



Δρ. Καλλιόπη Λαδωμένου

Επίκουρη Καθηγήτρια

Γνωστικό Αντ.: Ανόργανη Χημεία
με έμφαση στις Ενώσεις Συναρμογής



Τμήμα Χημείας, Εργαστήριο Ήφαιστος,
Δημοκρίτειο Πανεπιστήμιο Θράκης (Δ.Π.Θ.),
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Εξειδίκευση: Σχεδίαση, σύνθεση και χαρακτηρισμός πορφυρινών και μεταλλικών συμπλόκων που χρησιμοποιούνται ως φωτοευαισθητοποιητές, καταλύτες ή βιομιμητικές ενώσεις για πλήθος εφαρμογών. Σύνθεση υβριδικών υλικών βασισμένων σε carbon dots. Φωτοκαταλυτική παραγωγή υδρογόνου (H_2), αναγωγή CO_2 , φωτοβολταϊκά DSSC, ιατρικές εφαρμογές και φωτοαποδόμηση ρύπων.

Ερευνητικές Δραστηριότητες:

- Σχεδίαση, παρασκευή και μελέτη μεταλλοπορφυρινών συμπλόκων, για χρήση στην παραγωγή υδρογόνου και στην αναγωγή CO_2 .
- Σύνθεση και μελέτη βιομιμητικών φωτοσυνθετικών συστημάτων για εφαρμογή σε ηλιακές κυψέλες ευαισθητοποιημένες με χρωστικές (DSSC).
- Σχεδίαση και μελέτη μορίων που δρουν ως φωτοευαισθητοποιητές και καταλύτες για διάφορες περιβαλλοντικές εφαρμογές.
- Μελέτη των διαμοριακών αλληλεπιδράσεων πορφυρινικών συστημάτων με υδατάνθρακες.
- Βιομιμητική κατάλυση και μοντελοποίηση ενεργών κέντρων βιολογικών διεργασιών.
- Ανάπτυξη νέων υβριδικών υλικών με εφαρμογές στη **νανοτεχνολογία**.
- Μελέτη και χρήση φωτοευαισθητοποιητών για **φωτοδυναμική αντιμετώπιση μικροβιακών λοιμώξεων**, εξουδετέρωση ανεπιθύμητων παθογόνων στο περιβάλλον και **οξειδωση χημικών ρύπων**.
- Ανάπτυξη νέων συμπλόκων μεταλλοπορφυρινών με ικανότητα **αλληλεπίδρασης με βιολογικά μόρια** (DNA, RNA) για **θεραπευτικούς σκοπούς**.

Εκπαίδευση:

- Διδακτορικό (Ph.D.) στη Σύνθεση και Φυσικοχημική Μελέτη Πορφυρινικών Συμπλόκων, Τμήμα Χημείας, Πανεπιστήμιο του Λίβερπουλ, Ηνωμένο Βασίλειο.
- Μεταπτυχιακό Δίπλωμα Ειδίκευσης (M.Sc.) στην Ανόργανη Χημεία – Σύνθεση φωτοευαισθητοποιητών με εφαρμογές σε φωτοβολταϊκές κυψέλες, Τμήμα Χημείας, Πανεπιστήμιο Κρήτης, Ελλάδα.
- Πτυχίο (B.Sc.) Χημείας, Τμήμα Χημείας, Πανεπιστήμιο Κρήτης, Ελλάδα.

Προηγούμενη Επαγγελματική Απασχόληση:

2019–2021 Τμήμα Χημείας, Πανεπιστήμιο Κρήτης - Ερευνήτρια (Κ.Α.: 10312) (ECO CRETE).
2014–2016 Τμήμα Χημείας, Πανεπιστήμιο Κρήτης - Ερευνήτρια (Κ.Α.: 03746), «Σύνθεση και μελέτη πορφυρινών τύπου Push-Pull: Πιθανές εφαρμογές στη μετατροπή της ηλιακής ενέργειας σε ηλεκτρική».

2009–2012 Τμήμα Χημείας, Πανεπιστήμιο Κρήτης - Ερευνήτρια (Κ.Α.: 02807), «Bio-inspired Solar Energy Utilization (BIOSOLENUTI) 229927» (<https://biosolenuti.gr/>).

2007–2020 Τμήμα Γεωπονίας, Ελληνικό Μεσογειακό Πανεπιστήμιο - Συμβασιούχος Διδάσκουσα.

2004–2006 Τμήμα Χημείας, Πανεπιστήμιο Κρήτης - Ερευνήτρια (Κ.Α.: 01949), «Μετατροπή ενέργειας σε μοριακό επίπεδο: Πρότυπες ενώσεις του κυτοχρώματος οξειδάση C για την αναγωγή του μοριακού O₂ σε H₂O».

2002–2004 Τμήμα Χημείας, Πανεπιστήμιο του Εδιμβούργου, Ηνωμένο Βασίλειο – Μεταδιδακτορική Ερευνήτρια.

1999–2000 Τμήμα Χημείας, Πανεπιστήμιο του Λίβερπουλ, Ηνωμένο Βασίλειο - Βοηθός Εργαστηρίου.

06–09/1997 Πανεπιστήμιο Paris-Sud, Γαλλία - Ερευνήτρια.

Συμμετοχή σε Ερευνητικά Έργα:

1997–2024: Συμμετοχή σε 16 ερευνητικά έργα χρηματοδοτούμενα από την Ευρωπαϊκή Ένωση και εθνικούς φορείς.

