

Curriculum Vitae Zoi G. Lada**Assistant Professor, Department of Chemistry, Uni of Patras****Visiting Faculty Member, Institute of Chemical Engineering Sciences (ICE-HT/FORTH)****Visiting Researcher:** 1) University College of Dublin, Dublin, Ireland, 2) Queen's University, School of Chemistry and Chemical Engineering, Belfast, UK, 3) Department of Physics, Florida State University, USAGoogle Scholar: <https://scholar.google.com/citations?user=y-trQLkAAAAJ&hl=el&oi=ao>**Preface**

Dr. Zoi G. Lada is an Ass. Professor of the Department of Chemistry, Un. Patras. Her research centers on the development and physicochemical characterization of advanced inorganic-based materials, with particular emphasis on spin crossover (SCO) compounds sensors, multifunctional frameworks based on SCO compounds, and recently on metal-organic frameworks (MOFs) engineered for the detection and removal of emerging contaminants from the environment gas separation and CO₂ deposition. She further investigates Raman spectroscopy and SERS as powerful tools for probing molecular interactions and phase transitions, while also addressing risk assessment. She is member of the Cost Action CA22147 - European metal-organic framework network: combining research and development to promote technological solutions (EU4MOFs), while she participated as an Early Career Research Investigator via the Cost Action "Molecular Spintronics (MOLSPIN)" at Centre National de la Recherche Scientifique (CNRS), Centre de Recherche Paul Pascal Research (CRPP) at Bordeaux, France. She has worked as Post-Doctoral Fellow at the Institute of Chemical Engineering Sciences and the University College Dublin (UCD) in Dublin. She is Co-WP leader of the Horizon Project SCENARIOS at ICEHT/FORTH and has been PI of a research project under the action "Ideas Incubator" funded by the framework of the Innovative Entrepreneurship Observatory of the Region of Crete and a position. She is a visiting Researcher at Queen's University (Belfast) and in the Department of Physics, Florida State University, USA. She has participated in 15 R&D projects funded by the EU and the General Secretariat for Research and Technology. She is a co-author of 44 scientific articles in peer-reviewed Scientific Journals [h index: 13, Citations: ~620 (Google Scholar), in 10 as corresponding author]; 54 abstracts in international/national conference proceedings (10 as invited speaker); 1 book chapter; 1 provisional USA patent. She is/was Organizing Committee Member of the 12th North America, Greece and Cyprus Workshop on Paramagnetic Materials (Greece), and 9th International Conference on Phase Transition and Dynamical Properties of Spin Transition Materials (Ireland), Reviewer Board Member of "Magnetochemistry" and "Symmetry" journals, Editorial Board Member of Frontiers in Chemistry (IF= 5.545) while she serves as Guest Editor in five Special Issues related to Applied Inorganic Chemistry. She is a Reviewer in 26 Scientific Journals including Coordination Chemistry Reviews, International Journal of Biological Macromolecules, Inorganic Chemistry Communications and Dalton Transactions. Her published work was selected twice as Front page covers of New J Chem and Magnetochemistry Journals and listed as Editor's Choice articles, while she received the 1st Prize Award in the category "ESG, Environment Technology" of the Bootcamp Match & Develop a startup Patras 4.0, 2023, NBG Business Seeds, initiative of National Bank of Greece.

CURRENT POSITION(S)**12.2024 – to date** Assistant Professor, Department of Chemistry, University of Patras**02.2026 – to date** Visiting Faculty Member, Institute of Chemical Engineering Sciences (ICE-HT/FORTH)**PREVIOUS POSITION(S)****2019 – 2023** Post-Doctoral Fellow

Institute of Chemical Engineering Sciences, Foundation for Research and Technology (ICE-HT/FORTH), Greece, Laboratory of Applied Molecular Spectroscopy

2023-2024 Post-Doctoral Fellow

University College Dublin, School of Chemistry, Dublin, Ireland

2019 Visiting Researcher

- Centre National de la Recherche Scientifique (CNRS), Centre de Recherche Paul Pascal Research (CRPP), Early Career Investigator, MOLSPIN Cost Action, France

2021-2024 Adjunct Professor

Lecturer of "Organometallic Chemistry and Mechanisms of Inorganic Chemistry Reactions", "Bioinorganic Chemistry" and "Science Education", Department of Chemistry, University of Patras

EDUCATION

2014 - 2019	PhD Studies FORTH/ICE-HT & Department of Chemistry, Univ. of Patras, Greece, <u>Title of Dissertation</u> : “ <i>Development and Study of Materials with ‘Smart’ Properties for their Potential Use in Food Packaging</i> ”, PhD
2012 – 2014	Master of Science, MSc Department of Chemistry, Univ. of Patras, Greece, “Analytical Chemistry and Nanotechnology”, <u>Postgraduate Thesis Title</u> : “ <i>The Principle of Hard and Soft Acids and Bases as a Tool in the Chemistry of Molecular Heterometallic Magnets</i> ”, MSc
2008 – 2012	Bachelor Degree, BSc Department of Chemistry, Univ. of Patras, Greece, Chemist, <u>Undergraduate Thesis Title</u> : “ <i>The General Reaction System Dysprosium(III) Nitrate/Cobalt(II) Perchlorate/2-pyridyl Aldoxime or Phenyl 2-pyridylketoxime</i> ”, B.Sc.

