




Maria Koyioni PhD, MRSC

GENERAL INFORMATION

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RESEARCHER IDENTIFIERS

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PUBLICATIONS INFORMATION

Publications No.	13
Citations No.	125
Scopus <i>h</i> -index	7

EDUCATION AND RESEARCH EXPERIENCE

- Dec. 2019 – Nov. 2021** **Researcher and Project Coordinator:** Department of Chemistry, University of Cyprus. Research Project: Synthesis of canthin-4-ones and azepino-fused quinolones (CANTHIN4ONE)
- May 2019 – Nov. 2019** **Postdoctoral Research Associate:** Centre of Molecular and Macromolecular Studies, Łódź, Poland
Advisor: **Prof. Piotr Kaszynski**
- Mar. 2018 – April 2019** **Research Associate:** Department of Chemistry, University of Cyprus
Advisor: **Prof. Panayiotis A. Koutentis**
- Feb. 2017 – Jan. 2018** **Postdoctoral Research Associate:** University of Oxford, United Kingdom
Advisor: **Prof. Timothy J. Donohoe**
- Sept. 2010 – Dec. 2016** **PhD, Organic Chemistry,** University of Cyprus
PhD Thesis Title: “New Ring Transformations of 1,2,3-Dithiazoles”
Supervisor: **Prof. Panayiotis A. Koutentis**
- Sept. 2006 – June 2010** **BSc Chemistry,** Department of Chemistry, University of Cyprus
Grade GPA: 8.82 (out of 10)
Diploma Thesis Title: “Synthesis of New Dithiazolyldienes”
Diploma Project Supervisor: **Prof. Panayiotis A. Koutentis**

PUBLICATIONS (12 published papers) (Scopus *h*-index = 7)

RESEARCH ARTICLES

- 1) “Synthesis of Lamellarin Alkaloids Using Orthoester-Masked α -Keto Acids”, H.J. Shirley,^[†] M. Koyioni,^[†] F. Muncan, T.J. Donohoe, *Chem. Sci.*, 2019, **10**, 4334-4338 (^[†] equal contribution).
- 2) “OBO Protected Pyruvates as Reagents for the Synthesis of Functionalized Heteroaromatic Compounds” C.H.A. Esteves, M. Koyioni, K.E. Christensen, P.D. Smith, T.J. Donohoe, *Org. Lett.*, 2018, **20**, 4048-4051. Included in *Synfacts* 2018, **14**, 0909.

- 3) "Potent inhibitors of human LAT1 (SLC7A5) transporter based on dithiazole and dithiazine compounds for development of anticancer drugs" L. Napolitano, M. Scalise, M. Koyioni, P.A. Koutentis, M. Catto, I. Eberini, C. Parravicini, L. Palazzolo, L. Pisani, M. Galluccio, L. Console, A. Carotti, C. Indiveri, *Biochem. Pharmacol.*, 2017, **143**, 39-52.
- 4) "Synthesis of Quinoidal 5,5'-Diarylimino 2,2'-Bithiazoles" M. Koyioni and P.A. Koutentis, *Org. Lett.*, 2017, **19**, 174-177.
- 5) "The Reaction of DABCO with 4-Chloro-5*H*-1,2,3-dithiazoles: Synthesis and Chemistry of 4-[*N*-(2-Chloroethyl)piperazin-1-yl]-5*H*-1,2,3-dithiazoles" M. Koyioni, M. Manoli, P.A. Koutentis, *J. Org. Chem.*, 2016, **81**, 615-631.
- 6) "Ring transformations of 2-hydroxy-(4-chloro-5*H*-1,2,3-dithiazol-5-ylideneamino)arenes" A.S. Kalogirou, S.S. Michaelidou, M. Koyioni, P.A. Koutentis, *Tetrahedron*, 2015, **71**, 7181-7190.
- 7) "1,2,3-Dithiazoles – new reversible melanin synthesis inhibitors: a chemical genomics study" A. Charalambous, M. Koyioni, I. Antoniadis, D. Pegeioti, I. Eleftheriou, S.S. Michaelidou, S.A. Amelichev, L.S. Konstantinova, O.A. Rakitin, P.A. Koutentis, P.A. Skourides, *MedChemComm*, 2015, **6**, 935-946. Included in themed collection "2015 *MedChemComm* Hot Articles"
- 8) "Synthesis of Fused 1,2,4-Dithiazines and 1,2,3,5-Trithiazepines" M. Koyioni, M. Manoli and P.A. Koutentis, *J. Org. Chem.*, 2014, **79**, 9717-9727.
- 9) "Reinvestigating the reaction of 1*H*-pyrazol-5-amines with 4,5-dichloro-1,2,3-dithiazolium chloride: A route to pyrazolo[3,4-*c*]isothiazoles and pyrazolo[3,4-*d*]thiazoles" M. Koyioni, M. Manoli, M.J. Manolis and P.A. Koutentis, *J. Org. Chem.*, 2014, **79**, 4025-4037.
- 10) "The conversion of [(4-chloro-5*H*-1,2,3-dithiazol-5-ylidene)amino]azines into azine fused thiazole-2-carbonitriles" P.A. Koutentis, M. Koyioni, S.S. Michaelidou, *Org. Biomol. Chem.*, 2013, **11**, 621-629.
- 11) "Inactivation of the glutamine/amino acid transporter ASCT2 by 1,2,3-dithiazoles: Proteoliposomes as a tool to gain insights in the molecular mechanism of action and of antitumor activity" F. Oppedisano, M. Catto, P.A. Koutentis, O. Nicolotti, L. Pochini, M. Koyioni, A. Introcaso, S.S. Michaelidou, A. Carotti, C. Indiveri, *Toxicol. Appl. Pharm.*, 2012, **265**, 93-102.
- 12) "Synthesis of [(4-Chloro-5*H*-1,2,3-dithiazol-5-ylidene)amino]azines" P.A. Koutentis, M. Koyioni and S.S. Michaelidou, *Molecules*, 2011, **16**, 8992-9002.

