicals: The Chemists Perspective" In: Organic Radical Reactions in Water and Alternative Media; Editor Dr A. Postigo, Nova Publishing, USA, 2011; Authors: Lykakis, I. N.; Grabovskiy, S. A.; and Perchyonok, V. T.



https://www.novapublishers.com/catalog/product_info.php?products_id=21875

 Editor of the book "Streamlining Free Radical Green Chemistry", RSC Publishing, Thomas Graham House, Cambridge, UK, 2011, Editors: Dr. Lykakis, I. N.; Dr. Postigo, Al.; and Dr. Perchyonok, V. T.



http://www.rsc.org/shop/books/2011/9781849733328.asp

8. *Book Chapters* **10** and **28** in "*Organic Chemistry*", Broken Hill, Publishers Ltd, **2019**, Editor in Greek translated edition: Th. Mavromoustakos. Editors: Loudon Marc and Parise Jim,



http://www.brokenhill.com.cy/product/loudon-organiki-ximeia/

 Book coordinator "Introduction to Spectroscopy", Broken Hill, Publishers Ltd, 2020, Editors in Greek translated edition: M. Stratakis (Editor) and I. N. Lykakis (*translation team* coordinator). Editors: Donald L. Pavia, Gary M. Lampman, George S. Kriz, James A. Vyvyan.



http://www.brokenhill.com.cy/product/pavia-eisagogi-sti-fasmatoskopia/

 Book Chapters-Experiments 41-45 in "A Microscale Approach to Organic Laboratory Techniques", Broken Hill, Publishers Ltd, 2021, Editor in Greek translated edition: Th. Mavromoustakos. Editors: Donald L. Pavia, Gary M. Lampman, George S. Kriz, Randall G. Engel.



http://www.brokenhill.com.cy/product/pavia-ergastiriakes-texnikes-kai-peiramata-organikis-xhmeias/

 Book Chapter 22 in "Catalysis for Sustainable Environment", Wiley publishing, 2022, title: Sustainable Cu-based methods for valuable organic scaffolds. Edited by Armando J. L. Pombeiro, Manas Sutradhar, Elisabete C.B.A. Alegria.

PRESENTATIONS - SYMPOSIUMS AND MEETINGS

- 4th Greek Conference of Undergraduate Students of Chemistry, Kolymbari, Chania, Crete, June, 1998, "*Photosensitized Oxidation of alkenes by decatungstate as a catalyst*." Oral presentation
- 2. 1st Greek conference of EKEFE "Dimokritos" Athens, 1999, "*Comparison of stereoselectivity in oxidation of allylic alcohols with decatungstate catalyst and molecular oxygen*". Poster
- 5th Greek Conference of Undergraduate Students of Chemistry, Kolymbari, Chania, Crete, June, 1999, "Study of the stereoselective oxidation of allylic alcohols by decatungstate [Bu4N]4W10O32 and molecular oxygen." Oral presentation
- 4. 6^{th} Greek Conference of Undergraduate Students of Chemistry, Kolymbari, Chania, Crete, June, 2000, "*Photocatalytic oxidation of trisubstituted alkenes with the polyanion* $[Bu_4N]_4W_{10}O_{32}$." Oral presentation
- 5. 7th Greek Conference of Undergraduate Students of Chemistry, Kolymbari, Chania, Crete, June, 2001, "*Catalytic photooxidation of alkanes by decatungstate* $[Bu_4N]_4W_{10}O_{32}$." Oral presentation
- 6. 8th Greek Conference of Undergraduate Students of Chemistry, Kolymbari, Chania, Crete, June, 2002, "Decatungstate *catalyzed the photooxidation of aryl alkanols in the presence of molecular oxygen*." Oral presentation
- 7. 19th Greek conference of Chemistry, 2002, "*Homogeneous photocatalytic oxidation of aryl alkanols with decatungstate as a catalyst.*" Poster