TRACK RECORD

h-index: **13**, Citations: **~620**

Publications: **44 published** (10*, 1 monograph)

Average Journal Impact Factor: **~6.5**

Publications of chapters in Books: **1 and 1 in progress**

Patent applications: **1 provisional patent USA, 1 National Patent OBI and 1 EPO patent**

Early Career Research Investigator: CNRS/CRPP, France

Visiting Researcher: Un. College Dublin, Ireland, Queen's University, Northern Ireland, and Florida State University, USA

Research Associate: **15 R&D Projects**

Cost Action member: **EU4MOFs CA22147**

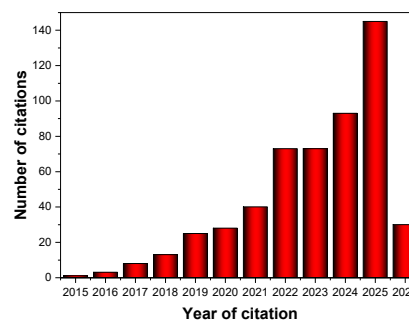
Advisory Panel Member: International Journal of Molecular Sciences Organizing Committee Member: 9th International Conference on Phase Transition and Dynamical Properties of Spin Transition Materials, Dublin 2025, 12th North America, Greece and Cyprus Workshop on Paramagnetic Materials 2026

Editorial Board Member: **Frontiers in Chemistry (IF= 5.545)**

Guest Editor: In the Special Issues of 1. *Inorganica Chimica Acta* (IF= 3.2), 2. *International Journal of Molecular Sciences* (IF= 4.9), 3. *Polymers* (IF= 4.7), 4. *Chemistry* (IF= 2.4), 5. *Magnetochemistry* (IF= 2.6)

Abstracts in Peer-Reviewed International/National Conference Proceedings: **54 (10 as Invited Speaker)**

Reviewer: 26 International Journals



TEACHING ACTIVITIES

2024- to date	Assistant Professor Applied Inorganic Chemistry (Laboratory course & teaching, undergraduate) General Chemistry for Physics (Teaching to Physics Department, undergraduate) Introduction to Inorganic Chemistry (Laboratory course, undergraduate) MSc Chemistry and Materials Technology with Applications in Industry, Energy, and the Environment (MSc course in MOFs applications, IR spectroscopy and XRD)
2021– 2024	Adjunct Professor/ Department of Chemistry, University of Patras Lecturer in chemistry courses “Organometallic Chemistry and Mechanisms of Inorganic Chemistry Reactions”, “Bioinorganic Chemistry” and “Science Education”
2012 – 2016	Teaching assistant and laboratory instructor , Un. of Patras, Dep. Chem. Greece. Lectures and tutorials in undergraduate general chemistry and inorganic chemistry lab courses

SUPERVISION OF PHD/MSC/DIPLOMA THESES

PhD Thesis

2025-to date **I. Papageorgiou**, “Development of Innovative Multifunctional Two-Dimensional and Three-Dimensional Metal–Organic Frameworks (MOFs) for Environmental Applications”, Department of Chemistry, University of Patras

MSc Thesis

2025- to date **I. Lataris**, “Synthesis, Characterization and Study of Water Soluble Metal Oxide Nanoparticles and their Photocatalytic Activity” Department of Chemistry, University of Patras

2026- to date **V. Panourgias**, “Hybrid Silane-Engineered ZnO/Epoxy Nanocomposites for Protective Coating Applications” Department of Chemistry, University of Patras

2026- to date **N. Papadopoulos**, “Organometallic Sn (IV) Coordination Compounds with Antiproliferative Activity against Human Cancer Cell Lines” Department of Chemistry, University of Patras

2026- to date **M. Aggelopoulou**, “Engineering ZnO/MOF-Derived Porous Carbon Photocatalysts for the Photocatalytic Degradation of Organic Contaminants in Water” Department of Chemistry, University of Patras

BSc Thesis

2025- 2026 **M. Aggelopoulou**, “Synthesis of Water-Soluble ZnO Nanoparticles and Investigation of Their Photocatalytic Performance for the Degradation of Methylene Blue in Water” Department of Chemistry, University of Patras

2025- 2026 **V. Panourgias**, “Water-Soluble Metal Oxide Nanoparticles for Agri-food Applications” Department of Chemistry, University of Patras

2025- 2026 **N. Papadopoulos**, “Towards Organotin(IV) Complexes with Anticancer Activity against Human Cancer Cell Lines: Investigation of the Reaction System between 2-Pyridylalldoxime and Dimethyltin(IV) Dichloride” Department of Chemistry, University of Patras

2026- to date
(Integrated MSc) **Ch. Tzouda**, “Design and Implementation of an Automated UV Irradiation Control System for Energy-Efficient Photocatalytic Wastewater Treatment” Department of Electrical and Computer Engineering, University of Patras

2026- to date **Th. Koulochera**, “Valorization of PET Plastic Waste via Terephthalic Acid Recovery for the Development of Sustainable Metal–Organic Framework Materials” Department of Chemistry, University of Patras

2026- to date **M. Piperi**, “Design and Development of ZnO/ZIF-8-Derived Porous Carbon Photocatalytic Composites for the Sustainable Removal of Pharmaceutical Pollutants from Water” Department of Chemistry, University of Patras

2026- to date **A. Kabouri**, “Organotin(IV) Complexes of 2-Methylpyridyl Ketoxime with Antiproliferative Activity against Human Cancer Cell Lines” Department of Chemistry, University of Patras

2026- to date **L. Katsourakis**, “Hybrid Mixed-Matrix Membranes Based on Two-Dimensional ZIF-8 MOF Nanosheets and Ionic Liquids for Gas Separation Applications” Department of Chemistry, University of Patras

2026- to date **A. Evaggelakopoulou**, “Design and Development of PSF/rGO Hybrid Conductive Membranes Incorporating a Spin-Crossover Iron(II) Complex for Advanced Functional Applications” Department of Chemistry, University of Patras