Δημοσιεύσεις:

- Δημοσιεύσεις σε διεθνή επιστημονικά περιοδικά με κριτές: Σύνολο 56
- Διεθνές Δίπλωμα Ευρεσιτεχνίας: Σύνολο 1
- Η βιβλιογραφική βάση Scopus αναφέρει 1200 ετεροαναφορές και *h-index* = 16 (<https://www.scopus.com/authid/detail.uri?authorId=6506002039>)
- Πανεπιστημιακά συγγράμματα – Διδακτικές σημειώσεις: Σύνολο 10
- Δημοσιεύσεις σε διεθνή συνέδρια: Σύνολο 46

Αξιολογήτρια (Reviewer):

- Elsevier (Chinese Journal of Catalysis, Inorganic Chemistry Communications)
- Royal Society of Chemistry
- MDPI (Catalysts, Minerals, Nanomaterials, Processes, International Journal of Molecular Sciences, Biomedicines, Carbon, Colorants, Molecules, Inorganics)
- Springer (Environmental Science and Pollution Research)
- Science Direct (Inorganic Chemistry Communications, Chinese Journal of Catalysis, Dyes and Pigments).
- Innovation Forever (Journal of Modern Green Energy).
- Frontiers (Frontiers in Chemical Biology).

Διδακτική Δραστηριότητα:

2022–Σήμερα: Προπτυχιακά Μαθήματα:

Γενική Χημεία, Ανόργανη Χημεία I & II (Θεωρία και Εργαστήριο), Βιοανόργανη Χημεία.

Μεταπτυχιακά Μαθήματα:

Βαρέα μέταλλα σε φυσικά προϊόντα (Π.Μ.Σ. Κοσμητική Χημεία), Νανοτεχνολογία και νανοϋλικά-Σύνθεση, χαρακτηρισμός και εφαρμογές πορφυρινικών μορίων, Οργανολογία - Πυρηνικός Μαγνητικός Συντονισμός (Π.Μ.Σ. Νανοτεχνολογίας).

2004–2022: Διαλέξεις (Θεωρία και Εργαστήριο) σχετικές με Γενική, Ανόργανη, Οργανική, Αναλυτική, Τροφίμων, Βιοχημεία και Αγροχημεία στα Τμήματα Χημείας, Διεθνούς Πανεπιστημίου Ελλάδος, Πανεπιστημίου Κρήτης, Ελληνικού Ανοικτού Πανεπιστημίου, Τμήματος Γεωπονίας του Ελληνικού Μεσογειακού Πανεπιστημίου και στο Minoan International College (όλα τα μαθήματα στα Αγγλικά).

Οργάνωση και Συμμετογή σε Συνέδρια:

- Συμμετοχή σε 36 διεθνή και εθνικά συνέδρια
- Οργάνωση 1 διεθνούς συνεδρίου
- Οργάνωση 3 θερινών σχολείων

Βραβεία / Διακρίσεις:

- Βραβείο από την Περιφέρεια Κρήτης (ECO CRETE) (Κ.Α.: 10312)
- Βραβείο από το Ίδρυμα Κρατικών Υποτροφιών (IKY) – LLP/ERASMUS (Κ.Α.: 03453)
- Βραβείο FP7 (BIOSOLENTI) (Κ.Α.: 02807)
- Βραβεία από τον Ειδικό Λογαριασμό Κονδυλίων Έρευνας Πανεπιστημίου Κρήτης (ΕΛΚΕ) (Κ.Α.: 03129 και 03746)
- Βραβείο Προγράμματος Δια Βίου Μάθησης Erasmus (IP) (Κ.Α.: 03333)
- Βραβείο της Royal Society of Chemistry για το 1ο Ευρωπαϊκό Συνέδριο
- Βραβείο του προγράμματος «Πυθαγόρας» Ε.Π.Ε.Α.Ε.Κ. II
- Βραβείο της Ευρωπαϊκής Ένωσης για εκπόνηση διδακτορικής διατριβής στο Ηνωμένο Βασίλειο
- Βραβείο Erasmus για ερευνητική εργασία στο Πανεπιστήμιο Paris-Sud

Επαγγελματικές Ομάδες:

- Μέλος της Ένωσης Ελλήνων Χημικών
- Μέλος της Royal Society of Chemistry (AMRSC)
- Μέλος της Society of Porphyrins & Phthalocyanines
- Μέλος του Πανεπιστημίου του Λίβερπουλ

Κατάλογος Δημοσιεύσεων:

1. “Urea porphyrins as simple receptors for sugars”, **K. Ladomenou** and R. P. Bonar-Law, *Chemical Communications*, **2002**, 2108.
2. “A strategic design to approach novel synthetic models for cytochrome c oxidase” A. G. Coutsolelos, **K. Ladomenou**, G. Charalambidis, *Journal of Porphyrin and Phthalocyanines*, **2006**, 430.
3. “A strategic approach for the synthesis of new porphyrin rings, attractive for heme model purpose” **K. Ladomenou**, G. Charalambidis, A. G. Coutsolelos, *Tetrahedron*, **2007**, 2882-2887.