- 8. XVth FECHEM Conference on Organometallic Chemistry, University of Zurich, 2003, "Decatungstate Photocatalyzed Oxygenation of Aryl Alkanol. Electron Transfer or Hydrogen Abstraction Mechanism?" Poster
- 10th European Symposium on Organic Reactivity (ESOR 10), University of Rome, July 25-30, 2005, "Decatungstate Catalyzed Photooxygenation of Tetrasubstituted Alkenes: Intramolecular and Intermolecular Kinetic Isotope Effects.?" Poster
- 10. "SULFRAD" Marie Curie Network, European Program, meeting-conference in Paris, February 01-05, 2006, "*Geometrical isomerization of mono and poly unsaturated fatty acids in vesicles by thiyl radical: The influence of antioxidant vitamins C and E.*" Oral presentation
- 11. EUCHEM Conference on Organic Free Radicals, Bergen, Norway, July 9-13, 2006, "The influence of antioxidant vitamins in the thiyl radical-catalyzed geometrical isomerization of phospholipids." Poster
- 12. 2nd Greek conference of Organic Synthesis «From the Chemistry to Biology, Medicine and Material Sciences», University of Athens, 2007, "*Cis-trans isomerization of fatty acid double bonds in vesicle catalyzed by thiyl radical*". Poster
- 13. 16th Annual Symposium on the Cannabinoids, ICRS, Tihany, Hungary, 2006, "All transanandamide synthesis and its effects on platelet functions. Interference with cis-anandamide hydrolysis by FAAH.' Poster (Dr. D. Anagnostopoulos)
- 2nd Greek Conference on lipids, fatty acid and liposomes: Today and future. Greek Lipid Forum (Euro Fed Lipid), National Foundation Research, Athens 2007. "The sulfhydryl radical (HS•/S•-) as isomerising species of unsaturated fatty acid residues. Oral presentation
- 15. 6nd Euro Fed Lipid Congress Oils, Fats and Lipids in the 3rd Millennium: Challenges, Achievements and Perspectives, Athens, 7-10 September, 2008. "*The sulfhydryl radical (HS•/S•*) as isomerising species of unsaturated fatty acid in vesicles". Oral presentation (*Invited*)
- 16. 1st Greek-Cyprus Conference of Undergraduate Students of Chemistry, Pafos Cyprus, 3-7 July,
 2008 "Zeolite NaY-promoted tandem 1,5-diene-carbonyl-ene dicyclization of α-geranyl substituted carbonyl compounds". Poster

Presentations after my election as Lecturer

17. 10th Greek-Cyprus Conference in Chemistry, Heraklion Crete, Greece, 2-5 July, 2009 "Zeolite NaY-promoted tandem 1,5-diene-carbonyl-ene dicyclization of α-geranyl substituted carbonyl compounds". Poster

- 2st Greek-Cyprus Conference of Undergraduate Students of Chemistry, Platanias Chania, 16-20 September, 2009 "Zeolite NaY-promoted tandem 1,5-diene-carbonyl-ene dicyclization of αgeranyl substituted carbonyl compounds". Poster
- 3^d Symposium in Organic Chemistry, Athens 2009, 15-17 October, "Divergent synthesis of the co-isolated mycotoxins longianone, isopatulin, and (Z)-ascladiol from the readily available γ-hydroxybutenolide." Poster
- 20. 3^d Symposium in Organic Chemistry, Athens 2009, 15-17 October, "Stereoisotopic studies on the acid-catalyzed cyclization of terpenes: Evidence for a concerted mechanism with competing pre-organized chair and boat transition states." Poster
- 21. 3^d EUCHEM, Young Investigators Workshop, Heraklion, 2011, 7-9 July, Crete, "Alkyne activation by supported gold nanoparticles." Oral presentation (Invited).
- 22. 17th ESOC, Heraklion, 10-15 July, 2011, Crete, "Oxidative cycloaddition of 1,1,3,3tetramethyldisiloxane to alkynes catalyzed by gold nanoparticles supported on TiO₂." Poster.
- 23. 21st Hellenic Symposium in Chemistry, 9-12 December 2011, Thessaloniki, "Alkyne activation catalyzed by Au nanoparticles supported on TiO₂". Oral presentation (Invited).
- 24. International Conference on Chemistry for Health, 9-14 September 2012, Athens, "Synthesis and biological evaluation of fused pyridocoumarins prepared from propargylaminocoumarins by catalysis with gold nanoparticles sypported on TiO₂." Poster.
- 25. 6th Hellenic Symposium of Porous Materials, 9-10 September 2013, Kavala, "Organic transformations catalyzed by supported gold nanoparticles: Chemoselective reduction of nitro compounds to amines". Oral presentation (Invited).