2026- to date **C. Papastratis**, “Rational Design and Synthesis of Fluorinated Mixed-Ligand Zr-MOFs for Enhanced PFAS Capture and Removal from Aqueous Systems” Department of Chemistry, University of Patras

2026- to date **N. Sofianou**, “Design and Development of Water-Soluble Nanoparticles for Sustainable Applications in Agriculture and Food Technology” Department of Chemistry, University of Patras

Participation in the Supervision of PhD/MSc/Diploma Theses and Practical Training*

MSc Thesis

2024 **M. Zaradouka**, “Research of New Spin Crossover (SCO) Systems of 3d-metallions with Macrocyclic Substituents and Schiff Bases”, Department of Chemistry, University of Patras

BSc Thesis

2025 **I. Lataris**, “Synthesis and Characterization of Water Soluble ZnO Nanoparticles”, Department of Chemistry, University of Patras

2022 **M. Zaradouka**, “Exploration of click chemistry in the isolation of coordinated clusters with the ligand α -methyl-2-pyridinemethanol”, Department of Chemistry, University of Patras

Practical Training

2022 **D. Lesi**, “Synthesis and evaluation of Metal Organic Frameworks (MOFs) as Surface Enhanced Raman Scattering (SERS) substrates” Institute of Chemical Engineering Sciences, ICE-HT/FORTH

2021 **P. Tsoupra**, “Biopolymer Hydrogels as Controlled Release Platforms for Metal Ions” Institute of Chemical Engineering Sciences, ICE-HT/FORTH

2020 **M. Hliopoulou**, “Development of Temperature Sensors for Potential Application in Food Packaging: Synthesis and Characterization of Fe(II) Spin-Crossover Complexes”, Institute of Chemical Engineering Sciences, ICE-HT/FORTH

2018 **V. Tselepi**, “Integration of Temperature Sensors into Polymer Matrices: Characterization and Release Study”, Institute of Chemical Engineering Sciences, ICE-HT/FORTH

**before election as Assistant Professor in the Chemistry Department of the Un. Patras in 2024*

MEMBER OF EXAMINING COMMITTEE/ PHD AND MSC

PhD Thesis

2024- to date **I. Alexandropoulos**, “Water Soluble Metal Oxide Nanoparticles for Biological Applications”, Department of Chemistry, University of Patras

2021-2025 **A.S. Armenis**, “New Efficient Single Molecule Magnets of Trivalent Lanthanides from the Use of Macrocyclic Ligands”, Department of Chemistry, University of Patras

MSc Thesis

2024-2026 **S. Karpouzis**, “Coordination Complexes of the Uranyl Ion with Oxime- and Amidoxime-Containing Ligands”, Department of Chemistry, University of Patras

2024-2026 **E. Tzavella**, “New fluorescent inorganic materials as luminescent solar concentrators (LSCs)” Department of Chemistry, University of Patras

2023-2025 **N. Bogdanopoulou**, “Heterometallic CoIII/LnIII Complexes as Efficient Single-Molecule Magnets”, Department of Chemistry, University of Patras

2023-2025 **D. Boumpous**, “Dysprosium(III) Macrocyclic Complexes with Phenoxido-type Axial Ligands”, Department of Chemistry, University of Patras

2023-2025 **I. Athanasoulas**, “Polynuclear Complexes of Trivalent Lanthanides from the Combined Use of Carboxylate and Hydroxyketonate Ligands”, Department of Chemistry, University of Patras

2022-2025 **G. Kaldiris**, “Tuning the Spin-Crossover Behaviour in Fe(II) Polymeric Composites for Food Packaging Applications and migration release studies”, Institute of Chemical Engineering Sciences, ICE-HT/FORTH & Department of Chemical Engineering, University of Patras

RESEARCH ACHIEVEMENTS AND PEER RECOGNITION

Research achievements

Overview: 44 Publications in peer-reviewed journals (in 10 as corresponding author, among others in the Journals *Chemosphere* (IF= 7.2), *Chem Commun* (IF= 6.3), *Inorg. Chem* (IF= 4.7), h=13, ~620 citations, **1 Provisional USA Patent**, **1 Book Chapter**, Participation in **54 Conferences and Workshops** (10 as invited speaker)