4. "Synthesis and studies of a super-structured porphyrin derivative-a potential building block for CcO mimic models" G. Charalambidis, **K. Ladomenou**, B. Boitrel and A. G. Coutsolelos, *Eur. J. Org. Chem.*, **2009**, 1263-1268.
5. "Spectroscopic and electrochemical studies of novel model compounds for cytochrome c oxidase" **K. Ladomenou**, G. Charalambidis, A. G. Coutsolelos, *Inorganica Chimica Acta*, 363, 10, 2201-2208, **2010**.
6. "Porphyrins in Bio-inspired Transformations: Light-Harvesting to Solar Cell", Manas Panda, **Kalliopi Ladomenou**, Athanassios G. Coutsolelos, *Coordination Chemistry Reviews*, 256, **2012**, 2601– 2627.
7. "Meso substituted porphyrin derivatives via Palladium catalyzed amination showing wide range visible absorption: Synthesis and photophysical studies" **Kalliopi Ladomenou**, Theodore Lazarides, Georgios Charalambidis, Athanassios G. Coutsolelos, *Inorganic Chemistry*, **2012**, 51, 10548–10556.
8. "Synthesis, Characterization and Electronic Properties of trans-[4 (Alkoxy carbonyl)phenyl]porphyrin-[RuII(bpy)₃]₂ Complexes or Boron–Dipyrrin Conjugates as Panchromatic Sensitizers for DSSCs", Christina Stangel, **Kalliopi Ladomenou**, Georgios Charalambidis, Manas K. Panda, Theodore Lazarides, and Athanassios G. Coutsolelos, *Eur. J. Inorg. Chem.* **2013**, 1275–1286.
9. "CO and O₂ binding studies of new model complexes for CcO", **Kalliopi Ladomenou**, Georgios Charalambidis, Athanassios G. Coutsolelos, *Polyhedron*, 54, 2013, 47–53.
10. "New hybrid materials with porphyrin-ferrocene and porphyrin-pyrene covalently linked to single-walled carbon nanotubes", Solon P. Economopoulos, Angeliki Skondra, **Kalliopi Ladomenou**, Nikolaos Karousis, Georgios Charalambidis, Athanassios G. Coutsolelos and Nikos Tagmatarchis, *RSC Adv.*, **2013**, 3, 5539-5546.
11. "The importance of various anchoring groups attached on porphyrins as potential dyes for DSSC applications", **K. Ladomenou**, T. N. Kitsopoulos, G. D. Sharma and A. G. Coutsolelos, *RSC Adv.*, **2014**, 4, 21379.
12. "Photochemical hydrogen generation with porphyrin-based systems" **Kalliopi Ladomenou**, Mirco Natali, Elisabetta Iengo, Georgios Charalampidis, Franco Scandola, Athanassios G. Coutsolelos, *Coordination Chemistry Reviews*, 304-305, **2014**, 38.
13. "Donor- π -acceptor, triazine-linked porphyrin dyads as sensitizers for dye-sensitized solar cells", Ganesh D. Sharma, Galateia E. Zervaki, **Kalliopi Ladomenou**, Emmanuel N. Koukaras, Panagiotis P. Angaridis, and Athanassios G. Coutsolelos, *Journal of Porphyrins and Phthalocyanines*, **2015**, 19, 175-191.
14. "A mono(carboxy) porphyrin-triazine-(Bodipy)₂ Triad as Donor for Bulk Heterojunction Organic Solar Cells", Ganesh D. Sharma, S. A. Siddiqui, Agapi Nikiforou, Galateia E. Zervaki, Irene Georgakaki, **Kalliopi Ladomenou**, Athanassios G. Coutsolelos, *Materials Chemistry C*, 201, 3, **2015**, 6209-6217.
15. "Click"-reaction: an alternative tool for new architectures of porphyrin-based derivatives", **Kalliopi Ladomenou**, Vasilis Nikolaou, Georgios Charalambidis, Athanassios G. Coutsolelos, *Coordination Chemistry Reviews*, 306, **2016**, 1-42.
16. "Artificial hemes for DSSC and/or BHJ applications", **Kalliopi Ladomenou**, Vasilis Nikolaou, Georgios Charalambidis and Athanassios G. Coutsolelos, *Dalton Trans.*, **2016**, 45, 1111.
17. "Pyridyl vs. bipyridyl anchoring groups of porphyrin sensitizers for dye sensitized solar cells", Panagiotis A. Angaridis, Eleftherios Ferentinos, Georgios Charalambidis, **Kalliopi**

- Ladomenou**, Vasilis Nikolaou, Sujit Biswas, Ganesh D. Sharma and Athanassios G. Coutsolelos, *RSC Advances*, **2016**, 6, 22187–22203.
18. “Photochemical hydrogen production and cobaloximes: the influence of the cobalt axial N-ligand on the system stability”, Athanassios Panagiotopoulos, **Kalliopi Ladomenou**, Dongyue Sun, Vincent Artero and Athanassios G. Coutsolelos, *Dalton Trans.*, **2016**, 45, 6732.
 19. “Photochemical hydrogen evolution using Sn-porphyrin as photosensitizer and a series of Cobaloximes as catalysts”, Georgios Landrou, Athanassios A. Panagiotopoulos, **Kalliopi Ladomenou** and Athanassios G. Coutsolelos, *J. Porphyrins Phthalocyanines*, 2016, 20: 535–541.
 20. “Porphyrin-BODIPY based hybrid model compounds for artificial photosynthetic reaction centers”, **K. Ladomenou**, V. Nikolaou, G. Charalampidis, A.G. Coutsolelos, *Comptes Rendues de Chimie*, 2016, 1-9.
 21. “Two new bulky substituted Zn porphyrins bearing carboxylate anchoring groups as promising dyes for DSSCs”, A. Charisiadis, V. Nikolaou, K. Karikis, C. Giatagana, K. Chalepli, **K. Ladomenou**, S. Biswas, G.D. Sharma, A.G. Coutsolelos, *New Journal of Chemistry*, **2016**, 40, 5930-5941.
 22. “Increased Efficiency of Dye-Sensitized Solar Cells by Incorporation of a π Spacer in Donor–Acceptor Zinc Porphyrins Bearing Cyanoacrylic Acid as an Anchoring Group” Stylianos Panagiotakis, Emmanouil Giannoudis, Asterios Charisiadis, Raphaella Paravatou, Maria-Eleni Lazaridi, Maria Kandyli, **Kalliopi Ladomenou**, Panagiotis A. Angaridis, Hélène C. Bertrand, Ganesh D. Sharma, and Athanassios G. Coutsolelos, *Eur. J. Inorg. Chem.* **2018**, 2369–2379.
 23. “The impact of potassium on downy mildew of cucumber and its leaf/soil nutritional status”, Anastasia A. Papadaki, Eirini Papazoglou, **Kalliopi Ladomenou**, *SDRP Journal of Plant Science*, **2018**, (3), 1.
 24. “Interactive effects of leaf age and inoculum concentration on downy mildew of cucumber plants and the implication of nutrients”, Anastasia A. Papadaki, **Kalliopi Ladomenou**, *SDRP Journal of Plant Science*, **2018**, (3), 1.
 25. “N and K interactions in cucumber plants artificially inoculated with *P. cubensis*”, Anastasia A. Papadaki, Konstantinos Nikoloudis, **Kalliopi Ladomenou**, *SDRP Journal of Plant Science*, **2019**, (3), 1.
 26. “Effect of nitrogen fertilization on cucumber downy mildew”, A. A. Papadaki, G. Markakis, **K. Ladomenou**, D. Goumas and N. Magan, *Journal of Applied Horticulture*, **2019**, 21(1), 31-36.
 27. “Heavy metal accumulation in various tissues of *Raphanus sativus* grown under different ratios of organic amendments”, A. Papadaki, **K. Ladomenou**, *Acta Sci. Pol. Hortorum Cultus*, 18(4) **2019**, 193–201.
 28. “Ru(II) porphyrins as sensitizers for DSSCs: Axial vs. peripheral carboxylate anchoring group”, **Kalliopi Ladomenou**, Vasilis Nikolaou, Georgios Charalambidis, Ganesh D. Sharma and Athanassios G. Coutsolelos, *J. Porphyrins Phthalocyanines*, **2019**, 23, 878.
 29. “Interfacial Engineering for Organic and Perovskite Solar Cells using Molecular Materials”, Anastasia Soultati, Apostolis Verykios, Konstantina-Kalliopi Armadorou, Marinos Tountas, Veroniki Vidali, **Kalliopi Ladomenou**, Leonidas Palilis, Dimitris Davazoglou, Athanassios G. Coutsolelos, Panagiotis Argitis, Maria Vasilopoulou, *Journal of Physics D: Applied Physics*, **2020**, 53 263001.

