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RESEARCHER IDENTIFIERS



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PUBLICATIONS METRICS

Scopus *h*-index **10**

Publications No. **20**

Reviews, Book Chapters **3**

SCIENTIFIC AND RESEARCH POSITIONS

Assistant Professor (Appointed) – National and Kapodistrian University of Athens (June 2025)

Assistant Professor (Elect) – National and Kapodistrian University of Athens (June 2024)

Principal Investigator – University of Cyprus (2019–2022)

Project: *Synthesis of canthin-4-ones & azepino-fused quinolones (CANTHIN4ONE)*

(Mentor: Prof. P. A. Koutentis)

Postdoctoral Research Associate

- Centre of Molecular and Macromolecular Studies, Poland (2019) – Boron cluster-based materials (Supervisor: Prof. P. Kaszynski)
- University of Oxford, UK (2017–2018) – Pd-catalyzed arylation of OBO-protected pyruvates (Supervisor: Prof. T. J. Donohoe)

Researcher – University of Cyprus (2011–2012, 2018–2019)

EDUCATION

PhD in Organic Chemistry (2010 – 2016) – University of Cyprus

Thesis: *New Ring Transformations of 1,2,3-Dithiazoles* (Supervisor: Prof. P. A. Koutentis)

BSc in Chemistry (2006 – 2010) – University of Cyprus

Thesis: *Synthesis of New Dithiazolylienes* (Supervisor: Prof. P. A. Koutentis)

TEACHING EXPERIENCE

Special Teaching Scientist (2021– 2024, 5 × semesters) – University of Cyprus

- Organic Chemistry III
- Organic Chemistry II
- Organic Laboratory I
- Pedagogical Training for Chemistry Teachers (co-lecturer)

Visiting Lecturer (2022, 1 × semester) – KES College

- Essentials of Pharmaceutical Technology

ChemDraw Workshops (2020–2021) – Cyprus Pedagogical Institute

Teaching Assistant (2010–2016) – University of Cyprus (Organic Chemistry Courses)

MENTORING & OUTREACH

- **Head Mentor** – Cypriot Chemistry Olympiad Team (2024–Present)
- **Coordinator** – Pancyprrian Chemistry Olympiad (2022–Present)
- **Science Communicator** – Nutty Scientists Cyprus (2022–Present)

TECHNICAL SKILLS

Instrumentation: NMR (1D & 2D), LC-MS, GC-MS, MALDI-TOF, IR, UV/Vis, DSC, CV

Software: Gaussian (DFT Calculations), ChemDraw, MestReNova, TopSpin, SigmaPlot

PROFESSIONAL DEVELOPMENT & TRAINING

- *Performance Management (HRM 536)*, 14 hours, University of Cyprus, 2020.
- *TIE3 – Tools for Innovation, Environment and Entrepreneurship Education*, Erasmus+ Learning Mobility Project, Łódź, Poland, January 8-15, 2019.
- *Programming for Everybody (Getting Started with Python)*, University of Michigan (Coursera), 2018.
- *Introduction to Gaussian: Theory and Practice*, Gaussian, Inc. & SCUBE Scientific Software Solutions, New Delhi, India, January 16-20, 2017.

PROFESSIONAL AFFILIATIONS

- Royal Society of Chemistry (MRSC), Member (2019-present)
- American Chemical Society (ACS), Member (2019-present)
- Pancyprrian Association of Chemical Scientists (ΠΕΕΧ), Member (2021-present)

AWARDS & DISTINCTIONS

- **COST Fellowship** – ASSOS 2022 Summer School on Organic Synthesis
- **EuChemS Young Investigator Nominee** (2019, 2020)
- **Delegate** – International Younger Chemists Network (2019)
- **PhD Scholarship Award (€8000)** – University of Cyprus (2015–2016)
- **1st Place Undergraduate Research Award (€3000)** – Cyprus Research Promotion Foundation
- **Highest GPA in Chemistry (2006–2010)** – University of Cyprus

FUNDED RESEARCH PROJECTS

- **2019-2021:** "Synthesis of canthin-4-ones and azepino fused quinolones." Funded by the *Cyprus Research Promotion Foundation* ("DIDAKTOR" – POST-DOC/0718/0005). €159,760. Principal Investigator. *Developed novel synthetic routes to canthin-4-ones and azepino-fused quinolones, exploring their potential biological activity.*

RESEARCH PROPOSALS (PEER REVIEWED)

- **2024:** "Leveraging Synergistic Effects: Synthesis and Exploration of Novel Coumarin-Fused Porphyrazines." Submitted to the *Cyprus Research & Innovation Foundation* (EXCELLENCE/0524/0412). €247,514,74 requested. Principal Investigator.
- **2021:** "Synthesis of 3,4-dicyano-2H-iminochromenes and their cyclotetramerization to porphyrazines." Submitted to the *Cyprus Research & Innovation Foundation* (EXCELLENCE/0421/0067). €197,456 requested. Principal Investigator.