Publications in peer-reviewed journals

1. C.D. Polyzou, Z.G. Lada, A. Terzis, C.P. Raptopoulou, V. Psycharis and S.P. Perlepes, "The Fac Diastereoisomer of Tris(2-Pyridinealdoximate)Cobalt(III) and a Cationic Cobalt(III) Complex Containing Both the Neutral and Anionic Forms of the Ligand: Synthetic, Structural and Spectroscopic Studies", *Polyhedron*, **2014**, 79, 29-36
2. P. Danelli, Z.G. Lada, C.P. Raptopoulou, V. Psycharis, T.C. Stamatatos and S.P. Perlepes, "Doubly Thiocyanato(S,N)-Bridged Dinuclear Complexes of Mercury(II) from the Use of 2-Pyridyl Oximes as Capping Ligands", *Curr. Inorg. Chem.* (Thematic Issue), **2015**, 5, 26-37
3. Z.G. Lada, C.P. Raptopoulou, V. Psycharis, N. Klouras, A. Escuer and S.P. Perlepes, "Bis(di-2-Pyridyl Ketoximate-O,N,N')Bis(Di-2-Pyridyl Ketoxime -N,N')Dicopper(II) Diperchlorate: A Plausible, Weakly Ferromagnetically-Coupled Intermediate in the Formation of the Neutral, Strongly Antiferromagnetically-Coupled Neutral Dimer Bearing Only Deprotonated Ligands", *Inorg. Chem. Commun.*, **2016**, 70, 95-98
4. Z.G. Lada, A. Soto Beobide, A. Savvidou, C.P. Raptopoulou, V. Psycharis, G.A. Voyiatzis, M.M. Turnbull and S.P. Perlepes, "A unique Copper(II)-Assisted Transformation of Acetylacetone Dioxime in Acetone that Leads to One-Dimensional, Quinoxaline-Bridged Coordination Polymers", *Dalton Trans.*, **2017**, 46, 260-274
5. Z.G. Lada, Y. Sanakis, C.P. Raptopoulou, V. Psycharis, S.P. Perlepes and G. Mitrikas, "Probing the Electronic Structure of a Copper(II) Complex with a Ligand Derived from a Rare Metal Ion-Assisted, Crossed-Aldol Reaction of Acetone with Di-2-Pyridyl Ketone by CW- and Pulse-EPR Spectroscopy", *Dalton Trans.*, **2017**, 46, 8458-8475
6. C.D. Polyzou, E.S. Koumoussi, Z.G. Lada, C.P. Raptopoulou, V. Psycharis, M. Rouzières, A.C. Tsepis, C. Mathonière, R. Clérac and S.P. Perlepes, "Switching on" the Single-Molecule Magnet Properties within a Series of Dinuclear Cobalt(III)-Dysprosium(III) 2-pyridyloximate Complexes", *Dalton Trans.*, **2017**, 46, 14812-14825
7. Z.G. Lada, K.S. Andrikopoulos, A. Chrissanthopoulos, S.P. Perlepes and G.A. Voyiatzis, "A known Iron(II) Complex in Different Nanoparticle Sizes: Variable-Temperature Raman Study of its Spin-Crossover Behavior", *Inorg. Chem.*, **2019**, 58 (8), 5183–5195
8. M. Makrygianni, Z.G. Lada, A. Manousou, C.A. Aggelopoulos and V. Deimede, "Removal of Anionic Dyes from Aqueous Solution by Novel Pyrrolidinium-based Polymeric Ionic Liquid (PIL) as Adsorbent: Investigation of the Adsorption Kinetics, Equilibrium Isotherms and the Adsorption Mechanisms Involved", *J. Environ. Chem. Eng.*, **2019**, 7 (3), article 103163
9. N.C. Anastasiadis, Z.G. Lada, C.D. Polyzou, C.P. Raptopoulou, V. Psycharis, K. Konidaris and S.P. Perlepes, "Synthetic Strategies to {Co^{III}₂Ln^{III}} Complexes Based on 2-pyridyl Oximes (Ln = Lanthanide)", *Inorg. Chem. Commun.*, **2019**, 108, article 107478
10. C.A. Aggelopoulos, M. Hatzisymeon, S. Meropoulis, Z.G. Lada and G. Rassias, "Degradation of antibiotic enrofloxacin in water by gas-liquid nsp-DBD plasma combined with H₂O₂ or CaO₂: Parametric analysis and exploration of degradation mechanisms", *Chem. Eng. J.*, **2020**, 398, article 125622
11. Z.G. Lada, K.S. Andrikopoulos, C.D. Polyzou, V. Tangoulis and G.A. Voyiatzis, "Monitoring the spin crossover phenomenon of [Fe(2-mpz)₂Ni(CN)₄] 2D Hofmann-type polymer nanoparticles via temperature-dependent Raman spectroscopy", *J. Raman Spectrosc.*, **2020**, 51, 2171-2181
12. ^{CA}Z.G. Lada, A. Soto Beobide, G.N. Mathioudakis and G.A. Voyiatzis*, "Fe(II) Spin Crossover/ Polymer Hybrid Materials: Investigation of the SCO Behavior via Temperature-Dependent Raman Spectroscopy, Physicochemical Characterization and Migration Release Study", *Molecules*, Communication, Special Issue "Hybrid Materials for Advanced Applications", **2021**, 26, article 201
13. S. Tsantis, Z.G. Lada, D. I. Tzimopoulos, V. Bekiari, V. Psycharis, C. Raptopoulou, and S.P. Perlepes, "Two different coordination modes of the Schiff base derived from ortho-vanillin and 2-(2-aminomethyl)pyridine in a mononuclear uranyl complex", *Heliyon*, **2022**, 8(6), article e09705