30. “Carbon dots for photocatalytic H₂ production in aqueous media with molecular Co catalysts”, **Kalliopi Ladomenou**, Giorgos Landrou, Georgios Charalambidis, Emmanouil Nikoloudakis, Athanassios G. Coutsolelos, **2021**, *Sustainable Energy Fuels*, 5, 449.
31. "Controlling Solar Hydrogen Production by Organizing Porphyrins", Vasilis Nikolaou, Georgios Charalambidis, **Kalliopi Ladomenou**, Emmanouil Nikoloudakis, Charalambos Drivas, Ioannis Vamvasakis, Stylianos Panagiotakis, Georgios Landrou, Eleni Agapaki, Christina Stangel, Christian Henkel, Jan Joseph, Gerasimos Armatas, Maria Vasilopoulou, Stella Kennou, Dirk M. Guldi, and Athanassios G. Coutsolelos, **2021**, *ChemSusChem*, 13, 1 – 11.
32. “Nickel complexes and carbon dots for efficient light-driven hydrogen production”, **Kalliopi Ladomenou**, Michael Papadakis, Georgios Landrou, Michel Giorgi, Charalambos Drivas, Stella Kennou, Renaud Hardré, Julien Massin, Athanassios G. Coutsolelos, Maylis Orio, *EurJIC*, **2021**, 3097-3103.
33. “Shape-dependent photocatalytic H₂ production photosensitized by different self-assembled forms of a zinc(II) porphyrin”. Emmanouil Orfanos, **Kalliopi Ladomenou**, Panagiotis Angaridis, Athanassios G. Coutsolelos, *Dalton Trans.*, **2022**, 51, 8009.
34. “Core-shell carbon-polymer quantum dot passivation for near infrared perovskite light emitting diodes”, Marinos Tountas, Anastasia Soultati, Konstantina-Kalliopi Armadorou, **Kalliopi Ladomenou**, Georgios Landrou, Apostolis Verykios, Maria-Christina Skoulikidou, Stylianos Panagiotakis, Petros-Panagis Fillipatos, Konstantina Yanakkopoulou, Alexander Chroneos, Leonidas C. Palilis, Abd. Rashid Bin Mohd Yusoff, Athanassios G. Coutsolelos, Panagiotis Argitis, Maria Vasilopoulou, **2022**, *J. Phys. Photonics*, DOI: 10.1088/2515-7647/ac79e9.
35. “Porphyrins and phthalocyanines as biomimetic tools for photocatalytic H₂ production and CO₂ reduction”, Emmanouil Nikoloudakis, Ismael López-Duarte, Georgios Charalambidis, **Kalliopi Ladomenou**, Mine Ince, Athanassios G. Coutsolelos, *Chem. Soc. Rev.*, **2022**, 51, 6965. DOI: 10.1039/d2cs00183g.
36. “A stable platinum porphyrin based photocatalyst for hydrogen production under visible light in water”, Emmanouil Orfanos, **Kalliopi Ladomenou**, Panagiotis Angaridis, Theodoros Papadopoulos, Georgios Charalambidis, Maria Vasilopoulou and Athanassios G. Coutsolelos, *Sustainable Energy Fuels*, **2022**, 6, 5072-5076. DOI: 10.1039/D2SE01105K.
37. “Carbon Nanodots as Electron Transport Materials in Organic Light Emitting Diodes and Solar Cells”, Zoi Georgiopoulou, Apostolis Verykios, **Kalliopi Ladomenou**, Katerina Maskanaki, Georgios Chatzigiannakis, Konstantina-Kalliopi Armadorou, Leonidas C. Palilis, Alexander Chroneos, Evangelos K. Evangelou, Spiros Gardelis, Abd. Rashid bin Mohd Yusoff, Athanassios G. Coutsolelos, Konstantinos Aidinis, Maria Vasilopoulou, and Anastasia Soultati, *Nanomaterials*, **2023**, 13, 169. DOI: 10.3390/nano13010169.
38. “Efficient Solar Hydrogen Production of Zinc Trimesityl Porphyrin Based Photocatalysts“, Eleni Agapaki, **Kalliopi Ladomenou**, Vasilis Nikolaou, Athanassios G. Coutsolelos. *J. Porphyrins Phthalocyanines*, **2023**, 27, 479 DOI: 10.1142/S1088424623500207.
39. "Light-induced hydrogen production from water using nickel(II) catalysts and N-doped carbon-dot photosensitizers: catalytic efficiency enhancement by increase of catalyst nuclearity", Dimitra K. Gioftsidou, Georgios Landrou, Charikleia Tzatzas, Antonios Hatzidimitriou, Emmanouil Orfanos, Georgios Charalambidis, **Kalliopi Ladomenou**, Athanassios G. Coutsolelos and Panagiotis A. Angaridis *Dalton Trans*, **2023**, 52, 9809 DOI: 10.1039/d3dt01052j.