- **2019:** "Synthesis of 3,4-dicarbonitrile-2H-iminocoumarins and their annulation to porphyrazines." Submitted to the *University of Cyprus* ("ONISILOS" postdoctoral funding scheme). €70,000. Principal Investigator.
- **2018:** "New Fused- and Spiro-1,2,6-Thiadiazine Templates – Novel Starting Points for Bioactive Molecule Discovery." Submitted to the Cyprus Research Promotion Foundation ("International Collaboration – Dual Targeting" – INTERNATIONAL/OTHER/0118/0020). €79,990 requested. Principal Investigator.

CONFERENCES & PRESENTATIONS

2022

- Athens Summer School on Organic Synthesis (ASSOS 2022), Athens, Greece, July 7-9. *Oral Presentation: "Synthesis of 5,5-Diarylimino Quinoidal 2,2-Bithiazoles" (20 mins)*
- North America-Greece-Cyprus Conference (NAGC), Ayia Napa, Cyprus, May 9-13. *Oral Presentation: "Synthesis of canthin-4-ones and azepino-fused quinolones" (15 mins)*
- FloHet2022, Gainesville, Florida, USA, March 6-9. *Poster Presentation: "Synthesis of Canthin-4-ones"*

2021

- Virtual Edition of the 2020 Young Investigator Workshop of the Division of Organic Chemistry of EuChemS, Online, December 14-16. *Oral Presentation: "Synthesis of canthin-4-one and isocanthin-4-ones via B ring construction" (20 mins)*
- Young Investigator Workshop, EuChemS Division of Organic Chemistry, Barcelona, Spain, November 25-26 (Nominated). *Oral Presentation: "Synthesis of canthin-4-one and isocanthin-4-ones via B ring construction" (30 mins)*
- Athens Summer School on Organic Synthesis 2021, Virtual Edition, August 25-27. *Oral Presentation: "Synthesis of canthin-4-one and isocanthin-4-ones via B ring construction" (15 mins)*

2019

- Young Investigator Workshop, EuChemS Division of Organic Chemistry, Vienna, Austria, July 11-13 (Nominated). *Oral Presentation: "Recent Advances on the Chemistry of 1,2,3-Dithiazoles" (30 mins)*

2018

- Frontiers in Chemistry, Yerevan, Armenia, October 21-25. *Oral Presentation: "Adventures with S,N-Heterocycles" (15 mins)*

2017

- 25th International Symposium: Synthesis in Organic Chemistry, Oxford, UK, July 17-20.
- 17th Bristol Synthesis Meeting, Bristol, UK, April 4.
- Introduction to Gaussian 16: Theory and Practice, New Delhi, India, Jan 16-20. *Poster presentation: "UV-VIS of Quinoidal 2,2'-Bithiazoles: An Experimental and Theoretical Study".*

2016

- 2nd Postgraduates' Conference – Department of Chemistry – University of Cyprus, Agros, Cyprus, June 27-29. *Oral Presentation: "Synthesis of Rare Quinoidal 2,2'-Bithiazoles" (20 mins)*

2013

- Transmediterranean Colloquium on Heterocyclic Chemistry (Tramech-VII), Rabat, Morocco, November 27-30. *Oral Presentation: "Recent Developments on Appel Salt Chemistry" (15 mins)*

- Fifth North America-Greece-Cyprus Workshop on Paramagnetic Materials (NAGC), Limassol, Cyprus, May 22-26. *Oral Presentation: "Recent Developments on Appel Salt Chemistry" (10 mins)*

2012

- 13th Annual Florida Heterocyclic Conference, Gainesville, Florida, USA, March 4-7. *Poster presentation: "Reaction of 4,5-Dichloro-1,2,3-dithiazolium Chloride with 5 Aminopyrazoles"*

DEPARTMENTAL SEMINARS (3)

- **2024:** "Exploring the Frontiers of Heterocyclic Chemistry." Invited Seminar, Department of Chemistry, University of Cyprus, November 13 (45 mins).
- **2019:** "Recent advances on the synthesis of S,N-rich heterocycles and alkaloids." Invited Seminar, Faculty of Chemistry, University of Łódź, Poland, January 15 (45 mins).
- **2018:** "Adventures with S,N-Heterocycles." Department of Chemistry, University of Crete, Greece, July 13 (60 mins).
- **2016:** "Ring Transformations of 1,2,3-Dithiazoles." Department of Chemistry, University of Cyprus, May 25 (45 mins).