Presentations after my election as Assistant Professor

- 26. International conference of hydrogen atom transfer (iCHAT) Rome, 22-26 June 2014, Italy,
 "Mechanistic studies in the selective oxidation of aromatic alcohols photocatalyzed by polyoxometalates vs mesoporous TiO₂ assemblies". Oral presentation
- 27. International conference of hydrogen atom transfer (iCHAT) Rome, 22-26 June 2014, Italy, *"Efficient and selective oxidation of aromatic amines into nitrosoarenes catalyzed by supported gold nanoparticles"*. Poster (Dr. P. Gkizis, postdoc)
- 28. International conference of hydrogen atom transfer (iCHAT) Rome, 22-26 June 2014, Italy, *"Mechanistic studies in the reduction of nitro arenes by NaBH₄ or hydrosilanes catalyzed by supported gold nanoparticles"*. Poster (S. Fountoulaki, PhD candidate)
- 29. 8th European meeting in Solar Chemistry and Photocatalysis (SPEA8) Thessaloniki, 25-28 June
 2014, Greece, "Green photocatalytic organic transformations by polyoxometalates vs CdS-TiO₂ nanoparticles: Selective aerobic oxidation of alcohols". Poster

- EUCHEM Conference on Organic Free Radicals & Annual MC Meeting COST action CM1201, Prague, June 29- July 4, 2014, "Minutes from the 3rd Management Committee meeting of COAT Action CM1201." Oral presentation
- 31. 13th Panhellenic Symposium of Catalysis, Agios Athanasios, Thessaloniki, 16-18 October 2014. "*Mechanistic studies in the reduction of nitro arenes by NaBH*⁴ or hydrosilanes catalyzed by supported gold nanoparticles." Oral presentation
- 32. 13th Panhellenic Symposium of Catalysis, Agios Athanasios, Thessaloniki, 16-18 October 2014. "*Efficient and selective oxidation of aromatic amines into nitrosoarenes catalyzed by supported gold nanoparticles.*" Poster (S. Fountoulaki, PhD candidate)
- 12nd Greece-Cyprus Conference in Chemistry, 8-10 May, 2015, Thessaloniki, "Green Organic Transformations Catalyzed by Supported Gold Nanoparticles." Oral presentation
- 34. 12nd Greece-Cyprus Conference in Chemistry, 8-10 May, 2015, Thessaloniki, "Mesoporous Fe2O3 Nanoparticle Assemblies Catalyze the Selective Reduction of Nitroarenes into Amines by Activation of Methyl hydrazine" Poster (S. Fountoulaki, PhD candidate)
- 35. 12nd Greece-Cyprus Conference in Chemistry, 8-10 May, 2015, Thessaloniki, "Silver nanoparticles catalyze the selective reduction of nitro compounds into amines and hydroxylamines in the presence of NaBH₄ and NH₃BH₃" Poster (D. Iordanidou, PhD candidate)
- 36. 12nd Greece-Cyprus Conference in Chemistry, 8-10 May, 2015, Thessaloniki, "An unpresented non-catalytic nitromethane elimination for the efficient synthesis of imines and N-monosubstituted hydrazones from nitroalkenes" Poster (Dr. M. Kallitsakis, postdoc)
- 37. Annual MC Meeting COST action CM1201, Athens, May 11- 13, 2015, "Green Organic Transformations Catalyzed by Supported Gold Nanoparticles"
- IsySyCat, 2-4 September, 2015, Evora, Portugal, "Chemoselective Organic Transformations Catalyzed by Supported Gold Nanoparticles" Oral presentation (Invited)
- IsySyCat, 2-4 September, 2015, Evora, Portugal, "Supported gold nanoparticles catalyzed the selective oxidation of amines into nitroso compounds by hydrogen peroxide" Poster (Dr. T. Symeonidis, postdoc)
- 40. IsySyCat, 2-4 September, 2015, Evora, Portugal, "Catalytic Activation of Methyl Hydrazine by Mesoporous Fe₂O₃ Nanocrystal Assemblies: Chemoselective Reduction of Nitroarenes into Anilines" Poster (S. Fountoulaki, PhD candidate).
- 41. 9th European Meeting on Solar Chemistry and Photocatalysis: Environmental Applications (SPEA9), 13-17 June 2016, Strasbourg, France, "Selective Aerobic Photocatalytic Oxidation of Alkenes into Epoxides and Chlorohydrins by Polymer-Supported Polyoxometalate Hybrids" Oral presentation, (Dr. T. Symeonidis, postdoc)