14. A. Routzomani, Z.G. Lada, V. Angelidou, C. Raptopoulou, V. Psycharis, K.F. Konidaris, C.T. Chasapis and S.P. Perlepes, "Confirming the Molecular Basis of the Solvent Extraction of Cadmium(II) Using 2-Pyridyl Oximes through a Synthetic Inorganic Chemistry Approach and a Proposal for More Efficient Extractants", *Molecules*, **2022**, 27(5), 1619
15. Z.G. Lada, A. Chrissanthopoulos, S.P. Perlepes, K.S. Andrikopoulos and G.A. Voyiatzis, "Wet-Chemistry Assembly of One-Dimensional Nanowires of a Known Spin-Crossover Iron(II) Complex and Study of its Switching Characteristics Through Raman Spectroscopy", *Chem. Commun*, **2022**, 58, 521-524
16. Z.G. Lada, K.S. Andrikopoulos, G.N. Mathioudakis, Z. Piperigkou, N. Karamanos, S.P. Perlepes* and G.A. Voyiatzis, "Tuning the Spin-Crossover Behaviour in Fe(II) Polymeric Composites towards Food Packaging Applications" Special Issue "Molecular Spin Crossover Materials: Recent Trends, Emerging Properties and Applications", *Magnetochemistry*, **2022**, 8(2), article 16 (**Front page, Title story, Editor's Choice**)
17. Z.G. Lada, C.D. Polyzou, V. Nika, K.F. Konidaris, T.C. Stamatatos and S.P. Perlepes, "Adventures in the Coordination Chemistry of 2-pyridyl Oximes: On the Way to 3d/4f-metal Coordination Clusters" Special Issue "Chemistry and Properties of Heterometallic 3d/4f-Metal Complexes", *Inorg. Chim. Acta*, Review, **2022**, 539, article 120954
18. Z.G. Lada, G.A. Voyiatzis and C.A. Aggelopoulos, "A Novel, Green, Low-cost Regeneration Method for Surface Enhanced Raman Scattering (SERS) Substrates Based on Nanosecond Pulsed Cold Plasma Technology", *Surfaces and Interfaces*, **2022**, 34, article 102330
19. ^{CA}Z.G. Lada, "Investigation of Spin-Crossover Systems by Raman Spectroscopy: A Critical Review on the Assets and the Bottlenecks", Special Issue "Molecular Spin Crossover Materials: Recent Trends, Emerging Properties and Applications", *Magnetochemistry*, **2022**, Review, 8(9), article 108 (**Front page, Title story**)
20. C. Stamou, Z.G. Lada, C.T. Chasapis, D. Papaioannou, P. Dechambenoit and S.P. Perlepes, "Indium(iii)/2-benzoylpyridine chemistry: interesting indium(iii) bromide-assisted transformations of the ligand", *Dalton Trans.*, **2022**, Advance Article, 51, 15771-15782
21. A. Soto Beobide, A.M. Moschovi, G.N. Mathioudakis, M. Kourtelesis, **Z.G. Lada**, K.S. Andrikopoulos, L. Sygellou, V. Dracopoulos, I. Yakoumis and G.A. Voyiatzis, "High catalytic efficiency of nanosized copper-based catalyst for automotive: A physicochemical characterization", *Molecules*, **2022**, 27(21), article 7402
22. ^{CA}Z.G. Lada, G.N. Mathioudakis, S. Pavlidou, G. Goulas, C. Anastasopoulos, G. Bokias, K.S. Andrikopoulos and G.A. Voyiatzis, "Comparative assessment of the dyeing process for pristine and modified cotton fabrics towards the reduction of the environmental fingerprint", *Sustainability*, **2023**, 15(4), article 3144
23. ^{CA}Z.G. Lada, E. Katsoulakou, C.D. Polyzou, C.P. Raptopoulou and V. Psycharis, "A Missing Nuclearity in the Co(III)/Ln(III)/2-Pyridyladoxime Chemistry: Tetranuclear Compounds Using the "Assisted Self-Assembly" Approach (Ln = Rare Earth Metals)", *Chemistry*, **2023**, 5(2), 996-1005
24. I. Mylonas-Margaritis, Z.G. Lada, A. Kitos, D. Maniaki, K. Skordi, A. Tasiopoulos, V. Bekiari, A. Escuer, J. Mayans, V. Nastopoulos, E. Bakalbassis, D.A. Papaioannou and S.P. Perlepes, "Interesting chemical and physical features in the products of the reactions between trivalent lanthanoids and a tetradentate Schiff base derived from cyclohexane-1, 2-diamine", *Dalton Trans.*, **2023**, 52, 8332-8343
25. A. Dimitropoulos, Ch. Stamou, S.P. Perlepes, Z.G. Lada, I.D. Petsalakis and S. Marinakis, "A Study of 1-Methylbenzotriazole (MEBTA) Using Quantum Mechanical Calculations and Vibrational, Electronic, and Nuclear Magnetic Resonance Spectroscopies", *Journal of Engineering Science & Technology Review*, **2023**, 16(4), 77
26. Ch. Stamou, P. Dechambenoit, Z.G. Lada, P. Gkolfi, V. Riga, C.P. Raptopoulou, V. Psycharis, K.F. Konidaris, C.T. Chasapis and S.P. Perlepes, "Reactions of Cadmium(II) Halides and Di-2-Pyridyl Ketone Oxime: One-Dimensional Coordination Polymers", *Molecules*, **2024**, 29(2), 509
27. S. Tsantis, Z.G. Lada, S. Skiadas, D.I. Tzimopoulos, C.P. Raptopoulou, V. Psycharis and S.P. Perlepes, "Understanding the Selective Extraction of the Uranyl Ion from Seawater with Amidoxime-Functionalized Materials: Uranyl Complexes of Pyrimidine-2-amidoxime", *Inorganics*, **2024**, 12(3), 82
28. K.N. Pantelis, S. Skiadas, Z.G. Lada, R. Clérac, Y. Sanakis, P. Dechambenoit and S.P. Perlepes, "Hexanuclear {Zn^{II}₄Fe^{III}₂} and {Zn^{II}₄Cr^{III}₂} complexes from the use of potentially tetradentate NOO'O" Schiff-base ligands", *New J. Chem.*, **2024**, 48, 11221-11232 (**Front page cover**)
29. K.N. Pantelis, S. Skiadas, Z.G. Lada, C.P. Raptopoulou, V. Psycharis, Y. Sanakis, M. Turnbull and S.P. Perlepes, "Tetradentate NOOO"Schiff-Base Ligands as a Platform for the Synthesis of Heterometallic Cd^{II}-Fe^{III} and Cd^{II}-Cr^{III} Coordination Clusters", *Magnetochemistry* **2024**, 10(10), 69