PUBLICATIONS LIST

REVIEWS (1) – BOOK CHAPTERS (2)

- 1) "Direct C-H (Het)arylation of 1,2-Heteroazoles, Heterodiazoles and Triazoles", M. Koyioni and P.A. Koutentis, in *Handbook of CH-Functionalization*; Editor-in-Chief Debabrata Maiti, Wiley-VCH: Weinheim, CHF-0219: 2022, <https://doi.org/10.1002/9783527834242.chf0219>
- 2) "Bicyclic 5-6 Systems: Six and Seven Heteroatoms", M. Koyioni, P. A. Koutentis, *Compr. Heterocycl. Chem. IV*, Volume 10, Chapter 10.14, Volume Editor F. Aldabbagh, 586-605, 2022.
- 3) "Metal-Catalysed Direct Arylation of 1,2-Azoles", M. Koyioni, P.A. Koutentis, *Adv. Heterocycl. Chem.*, 2019, **129**, 89-154.

RESEARCH ARTICLES (20 published)

- 1) "Synthesis of ring expanded canthin-6-ones", M. Koyioni, E. Broumidis, A. Kourtellaris, P.A. Koutentis, *in preparation*.
- 2) "Unexpected Performance of a Bifunctional Sensitizer/Activator Component for Photon Energy Management via Upconversion", G. Antoniou, S. Athanasopoulos, M. Koyioni, P. A. Koutentis,, P. E. Keivanidis, *J. Phys. Chem. Lett.* 2024, **15**, 5337.
- 3) "Synthesis of Canthin-4-ones and Isocanthin-4-ones via B Ring Construction", M. Koyioni, A. Kourtellaris, P.A. Koutentis, *J. Org. Chem.* 2024, **89**, 6444.
- 4) "Tunable intermolecular charge transfer in ionic liquid crystalline derivatives of the [closo-B₁₀H₁₀]²⁻ anion", L. Jacob, E. Rzeszutarska, M. Koyioni, R. Jakubowski, D. Pocięcha, A. Pietrzak, P. Kaszyński, *Chem. Mater.*, 2022, **34**, 6476.
- 5) "Synthesis and evaluation of 1,2,3-dithiazole inhibitors of the nucleocapsid protein of feline immunodeficiency virus (FIV) as a model for HIV infection", T. Meili, T. Laitinen, M. Koyioni, P. A. Koutentis, A. Poso, R. Hofmann-Lehmann, C. R. M. Asquith, *Bioorg. Med Chem.*, 2022, **68**, e116834 (1-10).
- 6) "Crystal Structure and Solid-State Packing of 4-Chloro-5*H*-1,2,3-dithiazol-5-one and 4-Chloro-5*H*-1,2,3-dithiazole-5-thione", C. P. Constantinides, M. Koyioni, F. Bazzi, M. Manoli, D. B. Lawson, P. A. Koutentis, *Molecules*, 2021, **26**, 5875.
- 7) "8,8' -(Benzo[c][1,2,5]thiadiazole-4,7-diyl)bis(quinolin-4(1*H*)-one): a twisted photosensitizer with AIE properties", E. Broumidis, C. M. S. Jones, M. Koyioni, A. Kourtellaris, G. O. Lloyd, J. Marques-Hueso, P. A. Koutentis, F. Vilela, *RSC Adv.* 2021, **11**, 29102.
- 8) "Design and evaluation of 1,2,3-dithiazoles and fused 1,2,4-dithiazines as anti-cancer agents", K. A. Maffuidae, ^[+] M. Koyioni, ^[+] C. D. Torricea, W. A. Murphy, H. K. Mewada, P. A. Koutentis, D. J. Crona, C. R. M. Asquith, *Bioorg. Med. Chem. Lett.*, 2021, **43**, 128078 (^[+] equal contribution).
- 9) "The Reaction of 6-(4-Chloro-5*H*-1,2,3-dithiazol-5-ylidene)-4-methylcyclohexa-2,4-dien-1-one with Benzene-1,2-diamine: Synthesis and Chemistry of *N*-(2-Aminophenyl)-2-hydroxy-5-methylbenzimidoyl Cyanide", M. Koyioni, P. A. Koutentis, *Synlett*, 2020, **31**, 482.
- 10) "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 (^[+] equal contribution).

- 11) "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.
- 12) "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.
- 13) "Synthesis of Quinoidal 5,5'-Diarylimino 2,2'-Bithiazoles", M. Koyioni and P.A. Koutentis, *Org. Lett.*, 2017, **19**, 174.
- 14) "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.
- 15) "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.
- 16) "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. Included in themed collection "2015 *MedChemComm* Hot Articles"
- 17) "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.
- 18) "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.
- 19) "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.
- 20) "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.
- 21) "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.