- 42. Demokritos, 17 March 2016, Athens, "Green Organic Transformations Catalyzed by Supported Noble Metal Nanoparticles and Polyoxometalates" Oral presentation (Invited lecture)
- 43. Athens International Catalysis Symposium, November 3 4, 2006, "*Redox Organic Transformations Catalyzed by Supported Noble Metal Nanoparticles: AuNPs vs AgNPs.*" Oral presentation
- 44. Athens International Catalysis Symposium, November 3 4, 2006, "A copper-benzotriazole based coordination polymer catalyzes the efficient one-pot synthesis of (N'-substituted)hydrazo-4-aryl-1,4-dihydropyridines from azines." Poster, (Dr. M. Kallitsakis, postdoc)
- 45. Athens International Catalysis Symposium, November 3 4, 2006, "*Chemoselective synthesis* of epoxides and chlorohydrins via photocatalytic oxidation of alkenes with molecular oxygen catalyzed by polymer-supported polyoxometalate hybrids." Poster (Dr. T. Symeonidis, postdoc)
- 46. 22nd Panhellenic Symposium in Chemistry, 2-4 December, 2016, Thessaloniki, Greece, "*Green Organic Transformations Catalyzed by Supported Noble Metal Nanoparticles*" Oral presentation (Invited lecture)
- 47. 22nd Panhellenic Symposium in Chemistry, 2-4 December, 2016, Thessaloniki, Greece, "A copper-benzotriazole based coordination polymer catalyzes the efficient one-pot synthesis of (N'-substituted)-hydrazo-4-aryl-1,4-dihydropyridines from aryl hydrazines." Oral presentation (Dr. M. Kallitsakis, postdoc)
- 48. 22nd Panhellenic Symposium in Chemistry, 2-4 December, 2016, Thessaloniki, Greece,
 "Selective photo-catalytic aerobic oxidation of alkenes into epoxides and chlohydrines mediated by polymeric decatungstate catalysts", Oral presentation (Dr. T. Symeonidis, postdoc)
- 49. 22nd Panhellenic Symposium in Chemistry, 2-4 December, 2016, Thessaloniki, Greece, *"Catalysis with AgNPs and AuNPs: Chemoselective reduction of nitroalkenes into the corresponding nitroalkanes and oximes."* Poster (D. Iordanidou, PhD candidate).
- 50. 22nd Panhellenic Symposium in Chemistry, 2-4 December, 2016, Thessaloniki, Greece, *"Regioselective hydroalkoxylation of alkynes catalyzed by Cu(II)."* Poster (D. Andreou, PhD candidate)
- 51. 17th Hellenic Symposium on Medicinal Chemistry, Thessaloniki 1-3 June, 2017, Greece, "Cu(II)-1D-CPs catalyzed synthesis of N'-substituted-1,4-dihydropyridines and polysubstituted pyrroles as potential L-type calcium channel blockers", Oral Presentation (Dr. M. Kallitsakis, postdoc)
- 52. 2nd international conference of hydrogen atom transfer (iCHAT) Rome, 2-6 July 2017, Italy, "One-pot synthesis of (N'-substituted)-hydrazo-4-aryl-1,4-dihydropyridines catalyzed by a

novel 1D-Cu(II)-benzotriazole based coordination polymer. HAT or SET process?" Oral Presentation (Dr. M. Kallitsakis, postdoc)