30. Z.G. Lada, G.N. Mathioudakis, A. Soto Beobide, K.S. Andrikopoulos and G.A. Voyiatzis, "Generic method for the detection of short and long chain PFAS extended at very low detection limits via Surface Enhanced Raman Scattering, SERS", *Chemosphere*, **2024**, 363, 142916
31. Ch. Stamou, Z.G. Lada, S. Paschalidou, C.T. Chasapis and S.P. Perlepes, "Towards Construction of the "Periodic Table" of 1-methylbenzotriazole", *Inorganics*, **2024**, 12(8), 208 (**Front page cover**)
32. ^{CA}Ch. Stamou, Ch. Gourdoupi, P. Dechambenoit, D. Papaioannou, Z. Piperigkou and Z.G. Lada, "Antiproliferative activity of an organometallic Sn(IV) coordination compound based on 1-methylbenzotriazole against human cancer cell lines", *Chemistry*, **2024**, 6(5), 1189-1200
33. ^{CA}Ch. Stamou, C.D. Polyzou, Z.G. Lada, K. Konidaris and S.P. Perlepes, "Towards Completion of the "Periodic Table" of Di-2-Pyridyl Ketoxime", *Molecules*, **2025**, 30(4), 791
34. Z.G. Lada, G.N. Mathioudakis, A. Soto Beobide, S. Andrikaki, K.S. Andrikopoulos and G.A. Voyiatzis, "Addressing the challenging stabilization of colloidal silver suspensions as an optimization tool for efficient Surface Enhanced Raman scattering", *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, **2025**, 724, 137462
35. S. Skiadas, C.D. Polyzou, Z.G. Lada, R. Clérac, Y. Sanakis, P. Dechambenoit and S.P. Perlepes, "Mixed 3d-3d'-Metal Complexes: A Dicobalt (III) Iron (III) Coordination Cluster Based on Pyridine-2-Amidoxime", *Inorganics* **2025**, 13(5), 171
36. K.H. Baka, L. Cuhna-Silva, C.P. Raptopoulou, V. Psycharis, D. Papaioannou, M. Turnbull, Z.G. Lada, S.P. Perlepes and Th.C. Stamatatos, "Copper(II)-Promoted Reactions of α -Pyridoin Oxime: A Dodecanuclear Cluster and a 2D Coordination Polymer", *Magnetochemistry* **2025**, 11(4), 35
37. ^{CA}A.C. Patsidis, I.Th. Papageorgiou, Z.G. Lada, "Synthesis and Integration of an Fe (II) Coordination Compound into Green Resin Matrices for Multifunctional Dielectric, Piezoelectric, Energy Harvesting, and Storage Applications", *Polymers* **2025**, 17(18), 2509
38. C.T. Kelly, E. Cuza, E. Pasquetti, N. Quinn, M. Griffin, P. Nockemann, H. Müller-Bunz, J. Bruno-Colmenarez, S. Felton, Z.G. Lada and G.G. Morgan, "Symmetric and asymmetric ligands for FeIII spin crossover – the influence of the C2 axis", *Dalton Trans.*, **2025**, 54, 14522
39. S.G. Skiadas, I.Th. Papageorgiou, Z.G. Lada, C.P. Raptopoulou, V. Bekiari, V. Psycharis, S.T. Tsantis and S.P. Perlepes, "Reactions of the Uranyl Ion and a Bulky Tetradentate, "Salen-Type" Schiff Base: Synthesis and Study of Two Mononuclear Complexes" *Crystals*, **2025**, 15(11), 974
40. ^{CA}G.N. Mathioudakis, G. Kaldiris, S. Felton, G.G. Morgan, G.A. Voyiatzis and Z.G. Lada, "Polymer Mediated Control and Migration Effects in Spin-Crossover-Polymer Hybrids Towards Tunable Thermal Sensing Applications", *Polymers* **2025**, 17(23), 3226
41. Y. Zhang, Z.G. Lada, W. Aljuhani, Y. Lu, C. Li, Y. Xu, G.G. Morgan and S.E.J. Bell, "Plasmonically enhanced Fe (ii) coordination complexes allow SERS readout of spin state switching below the optical diffraction limit", *Chemical Science*, Advance Article, **2026**
42. ^{CA}I.Th. Papageorgiou, G.N. Mathioudakis, F. Adami, G.G. Morgan, M. Drosinou, Z. Piperigkou, G.A. Voyiatzis and Z.G. Lada "Synergistic Integration of Spin Crossover and Zinc Oxide in Transparent Films for Active Intelligent Packaging", *Polymers* **2026**, 18(4), 461
43. H. Xing, R. Zhang, N. Li, X. Li, Z. G. Lada, Th. C. Stamatatos, X. Chen, H. Shen, D. Xu, X. Xing, R. Wu, L. Song Li "Simultaneous multi-biomarker detection: streptavidin-biotin mediated high-quality quantum dot immunosensor with signal amplification", *Analytica Chimica Acta* **2026**, 1409, 345589
44. ^{CA}I.Th. Papageorgiou, G.N. Mathioudakis and Z.G. Lada, "Influence of ZIF8 Architecture on Mass Transfer and Surface Accessibility for Organic Pollutant Removal from Water", *Separation and Purification Technology*, **2026**, accepted

Book Chapters

- **Z.G. Lada**, E. Katsoulakou and S. P. Perlepes, "**Synthesis and Chemistry of Single-molecule Magnets**", in *Single-Molecule Magnets: Molecular Architectures and Building Blocks for Spintronics*, ed. Malgorzata Holynska, Wiley-VCH, New York, 2018, Print ISBN: 978-3-527-34321-8

Patent applications

1. A. Psarelis, C. Molina, G. Theodoropoulos, **Z. Lada**, G. Mathioudakis, A. Soto Beobide, K. Andrikopoulos, C. Kaltsonoudis, A. Nenes, G. Voyiatzis, "Raman/SERS establishment of imidazole-based molecular probes and polymers as pH sensors", (2024) Provisional patent, US PATENT AND TRADEMARK OFFICE

2. Z.G. Lada, K.H. Baka, A. Theocharis, Th.C. Stamatatos, "Preparation of Water-Soluble Metal Oxide Nanoparticles as Nanofertilizers in Agriculture" OBI application number:000014714, EPO application number: EP26153827.6