40. “A series of cobalt bis(thiosemicarbazone) catalysts for effective photocatalytic hydrogen evolution reaction”, Michael Papadakis, Georgios Landrou, Marie Poisson, Léa Delmotte, Katerina Achilleos, Sylvain Bertaina, Renaud Hardré, **Kalliopi Ladomenou**, Athanassios G. Coutsolelos and Maylis Orio *Eur. J. Inorg. Chem.*, **2023**, 1 DOI: 10.1002/ejic.202300352.
41. “Highly efficient light-driven hydrogen evolution utilizing porphyrin-based nanoparticles”, Vasilis Nikolaou, Eleni Agapaki, Emmanouil Nikoloudakis, Katerina Achilleos, **Kalliopi Ladomenou**, Georgios Charalambidis, Evitina Triantafyllou and Athanassios G. Coutsolelos *Chem. Commun.*, **2023**, 59, 11256, DOI: 10.1039/d3cc02922k.
42. “Adsorption and photocatalytic applications of porphyrin-based materials for environmental separation processes: A review”, Despina A. Gkika, **Kalliopi Ladomenou**, Mohamed Bououdina, Athanasios C. Mitropoulos, George Z. Kyzas *Science of The Total Environment*, **2024**, 908, 168293, DOI: 10.1016/j.scitotenv.2023.168293.
43. “Porphyrins-valuable pigments of life”. Vasilis Nikolaou, Emmanouil Nikoloudakis, **Kalliopi Ladomenou***, Georgios Charalambidis*, Athanassios G. Coutsolelos *Front. Chem. Biol.*, 2024, DOI:10.3389/fchbi.2023.1346465. “Anti-Inflammatory and Antithrombotic Potential of Metal-Based Complexes and Porphyrins”, Alexandros Tsoupras, Sofia Pafli, Charilaos Stylianoudakis, Kalliopi Ladomenou, Constantinos A. Demopoulos and Athanassios Philippopoulos, *Compounds*, **2024**, 4, 376–400, DOI: 10.3390/compounds4020023.
44. “Anti-Inflammatory and Antithrombotic Potential of Metal-Based Complexes and Porphyrins”, Alexandros Tsoupras, Sofia Pafli, Charilaos Stylianoudakis, **Kalliopi Ladomenou**, Constantinos A. Demopoulos and Athanassios Philippopoulos, *Compounds*, **2024**, 4, 376–400 DOI: 10.3390/compounds4020023.
45. “Graphene adsorbents and photocatalysts derived from agricultural wastes: A review”, Konstantinos N. Maroulas, Aristi Karakotsou, Stavros G. Pouloupoulos, Ioannis Konstantinou, **Kalliopi Ladomenou**, Geore Z. Kyzas, *Sustainable Chemistry for the Environment*, **2024**, 100166. DOI: 10.1016/j.scenv.2024.100166.
46. “Removal of Ibuprofen from Wastewaters by Aluminum Modified Hybrid Porous Activated Carbon Derived From Coconut Shells” Athanasia K. Tolkou, Natalia Malouchi, Ramonna I. Kosheleva, Pavlos Efthymiopoulos, **Kalliopi Ladomenou**, Michail Chalaris, Athanasios C. Mitropoulos, Ioannis A. Katsoyiannis, George Z. Kyzas, *Proceedings of the 10th World Congress on New Technologies (NewTech'24) Barcelona, Spain - August 25-27, 2024*, Paper No. ICEPR 125, DOI: 10.11159/icepr24.125.
47. “Water-soluble photocatalysts based on porphyrin carbon dot conjugates produce H₂ under visible light irradiation”, Katerina Achilleos, Anna Katsari, Emmanouil Nikoloudakis, Foteini Chatzipetri, Dimitris Tsikritzis, **Kalliopi Ladomenou,*** Georgios Charalambidis, Emmanuel Stratakis and Athanassios G. Coutsolelos, *Dalton Trans.*, **2025**, 54, 328, DOI: 10.1039/d4dt02101k.
48. “Photocatalytic degradation of veterinary antibiotics in wastewaters: A review”. Christina Nannou, Konstantinos N. Maroulas, Christina Tsamtzidou, **Kalliopi Ladomenou**, George Z. Kyzas *Science of the Total Environment*, **2025**, 966, 178765, DOI: 10.1016/j.scitotenv.2025.178765.
49. “Metalloporphyrins in Bio-Inspired Photocatalytic Conversions”, Asterios Charisiadis, Vasilis Nikolaou, Emmanouil Nikoloudakis, **Kalliopi Ladomenou,*** Georgios Charalambidis and Athanassios G. Coutsolelos, *Chem. Commun.*, **2025**, 61, 4630-4646.
50. “Exploring Metal- and Porphyrin-Modified TiO₂-Based Photocatalysts for Efficient and Sustainable Hydrogen Production”, Dimitrios Rafail Bitsos, Apostolos Salepis, Emmanouil

Orfanos, Athanassios C. Mitropoulos and **Kalliopi Ladomenou***, *Inorganics*, **2025**, 13 (4), 121; Cover.