- 53. 5th Panhellenic Conference in Green Chemistry and Sustainable Development, Patra, 20-22 October, Greece. "Green Organic transformations catalyzed by supported noble metal nanoparticles" Oral presentation
- 54. 5th Panhellenic Conference in Green Chemistry and Sustainable Development, Patra, 20-22 October, Greece. "*Green Organic transformations catalyzed by supported noble metal nanoparticles*" Oral presentation (Dr. M. Kallitsakis, postdoc)
- 55. 1st Conference in Chemistry for Graduate, Postgraduate Students, and PhD candidates in Aristotle University of Thessaloniki, Title: «Research as development perspective» November 10-12, 2017, Thessaloniki, Greece. (*Chairman in the Organic Chemistry division*).
- 56. 1st Conference in Chemistry for Graduate, Postgraduate Students, and PhD candidates in Aristotle University of Thessaloniki, Title: «Research as development perspective» November 10-12, 2017, Thessaloniki, Greece. "One-pot chemoselective transfer hydrogenation of multi functional nitrocompounds into the corresponding amino derivatives catalyzed by gold or silver nanoparticles" Oral presentation (D. Iordanidou, PhD candidate)
- 57. 1st Conference in Chemistry for Graduate, Postgraduate Students, and PhD candidates in Aristotle University of Thessaloniki, Title: «Research as development perspective» November 10-12, 2017, Thessaloniki, Greece. "*Titania-Supported Gold Nanoparticles Catalyze the Selective Oxidation of Amines into Nitroso Compounds in the Presence of Hydrogen Peroxide*" Oral Presentation (S. Fountoulaki, PhD candidate).

Presentations after my election as Associate Professor

- 58. 2nd Conference in Chemistry for Graduate, Postgraduate Students, and PhD candidates in Aristotle University of Thessaloniki, Title: «Research, the perspective of development» November 2-3, 2018, Thessaloniki, Greece. "*Reductive transformations catalyzed by heterogeneous supported silver nanoparticles towards the selective reduction of* α , β -conjugated *unsaturated organic molecules*" Oral presentation (D. Iordanidou, PhD candidate).
- 59. 2nd Conference in Chemistry for Graduate, Postgraduate Students, and PhD candidates in Aristotle University of Thessaloniki, Title: «Research, the perspective of development» November 2-3, 2018, Thessaloniki, Greece. "*Study of the nitroarenes reduction to amines catalyzed by cobalt complexes and methylhydrazine*" Oral presentation (D. Ioannou, Master student).

- 60. 2nd Conference in Chemistry for Graduate, Postgraduate Students, and PhD candidates in Aristotle University of Thessaloniki, Title: «Research, the perspective of development» November 2-3, 2018, Thessaloniki, Greece. "Selective reduction of aldehydes into alcohols catalyzed by AgNPs with hydrosilanes as reducing agents." Oral presentation (D. Georgantas, Master student).
- 61. 15th Panhellenic Symposium in Catalysis, Ioannina, 18-20 October 2018, Greece. "Supported Noble Metal Nanoparticles in Catalysis: Green Organic Transformations Catalyzed by Au vs Ag" Oral presentation.
- 62. 15th Panhellenic Symposium in Catalysis, Ioannina, 18-20 October 2018, Greece. "Study of the acid properties of heterogeneous metaloxides for the selective synthesis of 2-alcoxy-3-arylimidazol[1,2-α]pyridines molecules with biological activity" Oral presentation (K. Pappa, Master student).
- 63. 15th Panhellenic Symposium in Catalysis, Ioannina, 18-20 October 2018, Greece. "Synthesis of pyrroles from aldehydes, amines and β-nitrostyrenes via a 1,2-phenyl/alkyl migration catalyzed by Cu-1D coordination polymeric materials" Poster (D. Andreou, PhD candidate).
- 64. 15th Panhellenic Symposium in Catalysis, Ioannina, 18-20 October 2018, Greece. "Selective reduction of α,β -conjugated nitrostyrenes and carbonyl compounds catalyzed by silver nanoparticles" Oral presentation (D. Iordanidou, PhD candidate).
- 65. 3^d Conference in Chemistry for Graduate, Postgraduate Students, and PhD candidates in Aristotle University of Thessaloniki, Title: «Research, the perspective of development» November 22-23, 2019, Thessaloniki, Greece. "*Catalytic reduction of α,β-unsaturated carbonyl compounds into the allylic alcohols with supported gold nanoparticles Au/Al₂O₃ and silanes*" Oral presentation (K. Lotidou, Master student).
- 66. 3^d Conference in Chemistry for Graduate, Postgraduate Students, and PhD candidates in Aristotle University of Thessaloniki, Title: «Research, the perspective of development» November 22-23, 2019, Thessaloniki, Greece. "*Study of the sustainable functionalization of isatin and the corresponding N-substituted derivatives for the synthesis of hydrazo-isatin derivatives*" Oral presentation (V. Papazoglou, Master student).
- 67. 3^d Conference in Chemistry for Graduate, Postgraduate Students, and PhD candidates in Aristotle University of Thessaloniki, Title: «Research, the perspective of development» November 22-23, 2019, Thessaloniki, Greece. "Bi-functional activity of supported gold nanoparticles on alumina towards the synthesis of 2-amine-3-aryl-imidazol[1,2-α]pyridines" Poster (M. Tzani, PhD candidate).