Participation in Conferences/workshops

1. **Oral** I. Th. Papageorgiou*, G. N. Mathioudakis, and **Z. G. Lada**, "Morphological Engineering of ZIF-8 for Sustainable Organic Pollutant Removal", 2026 North America-Greece-Cyprus Conference (NAGC), 11-15 May 2026, Kefalonia, Greece
2. **Oral** G. Lataris*, K.H. Baka, G.N. Mathioudakis, T. C. Stamatatos, and **Z. G. Lada**, "Fine-Tuning the Size and Water Solubility of Metal Oxide Functionalized Nanoparticles towards Photocatalytic Degradation of Organic Pollutants in Water", 2026 North America-Greece-Cyprus Conference (NAGC), 11-15 May 2026, Kefalonia, Greece
3. **Oral** **Z.G. Lada**, "Design, Development and Exploitation of Metal Organic Frameworks (MOFs) and Metal Oxide Nanoparticles Towards Sustainable Energy Applications", 15th Energy Forum, 17 March 2026, Patras, Greece
4. **Oral** **Z.G. Lada**, "Design and Development of Functional Materials in the Field of Inorganic Chemistry", Seminar at ICE-HT/FORTH as Visiting Faculty Member, Patras, Greece
5. **POSTER** I. Th. Papageorgiou*, G. N. Mathioudakis, S. Felton, G. G. Morgan, Z. Piperigkou, G. A. Voyatzis and **Z. G. Lada**, "Synergistic Integration of Spin Crossover and Zinc Oxide in Transparent Films for Active Intelligent Packaging", 15th Hellenic Polymer Society International Conference (POLYCONF15), 3-6 December 2025, Patras, Greece
6. **ORAL** I. Th. Papageorgiou*, G. N. Mathioudakis, S. Felton, G. G. Morgan, Z. Piperigkou, G. A. Voyatzis and **Z. G. Lada**, "Synergistic Integration of Spin Crossover and Zinc Oxide in Transparent Films for Active Intelligent Packaging", 3rd Panhellenic Symposium on Inorganic Chemistry, 7-9 November 2025, Ioannina, Greece
7. **ORAL** G.N. Mathioudakis, G. Kaldiris, S. Felton, G.G. Morgan, G.A. Voyatzis and **Z.G. Lada***, "Tuning Spin Crossover (SCO) Transitions for Temperature Sensing Applications", 3rd Panhellenic Symposium on Inorganic Chemistry, 7-9 November 2025, Ioannina, Greece
8. **POSTER** I. Th. Papageorgiou*, G. N. Mathioudakis, S. Felton, G. G. Morgan, Z. Piperigkou, G. A. Voyatzis and **Z. G. Lada**, "Synergistic Integration of Spin Crossover and Zinc Oxide in Transparent Films for Active Intelligent Packaging", 3rd Panhellenic Symposium on Inorganic Chemistry, 7-9 November 2025, Ioannina, Greece
9. **POSTER** G. Lataris*, K.H. Baka, T. C. Stamatatos, and **Z. G. Lada**, "Fine-Tuning the Size and Water Solubility of Metal Oxide Functionalized Nanoparticles towards Photocatalytic Properties and Beyond", 3rd Panhellenic Symposium on Inorganic Chemistry, 7-9 November 2025, Ioannina, Greece
10. **Oral** **Z.G. Lada***, "Applied Inorganic Chemistry: Spin Crossover Temperature Sensors and Beyond", Pre-ICMM Meetings: Olivier Kahn Discussions (OKD), 23-24 October, 2025, Paris, France
11. **Oral** **Z.G. Lada**, G.N. Mathioudakis, A. Soto Beobide, K.S. Andrikopoulos and G.A. Voyatzis, "The Surface Enhanced Raman Scattering, SERS, as an analytical method for detection of PFAS" Interdisciplinary Symposium on One health and PFAS: an integrated approach to human, animal, and environmental health, Allesandria, Italy, 20th June 2025
12. **Oral** **Z.G. Lada**, G.N. Mathioudakis, G. Kaldiris, S. Felton, G.G. Morgan, and G.A. Voyatzis, "Tuning Spin Crossover (SCO) Transitions for Temperature Sensing Applications", 9th International Conference on Phase Transition and Dynamical Properties of Spin Transition Materials, Dublin 25-29 May 2025
13. **Oral** **Z.G. Lada***, G.N. Mathioudakis, G. Kaldiris, and G.A. Voyatzis, "Regulating Spin Crossover (SCO) Transition Temperatures towards SCO based Temperature Sensors in Food Packaging", 2025 North America-Greece-Cyprus Conference, May 4-9, 2025, Syros, Greece
14. **Oral** **Z.G. Lada***, G.N. Mathioudakis, G. Kaldiris, and G.A. Voyatzis, "Modulating Spin Crossover (SCO) Transition for the Optimization of SCO-Based Temperature Sensors", GFSM 2025, Nanochemistry, Hybrid Materials & Molecular Chemistry, April 22-25, 2025, Louvain-la-Neuve, Belgium
15. **Oral** **Z.G. Lada***, G.N. Mathioudakis, A. Soto Beobide, K.S. Andrikopoulos and G.A. Voyatzis, "Food Safety Temperature Indicators for Food Packaging Materials", International Conference on Safety Food Packaging Systems (ICSFPS-24), 5th -6th June 2024, Paris, France
16. **POSTER** Y. Zhang*, **Z.G. Lada**, G. Morgan and S. Bell, "Temperature switched Au@Spin Crossover nanocomposites probed by Surface Enhanced Raman Scattering", EUCHEMS 2024, 7-11 July 2024, Dublin, Ireland
17. **POSTER** **Z.G. Lada***, M. Griffin, L. Toupet, I. Kühne, B. Gildea, H. Müller-Bunz, a T. Keyes, E. Collet, B. Grimm,