51. “Intelligent agent orchestration for climateresilient energy systems: autonomous management of renewable integration and distributed resources”, Kalliopi Kravari, Maria Roussi, **Kalliopi Ladomenou**, Anna Thysiadou and Michail Chalaris, *E3S Web of Conferences* 638, 02009, **2025**.
52. “Functional characterization of hybrid porphyrin–carbon dot nanostructures for optimized photocatalytic performance”, Evangelia Banta, Christina Kampouri, **Kalliopi Ladomenou***, Kalliopi Kravari, Maria Roussi, Anna Thysiadou and Michail Chalaris, *E3S Web of Conferences* 638, 03006, **2025**.
53. “Synergistic effect of porphyrin and NiO in chitosan/graphene oxide aerogels for enhanced photocatalytic degradation of cationic and anionic dyes”, Angelos Faraos, Konstantinos N. Maroulas, Emmanouil Nikoloudakis, Charalampos Drivas, Mark A. Isaacs, George Z. Kyzas and **Kalliopi Ladomenou***, *RSC Advances*, **2025**, 15, 27685–27699.
54. “Intelligent Agent-Based Control of Distributed Sensor Networks for Environmental Monitoring and Disaster Prediction”, Kalliopi Kravari, Maria Roussi, **Kalliopi Ladomenou**, Anna Thysiadou and Michail Chalaris, *Eng. Proc.* **2025**, 104, 38.
55. “TiO₂ modified with green apple peel derived carbon dots for anionic and cationic dye removal.”, Sofia Pafli, Christina-Konstantina Tsamtzidou, Dimitrios Rafail Bitsos, Konstantinos N. Maroulas, George Z. Kyzas, **Kalliopi Ladomenou***, *CLEAN - Soil, Air, Water*, **2025**, accepted.
56. “Doped biopolymer composites for engineered water purification: Mechanistic insights into multi-ion adsorption”, Konstantinos N. Maroulas, Athanasia K. Tolkou, **Kalliopi Ladomenou**, Charalampos Drivas, Mark A. Isaacs, Spyridon Ntougia, Ioannis A. Katsoyiannis, George Z. Kyzas, *Industrial & Engineering Chemistry Research*, **2025**, accepted.

Κατάλογος Συνεδρίων:

1. **K. Ladomenou**, G. Charalambidis, A. G. Coutsolelos, 1st Symposium of Organic Synthesis, 4-6 November 2004, Athens. “Synthesis of porphyrins as model compounds for cytochrome c oxidase”. (**Poster**)
2. G. Coutsolelos, **K. Ladomenou**, G. Charalambidis, 1st European Conference on Chemistry for Life Sciences, 4-8, October, 2005, Rimini, Italy. “Synthesis of new porphyrin derivatives as model compounds for cytochrome c oxidase”. (**Poster**)
3. **K. Ladomenou**, 11o Hellenic Chemistry Conference of Postgraduate students, July 2005, Kolimpari, Chania. (**Oral Presentation**)
4. **K. Ladomenou**, 12o Hellenic Chemistry Conference of Postgraduate students, July 2006, Santorini. (**Oral Presentation**)
5. G. Coutsolelos, G. Charalambidis, **K. Ladomenou**, 4th International Conference on Porphyrins and Phthalocyanines, 2-7 July, 2006, Rome, Italy. “A strategic design to approach novel synthetic models for Cytochrome c Oxidase”. (**Poster**)
6. **K. Ladomenou**, G. Charalambidis, A. G. Coutsolelos, 1o European Conference of Chemistry 27-31 August 2006, Budapest, Hungary. “Novel synthetic models for cytochrome c oxidase”. (**Poster**)
7. **K. Ladomenou**, “The Wine at the nutrition of the future” Scientific Conference, Traditional Cretan Diet and Health, Technological Educational Institute of Crete (T.E.I.), Heraklion, 2007. (**Oral Presentation**)

8. G. Coutsolelos, G. Charalambidis, **K. Ladomenou**, 10th International Meeting in Inorganic Chemistry, 1-4 July 2009, Palermo, Italy, "Design and synthesis of super-structured porphyrin as building blocks for new materials, studies and applications". (**Poster**)
9. **K. Ladomenou**, G. Charalambidis, A. G. Coutsolelos, 10th Chemistry Conference Greece-Cyprus 02-04 July 2009, Heraklion, "Electrochemical and spectroscopic studies of novel compounds-models of cytochrome c oxidase". (**Oral Presentation**)
10. **K. Ladomenou**, G. Charalambidis, A. G. Coutsolelos, 16th European Symposium on Organic Chemistry, 12-16 July 2009, Prague, Czech Republic, "Electrochemical and spectroscopic studies of novel model compounds for cytochrome c oxidase". (**Poster**)
11. Athanassios G. Coutsolelos, Galatea E. Zervaki, Georgia Pagona, Georgios Charalambidis, **Kalliopi Ladomenou**, Nikos Tagmatarchis, 25th European Photovoltaic Solar Energy Conference and Exhibition, 6-17 September 2010, Valencia, Spain, "Synthesis of novel porphyrin dimers for photovoltaic applications". (**Poster**)
12. **Kalliopi Ladomenou**, Georgios Charalambidis, Galatea E. Zervaki, Georgia Pagona, Nikos Tagmatarchis, Athanassios G. Coutsolelos, Sixth International Conference on Porphyrins and Phthalocyanines, July 4-9, 2010, New Mexico, USA, "Novel hybrid materials based on porphyrin dimers for photovoltaic applications". (**Poster**)
13. Athanassios G. Coutsolelos, **Kalliopi Ladomenou**, Georgios Charalambidis, Galatea E. Zervaki, T. Lazarides, D. Daphnomili, 10th European Biological Inorganic Chemistry Conference, June 22-26, 2010, Thessaloniki, Greece, "Bio inspired derivatives for solar energy utilization." (**Poster**)
14. G. Coutsolelos, **K. Ladomenou**, G. Charalambidis, G. E. Zervaki, T. Lazarides, D. Daphnomili, WIRE: Week of Innovative Regions in Europe, 15-17 March 2010, Granada, Spain. (**Poster**)
15. **Kalliopi Ladomenou**, Georgios Charalambidis, Dimitra Daphnomili, Athanassios G. Coutsolelos, «Synthesis of novel porphyrin sensitizers for solar cell applications» 2011, Manchester, UK. (**Poster**)
16. **Kalliopi Ladomenou**, Georgios Charalambidis, Dimitra Daphnomili, Athanassios G. Coutsolelos, «Synthesis of porphyrin-based sensitizers for solar cell applications», First International Conference on Bioinspired Materials for Solar Energy Utilization, BIOSOL2011, 12-17, September, 2011, Chania, Crete. (**Oral Presentation**)
17. **Kalliopi Ladomenou**, Theodore Lazarides, Georgios Charalambidis and Athanassios G. Coutsolelos, «Peripherally substituted porphyrin derivatives showing wide range visible absorption: Synthesis and photophysical studies», Inorganic Photochemistry and Photochemistry: Fundamentals and Applications: Dalton Discussion 13, 10-12 September, 2012, Sheffield, UK. (**Poster**)
18. **Kalliopi Ladomenou**, Theodore Lazarides, Georgios Charalambidis and Athanassios G. Coutsolelos, «Peripherally substituted porphyrin derivatives showing wide range visible absorption: Synthesis and photophysical studies», Seventh International Conference on Porphyrins and Phthalocyanines, ICPP-7, July 1-6, 2012, Jeju, KOREA. (**Poster**)
19. **K. Ladomenou**, A.G. Coutsolelos, G. Charalambidis, D. Daphnomili, C. Stangel, G. Zervaki, P. Aggaridis, A. Petrou, P. Nova, A. Apostolopoulou, V. Papastamatakis, K. Karikis, T. Lazarides, V. Nikolaou, «Synthesis and properties of new super structured chromophores based on porphyrin rings», 223th ECS Meeting May 12-16, 2013, Toronto, Canada. (**Poster**)