- 68. 3^d Conference in Chemistry for Graduate, Postgraduate Students, and PhD candidates in Aristotle University of Thessaloniki, Title: «Research, the perspective of development» November 22-23, 2019, Thessaloniki, Greece. "*Synthesis of poly-substituted pyrroles catalyzed by Cu-1D coordination polymeric materials*" Poster (D. Andreou, PhD candidate).
- 69. 3^d Conference in Chemistry for Graduate, Postgraduate Students, and PhD candidates in Aristotle University of Thessaloniki, Title: «Research, the perspective of development» November 22-23, 2019, Thessaloniki, Greece. "Silver nanoparticels (AgNPs) as catalysts for the selective reduction of aldehydes to alcohols with hydrosilanes" Oral presentation (D. Georgantas, Master student).
- 70. 3^d Conference in Chemistry for Graduate, Postgraduate Students, and PhD candidates in Aristotle University of Thessaloniki, Title: «Research, the perspective of development» November 22-23, 2019, Thessaloniki, Greece. "*Co-complexes as catalysts for the selective reduction of nitroarenes into anilines and azoxy-arenes*" Oral presentation (D. Ioannou, Master student).
- 71. 3^d Conference in Chemistry for Graduate, Postgraduate Students, and PhD candidates in Aristotle University of Thessaloniki, Title: «Research, the perspective of development» November 22-23, 2019, Thessaloniki, Greece. "*Catalytic hydramination of conjugated alkynylesters with silver nanoparticles*" Oral presentation (A. Bena, Master student).
- 72. 5th Edition of Global Conference on Catalysis, Chemical Engineering and Technology, London, UK, September 2019, "Chemoselective Transfer Hydrogenation of Multifunctional Nitro Compouds Catalyzed by Silver Nanoparticles: A Facile Synthetic Methodology towards Dihydroquinoxalin-2-ones" E-poster (D. Iordanidou, PhD candidate).
- 73. 4th Edition of International Conference on Catalysis and Green Chemistry, Tokyo, Japan, May 13-14, 2019, "Copper-benzotriazole based coordination polymer as catalyst towards the one-pot synthesis of N'-substituted-hydrazo-1,4-dihydropyridines" E-poster (Dr. M. Kallitsakis, postdoc).
- 74. Green Chemistry and Sustainable Development, 6th Panhellenic Symposium with International Participation, 18-20, October 2019, Athens, Greece, "*Metal Nanoparticles and Coordination Polymers in Organic Chemistry as vehicles for Green Synthetic Methodologies*". Oral presentation.
- 75. Green Chemistry and Sustainable Development, 6th Panhellenic Symposium with International Participation, 18-20, October 2019, Athens, Greece, "*Cobalt complexes as efficient catalysts for the reduction of nitroarenes into amines: A selective transformation mediated by methylhydrazine*". Oral presentation (D. Ioannou, Master student).