REVIEWS – BOOK CHAPTERS (1 published book chapter)

- 1) "Metal-Catalysed Direct Arylation of 1,2-Azoles", M. Koyioni, P.A. Koutentis, *Adv. Heterocycl. Chem.*, 2019, **129**, 89-154.

INVITED REFEREE FOR THE FOLLOWING JOURNALS

Arkivoc, Molecules, Molbank, Monatshefte für Chemie - Chemical Monthly, Processes

WORKSHOPS ATTENDED

- Jan. 2017** "Introduction to Gaussian: Theory and Practice" by Gaussian, Inc., in collaboration with SCUBE Scientific Software Solutions, 16-20 January 2017, New Delhi, India.

SYMPOSIUMS/MEETINGS/CONFERENCES ATTENDED

- 1) *Young Investigator Workshop 2019 – EuChemS Division of Organic Chemistry*, July 11-13, 2019, Vienna, Austria
- 2) Delegate of Cyprus at the International Younger Chemists Network (IYCN) General Assembly, July 7, 2019, Paris, France (virtual attendance)
- 3) *Frontiers in Chemistry*, October 21-25, 2018, Yerevan, Armenia
- 4) *25th International Symposium: Synthesis in Organic Chemistry*, July 17-20, 2017, Oxford, United Kingdom
- 5) *17th Bristol Synthesis Meeting*, April 4, 2017, Bristol, United Kingdom
- 6) *Transmediterranean Colloquium on Heterocyclic Chemistry (Tramech-VII)*, Nov. 27-30, 2013, Rabat, Morocco
- 7) *13th Annual Florida Heterocyclic Conference*, Mar. 04-07, 2012, Gainesville, Florida, USA

CONFERENCE PRESENTATIONS (4 oral presentations)

- 1) “Recent Advances on the Chemistry of 1,2,3-Dithiazoles”, Nominated Lecture (30 mins), Young Investigators Workshop 2019 – EuChemS Division of Organic Chemistry, Vienna, Austria, July 11-13, 2019.
- 2) “Adventures with S,N-Heterocycles”, Contributed Lecture (15 mins), *Frontiers in Chemistry*, Yerevan, Armenia, October 21-25, 2018.
- 3) “Synthesis of Rare Quinoidal 2,2'-Bithiazoles”, Contributed Lecture (20 mins), *2nd Postgraduates' Conference – Department of Chemistry – University of Cyprus*, Agros, Cyprus, June 27-29, 2016.
- 4) “Recent Developments on Appel Salt Chemistry”, Contributed Lecture (15 mins), *Transmediterranean Colloquium on Heterocyclic Chemistry (Tramech-VII)*, Rabat, Morocco, Nov. 27-30, 2013.
- 5) “Recent Developments on Appel Salt Chemistry”, Contributed Lecture (10 mins), *Fifth North America-Greece-Cyprus Workshop on Paramagnetic Materials (NAGC)*, Limassol, Cyprus, May 22-26, 2013.

DEPARTMENTAL PRESENTATIONS (3 oral presentations)

- 1) “Recent advances on the synthesis of S,N-rich heterocycles and alkaloids” Invited Departmental Seminar, Faculty of Chemistry, University of Łódź, Poland, January 15, 2019 (45 mins).
- 2) “Adventures with S,N-Heterocycles” Invited Departmental Seminar, Department of Chemistry, University of Crete, Greece, July 13, 2018 (60 mins).
- 3) “Ring Transformations of 1,2,3-Dithiazoles” Departmental Seminar, Department of Chemistry, University of Cyprus, May 25, 2016 (45 mins).