20. **Kalliopi Ladomenou**, Vasilis Nikolaou, Athanasia Nikolaou, Georgios Charalambidis, Panagiotis A. Angaridis, A.G. Coutsolelos, «Synthesis of new photosensitizers via click chemistry», Eighth International Conference on Porphyrins and Phthalocyanines (ICPP-8) June 22-27, 2014, Istanbul. **(Poster)**
21. Α. Παπαδάκη, **Κ. Λαδομένου**, «Επίδραση της καλιούχου λίπανσης στην ανάπτυξη του *Pseudoperonospora cubensis* σε καλλιέργεια αγγουριάς (*Cucumis sativus*, var. Knossos)», 28ο Συνέδριο της Ελληνικής Εταιρείας της Επιστήμης των Οπωροκηπευτικών, 16-20 Οκτωβρίου 2017, Θεσσαλονίκη. **(Poster)**
22. **Kalliopi Ladomenou**, Georgios Landrou, Georgios, Charalambidis, Emmanouil Nikoloudakis, Athanassios G. Coutsolelos, “Carbon dots for photocatalytic H₂ production in aqueous media with molecular Co catalysts”, ACS Meeting 2021, 5-16 April 2021, USA, Virtual Conference. **(Oral Presentation)**
23. Vasilis Nikolaou, Georgios Charalambidis, **Kalliopi Ladomenou**, Emmanouil Nikoloudakis, Charalambos Drivas, Ioannis Vamvasakis, Stylianos Panagiotakis, Georgios Landrou, Eleni Agapaki, Christina Stangel, Christian Henkel, Jan Joseph, Gerasimos Armatas, Maria Vasilopoulou, Stella Kennou, Dirk M. Guldi, Athanassios G. Coutsolelos, “Controlling solar hydrogen production by organizing porphyrins”, 11th International Conference on Porphyrins and Phthalocyanines (ICPP-11), 28 June – 3 July 2021, USA, Virtual Meeting. **(Poster)**
24. **Kalliopi Ladomenou**, Georgios Landrou, Emmanouil Orphanos, Athanassios G. Coutsolelos, “Light-driven H₂ production in aqueous media using carbon dots and molecular Co catalysts”, 11th International Conference on Porphyrins and Phthalocyanines (ICPP-11), 28 June – 3 July 2021, USA, Virtual Meeting. **(Poster)**
25. Emmanouil Orphanos, **Kalliopi Ladomenou**, Athanassios G. Coutsolelos, “Shape dependent photocatalytic H₂ evolution of a zinc porphyrin”, International solar fuels conference 2021, 26-29 July 2021, United Kingdom, Virtual Meeting. **(Poster)**
26. Michael Papadakis, Kalliopi Ladomenou, Georgios Landrou, Julien Massin, Renaud Hardre, Athanassios G. Coutsolelos, Maylis Orio, “Nickel complexes and carbon dots for efficient light-driven hydrogen production”, International solar fuels conference 2021, 26-29 July 2021, United Kingdom, Virtual Meeting. **(Poster)**
27. Fotis Anastasiadis, Magdalini Topouza, **Kalliopi Ladomenou**, Georgios Charalambidis, Athanassios G. Coutsolelos, “Synthesis and Characterization of Bis-Functional Electron-Donor and Electron-Acceptor Porphyrins for Application in Dye-Sensitized Solar Cells” 11th International Conference on Porphyrins and Phthalocyanines (ICPP-12), 10 - 15 July 2022, Madrid, Spain. **(Poster)**
28. Orfanos E., **Ladomenou K.**, Angaridis P. Coutsolelos A.G., “Shape dependent photocatalytic H₂ evolution of a zinc porphyrin”, International Solar Fuels Conference 2021 (ISF-2021), 26-29 July 2021, UK, Virtual Meeting. **(Poster)**
29. Orfanos, **Kalliopi Ladomenou**, Maria Perraki, Panagiotis Angaridis, Athanassios G. Coutsolelos, “Diverse Zn porphyrin structures effect the photocatalytic H₂ production” 11th International Conference on Porphyrins and Phthalocyanines (ICPP-12), 10 - 15 July 2022, Madrid, Spain. **(Poster)**
30. Georgios Charalambidis, **Kalliopi Ladomenou**, Georgios Landrou, Emmanouil Nikoloudakis, Aspasia Stoumpidi, Athanassios G. Coutsolelos, “Olive leaves-derived carbon dots for efficient photocatalytic H₂ production and CO₂ reduction” 11th International Conference on Porphyrins and Phthalocyanines (ICPP-12), 10 - 15 July 2022, Madrid, Spain. **(Poster)**