- 76. Green Chemistry and Sustainable Development, 6th Panhellenic Symposium with International Participation, 18-20, October 2019, Athens, Greece, "*Green catalytic processes towards the synthesis of N-heterocyclic compounds from azines*". Oral presentation (Dr. M. Kallitsakis, postdoc).
- 77. Green Chemistry and Sustainable Development, 6th Panhellenic Symposium with International Participation, 18-20, October 2019, Athens, Greece, "*Chemoselective reduction of nitro-moiety catalyzed by AgNPs: An innovative pathway towards N-heteroatom compounds synthesis*". Oral presentation (Dr. D. Iordanidou, postdoc).
- 78. Green Chemistry and Sustainable Development, 6th Panhellenic Symposium with International Participation, 18-20, October 2019, Athens, Greece, "Facile Catalytic Synthetic Methodology of Polysubstituted Pyrroles Promoted by Cu 1D Coordination Polymers". Poster (D. Andreou, PhD candidate).
- 79. Green Chemistry and Sustainable Development, 6th Panhellenic Symposium with International Participation, 18-20, October 2019, Athens, Greece, "Selective reduction of aldehydes via transfer hydrogenation process catalyzed by silver nanoparticles (AgNPs)". Poster (D. Georgantas, Master student).
- 80. Green Chemistry and Sustainable Development, 6th Panhellenic Symposium with International Participation, 18-20, October 2019, Athens, Greece, "Bifunctional catalytic activity of Aluminasupported gold nanoparticles towards the green synthesis of 2-amino-3-aryl-imidazo[1,2a]pyridines". Poster (M. Tzani, PhD candidate).
- 81. Webinar on Chemical Engineering and Catalysis (iCHEM), 26-27 October 2020, "Metal Nanoparticles and Polyoxometalates in Organic Chemistry as vehicles for Green Synthetic Methodologies", E-Oral (invited presentation)
- 82. Webinar on Chemical Engineering and Catalysis, 26-27 October 2020, "Cobalt(II)-catalyzed reductive amination of nitriles: Chemoselective synthesis of secondary amines" E-Poster (Dr. M. Kallitsakis, postdoc)
- 83. 6th NanoBoston Conference, 07-09 December 2020, "*Metal Nanoparticles and Polyoxometalates as vehicles for the Synthesis of Heterocyclic Compounds*" E-Poster.
- 84. 70 Panhellenic Environmental Conference in Macedonia Thessaloniki, 30/10–1/11/2020, Thessaloniki, "Photoinduced generation of ¹O₂ by Cu(I)-based complexe: Photooxidation of unsaturated compounds and terpenoids" E-Poster (Dr. M. Kallitsakis, postdoc)
- 85. 70 Panhellenic Environmental Conference in Macedonia Thessaloniki, 30/10–1/11/2020, Thessaloniki, "Selective synthesis of 2-aryl-benzimidazoles in the presence of gold nanoparticles with potential biological activity." E-poster (M. Tzani, PhD candidate)

- 86. 4th Conference in Chemistry for Graduate, Postgraduate Students, and PhD candidates in Aristotle University of Thessaloniki, Title: «Research, the perspective of development» March 20-21, 2021, Thessaloniki, Greece. "Synthesis of 3-karboxy-pyridines with domino hydroamination/oxidative cyclization of proprargyl esters with propargylamine catalyzed by AuNPs" E-Oral presentation (A. Bena, Master student).
- 87. 4th Conference in Chemistry for Graduate, Postgraduate Students, and PhD candidates in Aristotle University of Thessaloniki, Title: «Research, the perspective of development» March 20-21, 2021, Thessaloniki, Greece. "*Study of the multicomponent reaction for the synthesis of pyrrolo-aminoacid derivatives*," E-Oral presentation (D. Georgantas, Master student).
- 88. 4th Conference in Chemistry for Graduate, Postgraduate Students, and PhD candidates in Aristotle University of Thessaloniki, Title: «Research, the perspective of development» March 20-21, 2021, Thessaloniki, Greece. "*Catalytic study of the synthesis of N-aryl imidazoles from nitrile and amines*." E-Oral presentation (N. Siakavaras, Master student).
- 89. 4th Conference in Chemistry for Graduate, Postgraduate Students, and PhD candidates in Aristotle University of Thessaloniki, Title: «Research, the perspective of development» March 20-21, 2021, Thessaloniki, Greece. "*Metal Nanoparticles and Cobalt-Complexes Catalysis for Efficient Synthesis of N-Aryl Hydroxylamines and N-Heterocyclic Molecules*." E-Poster (D. I. Ioannou, Master student).
- 90. 4th Conference in Chemistry for Graduate, Postgraduate Students, and PhD candidates in Aristotle University of Thessaloniki, Title: «Research, the perspective of development» March 20-21, 2021, Thessaloniki, Greece. "*Thermal and catalytic reactions of indandionoketene with α*,*β*-unsaturated imines. Synthesis of 1'H-spiro[indeno-2,3'-pyridin]-1,2',3(4'H)-triones." E-Poster (Dr. E. Tsovaltsi).
- 91. Webinar on Chemical Engineering and Catalysis (iCHEM), March 31- April 1, 2021, "Metalbased Coordination Polymers as Vehicles for Efficient Synthesis of N-Heterocyclic Molecules."
 E-Oral presentation (invited lecture)
- 92. 5th European Conference on Green and Sustainable Chemistry, Virtual Conference, 26-29 September 2021, "COMFORT Chemistry: Efficient Catalytic Strategies for the Synthesis of N-Heterocyclics" E-Oral presentation
- 93. 5th European Conference on Green and Sustainable Chemistry, Virtual Conference, 26-29 September 2021, "Polyoxometalates as Vehicles for the Green Catalytic Transformation of Furfural and Lipids into Biological Active Molecules" E-Poster (M. Tzani, PhD candidate)