POSTERS (5 posters, presenting author underlined)

- 1) "Reaction of 4,5-Dichloro-1,2,3-dithiazolium Chloride with 5-Aminopyrazoles" P. A. Koutentis and M. Koyioni, *13th Annual Florida Heterocyclic Conference*, Gainesville, Florida, USA, Mar. 04-07, 2012, Poster P7.
- 2) "The formation of a rare quinoidal 2,2'-bithiazole" P. A. Koutentis, M. Koyioni, S. S. Michaelidou, S. I. Mirallai, *12th Ibn Sina Conference of Heterocyclic Chemistry*, Luxor, Egypt, Feb. 16-19, 2013, Poster PO-1.
- 3) "The Formation of a Rare Quinoidal 2,2'-Bithiazole" P. A. Koutentis, M. Koyioni, S. S. Michaelidou, S. I. Mirallai, *14th Annual Florida Heterocyclic Conference*, Gainesville, Florida, USA, Mar. 3-6, 2013, Poster P21.
- 4) "Inactivation of the glutamine/amino acid transporter ASCT2 by 1,2,3-dithiazoles: proteoliposomes as a tool to gain insights in the molecular mechanism of action and of antitumor activity" F. Oppedisano, M. Catto, P. Koutentis, O. Nicolotti, L. Pochini, M. Koyioni, A. Introcaso, S. Michaelidou, A. Carotti, C. Indiveri, *ASMC'13 International Symposium on Advances in Synthetic and Medicinal Chemistry*, Moscow, Russia, May 5-8, 2013, Poster P26.

AWARDS-DISTICTIONS-NOMINATIONS

- 1) Nominated to represent Cyprus at the EuChemS Young Investigator Workshop 2019 (YIW 2019) - Vienna July 2019
- 2) PhD Scholarship Award (€8000) for the best academic & research performance for the year 2015-2016 (Department of Chemistry, University of Cyprus)
- 3) 1st Place Award (€3000) for undergraduate level research projects ΚΟΥΛΤΟΥΡΑ/ΦΟΙΤΩ/1109/06 (Cyprus Research Promotion Foundation)
- 4) Awards for the highest grades at the Department of Chemistry for the years 2006-2010 (University of Cyprus)

RESEARCH PROPOSALS (PEER REVIEWED)

- 1) "Synthesis of 3,4-dicarbonitrile-2*H*-iminocoumarins and their annulation to porphyrazines" (University of Cyprus - Funding scheme for postdoctoral researchers "ONISILOS"). Role: Researcher. Budget: €70.000,00. UNDER EVALUATION.
- 2) "Synthesis of canthin-4-ones and azepino fused quinolones" (Cyprus Research Promotion Foundation – "DIDAKTOR" - POST-DOC/0718/0005). Role: Coordinator and Researcher. Requested Budget: €159.760,00. Score: 94% (SELECTED FOR FUNDING).
- 3) "New Fused- and Spiro-1,2,6-Thiadiazine Templates – Novel Starting Points for Bioactive Molecule Discovery" (Cyprus Research Promotion Foundation – "International Collaboration - Dual Targeting" - INTERNATIONAL/OTHER/0118/0020). Role: Coordinator and Researcher. Requested Budget: €79,990,16. Score: 87% (ELIGIBLE – NOT FUNDED).

TEACHING

- 2019-present** **Designing and implementing workshops** for undergraduate students for the purpose of the Organic Chemistry Laboratory II (voluntary work)
- 2017-2018** **Trained and supervised** a Part II student at the University of Oxford working on a total synthesis project (awarded a Part-II thesis runner-up prize)
- 2016** **Teaching Assistant** for the 2nd year UG theory course: *Organic Chemistry II*
Material Covered: NMR – Aromatic Chemistry – Carbonyl Chemistry
- 2015-2016** **Workshops:** Designed and delivered workshop “*Tools for Literature Searching*” as an introductory component to the 2nd year UG practical course: *Organic Laboratory II*
- 2010-2015** **Teaching Assistant** for the 3rd year UG theory course: *Organic Chemistry III*
Material Covered: Heteroaromatic Chemistry – Organoradical Chemistry – Alicyclic Chemistry – Non-Aromatic Heterocyclic Chemistry – The Chemistry of Boron, Silicon and Tin – Organometallic Chemistry
- 2012** **Lecture Course Preparation** (ppt) based on the book of Stuart Warren “*Organic Synthesis: The Disconnection Approach*”

ADMINISTRATIVE EXPERIENCE

- 2016** Member of the organizing committee for the “2nd Postgraduates’ Conference – Department of Chemistry – Cyprus” Agros, Cyprus 27-29 June 2016.
- 2011-2016** NMR “Super-User” – Duties: Training of new NMR users, maintenance and troubleshooting for the 500 MHz NMR at the Department of Chemistry, University of Cyprus and liaising with Bruker technical support in Germany