31. Dimitrios Trikkaliotis, **Kalliopi Ladomenou**, Dimitra A. Lambropoulou, José Nuñez, Ionut Tranca, Paola Quaino, Frederik Tielens, Athanassios G. Coutsolelos, George Z. Kyzas, “Synthesis and study of modified graphene-based photocatalysts after modification of TiO₂ and IrO₆ as efficient photocatalysts for H₂ evolution and CO₂ reduction” International Symposia on Applied Bioinorganic Chemistry, ISABC-16, June 11th-14th 2023, Ioannina, Greece. **(Poster)**
32. **Kalliopi Ladomenou**, Georgios Landrou, George Z. Kyzas Athanassios G. Coutsolelos, “Carbon dots for efficient photocatalytic H₂ production and CO₂ reduction in aqueous media” International Symposia on Applied Bioinorganic Chemistry, ISABC-16, June 11th-14th 2023, Ioannina. **(Oral Presentation)**
33. Christina Kampouri, **Kalliopi Ladomenou**, Georgios Maliaris, “Novel photocatalytic materials for dye degradation using adsorbed porphyrins on 3D printed structures”, 2nd Panhellenic Workshop on Inorganic Chemistry (PSIC-2), September 28th-30th 2023, Athens, Greece. **(Poster)**
34. **Kalliopi Ladomenou**, Vasilis Nikolaou, Eleni Agapaki, Athanassios G. Coutsolelos, “Porphyrin-based complexes for efficient light-driven H₂ evolution”, September 28th-30th 2023, Athens, Greece. **(Oral Presentation)**
35. Katerina Achilleos, Anna Katsari, Eirini-Maria Kontomanoli, Athanasios Panousis, Foteini Chatzipetri, **Kalliopi Ladomenou**, Athanassios G. Coutsolelos, “Synthesis and Characterization of Metalloporphyrins and NC-Dots Hybrids for Photocatalytic Hydrogen Production”, September 28th-30th 2023, Athens, Greece. **(Poster)**
36. K.N. Maroulas, A.K. Tolkou, P. Efthymiopoulos, **K. Ladomenou**, Z.S. Metaxa, M. Chalaris, A.C. Mitropoulos, S. Ntougias, I.A. Katsoyiannis, G.Z. Kyzas, “Chitosan/curcumin/activated carbon nanoadsorbents for the removal of hexavalent chromium from wastewaters”, intelWATT Workshop on European leadership in action: Enabling technologies to boost freshwater preservation, Birmingham, United Kingdom, 22-23 February 2024. **(Poster)**
37. **K. Ladomenou**, C. Kampouri, G. Maliaris, G.Z. Kyzas, “Novel photocatalytic materials for dye degradation using adsorbed porphyrins on 3D printed structures”, 2024 #RSCPoster Conference, 05-06 March 2024. **(Poster)**
38. Athanassios G. Coutsolelos, Georgios Charalambidis, **Kalliopi Ladomenou**, Vasilis Nikolaou, Emmanouil Nikoloudakis, “The pigments of life: a continuous source of inspiration for medical applications”, 23-28 June 2024, Niagara Falls & Buffalo, USA. **(Poster)**
39. A.K. Tolkou, N. Malouchi, R.I. Kosheleva, P. Efthymiopoulos, **K. Ladomenou**, M. Chalaris, A.C. Mitropoulos, I.A. Katsoyiannis, G.Z. Kyzas, “Removal of Ibuprofen from wastewaters by aluminum modified hybrid porous activated carbon derived from coconut shells”, 14th International Conference on Environmental Pollution and Remediation, Barcelona, Spain, 25-27 August 2024. **(Poster)**
40. Evangelia Kyriazi, Charikleia Malerou, Vasiliki Rammou, Artemis Sparaggi, **Kalliopi Ladomenou**, Synthesis and Studies of Green Carbon Dots from Oranges as Sensors for Fast Monitoring the Polarity of Solvents, 23rd Panhellenic Chemistry Conference, 25-26 September 2024, National and Kapodistrian University of Athens Central Building, Athens. **(Flash Oral Presentation)**
41. Sofoklis Chouliaras, Sotiria Eginloglou, Makrina Katsanopoulou, Christina Konstantina Tsamtzidou, **Kalliopi Ladomenou**, Development of a Hybrid Water-Soluble Porphyrin-Carbon Dot Material as Phototherapeutic Agent 23rd Panhellenic Chemistry Conference, 25-

26 September 2024, National and Kapodistrian University of Athens Central Building, Athens.
(Poster)

42. **Kalliopi Ladomenou**, Advanced hybrid porphyrin-based photocatalytic systems for H₂ production and pollutant removal, GreenMat Project Workshop (TAEDR-0535821) – Flagship Action “Advanced Materials for Sustainable Development: Green Energy Production and Storage, Energy Efficiency, and Anti-pollution Applications.” Thursday 28 & Friday 29 November 2024, University of Ioannina, Greece. (Oral Presentation).
43. **Kalliopi Ladomenou**, Sotiria Eginloglou, Makrina Katsanopoulou, Christina-Konstantina Tsamtzidou, «Development and characterization of a hybrid water-soluble porphyrin-carbon dot material as a potential phototherapeutic agent», 20th Hellenic Symposium on Medicinal Chemistry, 3-5 Απριλίου 2025, University of Ioannina, Greece. (Poster, 1st Prize Thomi Plakia)
44. Christina Kampouri, Georgios Maliaris and **Kalliopi Ladomenou**, “Innovative Porphyrin-Based Photocatalysts on 3D-Printed Structures for Efficient Pollutant Degradation”, 20th Hellenic Symposium on Medicinal Chemistry, 3-5 April 2025, University of Ioannina, Greece. (Poster)
45. Charilaos Stylianoudakis, Evangelia Banta, Aggelos Faraos, **Kalliopi Ladomenou**, “Axially Coordinated Curcumin–Tin Porphyrin Complex: A Potential Antibacterial Agent”, 20th Hellenic Symposium on Medicinal Chemistry, 3-5 April 2025, University of Ioannina, Greece. (Poster)
46. **Kalliopi Ladomenou**, A. Faraos, K. N. Maroulas¹, K. Achilleos, A. Katsari, and A. G. Coutsolelos, G. Z. Kyzas,” Porphyrin Hybrids as Photocatalysts for Water Remediation and Solar Fuels”, 4th International chemistry Conference (CHEMEET), 29 September-01 October 2025, Athens Greece (Oral Presentation).