- 94. XXXV Panhellenic Conference on Solid State Physics & Materials Science, Virtual Conference, 26-29, September, 2021, "Syntheis and characterization of 3D graphene-based materials with diamine crosslinking" E-Poster (M. Douka, PhD Candidate).
- 95. ChemPhotoChem EurJOC, 9 December, 2021, Willey "Virtual Symposium on Photoredox Catalysis", Virtual Presenter after invitation.
- 96. 2nd International Conference on Chemical Engineering and Catalysis, 16-17 November, 2021, USA, "Photosensitized Regioselective Oxygenation of Alkenes by ¹O₂ Based on Cu(I) Catalytic Systems: Evaluation of the Efficiency on Terpenoids and Nucleosides", E-Oral presentation (Dr. M. Kallitsakis, postdoc).
- 97. Webinar on Chemical Engineering and Catalysis, 31 March 1 April 2021, title "*Metal-based Coordination Polymers as Vehicles for Efficient Synthesis of N-Heterocyclic Molecules*" E-Oral presentation (invited lecture).
- 98. 21st Tetrahedron Symposium Online: Live and On-demand, 21-24 June 2021, title: *Photoinduced Redox Organic Transformations for Efficient Synthesis of N-Arylhydroxylamines and Allulic Hydroperoxides.*" E-Poster.
- 99. 1st Edition of Chemistry International Webinar, 21-22 March 2022, USA, title: "*Photoinduced Redox Organic Transformations for Efficient Synthesis of N-Aryl hydroxylamines*" Oral presentation (invited lecture)
- 100. 9th IUPAC International Conference on Green Chemistry, 5-9 September 2022, Athens, Greece, title: "Green Synthetic Transformation of Benzimidoyl-cyanides to the Valuable Intermediates Alkyl-N-pyridin-2-yl-benzimidates." E-Poster (A. Chaidali, Master student)
- 101. 9th IUPAC International Conference on Green Chemistry, 5-9 September 2022, Athens, Greece, title: "Metal Nanoparticles and Metal-based Polymeric Materials as vehicles for Green Organic Synthetic Methodologies." E-Oral presentation
- 102.Wageningen University and Research, Netherlands, 5-10-2022, title: "Green Redox Catalytic Strategies for Synthetic Methodologies using Metal Nanoparticles and Metal-based Polymeric Materials" I. N. Lykakis (Invited lecture)

LANGUAGES - OTHER DEGREES

- Greek
- English
- □ Italian (speaking and reading)
- □ European Computer Diploma Learning (ECDL)

ACTIVITY AREA – RESEARCH INTERESTING

Organic Chemistry – Catalysis – Synthetic Methodologies

- Green Organic Redox Transformations (Photo)Catalyzed by Metal Nanoparticles (NPs) and Polyoxometalates (POMs)
- Catalytic Strategies and Mechanistic Studies for Synthetic Methodologies of *N*-Heterocycles

Dr. Ioannis N. Lykakis

Professor Laboratory of Organic Chemistry, Department of Chemistry, Aristotle University of Thessaloniki