- H.van Tol, S. Hill, J.F. L  tard, C. Desplanchese and G.G. Morgan, Summer School on Molecular Magnetism 2024, 24th-28th June 2024, Frejus, France
18. **POSTER** G. Voyiatzis, A. Psarelis*, C. Molina, G. Theodoropoulos, **Z. Lada**, G. Mathioudakis, A. Soto Beobide, K. Andrikopoulos, Ch. Kaltsonoudis, A. Nenes, "New strategies for Non-invasive pH sensing of Aerosols", 12th Hellenic Chemical Engineering Conference, 2024, 29-31 May 2024, Thessaloniki, Greece
 19. **POSTER** L. Greiser*, A. Sultan **Z.G. Lada**, and G. Morgan, "New Routes to Spin State Switching in Mn^{III}", Inorganic Ireland Symposium 2023, 19 May 2023, Dublin, Ireland
 20. **Oral&POSTER** **Z.G. Lada***, K.S. Andrikopoulos, G.A. Voyiatzis and G. Morgan, "Towards the Investigation of Spin Crossover (SCO) systems", Inorganic Ireland Symposium 2023, 19 May 2023, Dublin, Ireland
 21. **POSTER** L. Greiser*, A. Sultan **Z.G. Lada**, and G. Morgan, "New Routes to Spin State Switching in Mn^{III}", Inorganic Ireland Symposium 2023, 19 May 2023, Dublin, Ireland
 22. **Oral** **Z.G. Lada***, A. Sultan, S. Sundaresan, D. McLaughlin, H. M  ller-Bunz and G.G. Morgan, "Spin State Switching in Non-centrosymmetric Crystals", 2023 Joint CTMNM/NAGC Conference, May 8-12, 2023, Spetses, Greece
 23. **Oral** **Z.G. Lada**, G.N. Mathioudakis, A. Soto Beobide, K.S. Andrikopoulos and G.A. Voyiatzis*, "Towards the Challenging Detection of Per- And Polyfluoroalkyl Substances (PFAS) with Nano-Enabled Raman Scattering (SERS): Initial Steps Based on Metal Organic Frameworks Substrates", Nanotechnology 2022, Session EU Projects, 2-9 July 2022, Thessaloniki, Greece
 24. **POSTER** G.N. Mathioudakis*, **Z.G. Lada**, K.S. Andrikopoulos, A. Soto Beobide and G.A. Voyiatzis, "Optimization of Surface Enhanced Raman Scattering by Stabilization of Silver Colloidal Suspensions", 28th EUCHEM Conference on Molten Salts and Ionic Liquids, June 5-10, 2022, Patras, Greece
 25. **Oral** **Z.G. Lada***, G.N. Mathioudakis, A. Soto Beobide, K.S. Andrikopoulos and G.A. Voyiatzis, "In the Exploration of Novel Surface Enhanced Raman (Sers) Approaches towards the Challenging Detection of Per- And Polyfluoroalkyl Substances (PFAS)", EGU General Assembly 2022, Session HS8.1.4 – Emerging particles and biocolloids in terrestrial and aquatic systems, 23–27 May 2022, Vienna, Austria & Online
 26. **Oral** **Z.G. Lada***, G.N. Mathioudakis, A. Soto Beobide, K.S. Andrikopoulos and G.A. Voyiatzis, "Metal Organic Frameworks (MOFs) based Surface Enhanced Raman Scattering (SERS) Substrates towards Emerging Contaminants Detection", 2022 North America-Greece-Cyprus Conference, May 9-13, 2022, Ayia Napa, Cyprus
 27. **Oral** S.P. Perlepes*, **Z.G. Lada**, C.D. Polyzou, C.P. Raptopoulou, V. Psycharis, G.N. Mathioudakis, A. Soto Beobide, K.S. Andrikopoulos and G.A. Voyiatzis, "On the Way to 3d/4f-metal Coordination Complexes Using 2-pyridyloximate Ligands", 2022 North America-Greece-Cyprus Conference, May 9-13, 2022, Ayia Napa, Cyprus
 28. **Oral** **Z.G. Lada***, K.S. Andrikopoulos, A. Chrissanthopoulos, S.P. Perlepes and G.A. Voyiatzis, "Switching Characteristics of [Fe(abpt)₂(CNS)₂] Spin Crossover Nanowires Investigated by Raman Spectroscopy", EUROPEAN CONGRESS AND EXHIBITION ON ADVANCED MATERIALS AND PROCESSES - EUROMAT 2021, 12-16 September, 2021 virtual
 29. **Oral** G.A. Voyiatzis*, **Z.G. Lada**, G.N. Mathioudakis, K.S. Andrikopoulos and A. Soto Beobide, "Physicochemical properties, transformation and degradation assessment of MCNMs and HARNs with spectroscopic techniques", 18th International Conference on Nanosciences & Nanotechnologies (NN21) 6-9 July 2021, Thessaloniki, Greece
 30. **Oral** A. Soto Beobide*, K.S. Andrikopoulos, J.A. Anastasopoulos, **Z.G. Lada**, G.N. Mathioudakis and G.A. Voyiatzis, "Carbon Nanotube Based Membranes as Candidates for Wastewater Treatment", International Symposium on Constructed Wetlands & Small Decentralized Wastewater Treatment Plants (ISCW2019), 29-31 August, 2019, Patras, Greece
 31. **Poster** **Z.G. Lada***, K.S. Andrikopoulos, A. Soto Beobide, A. Chrissanthopoulos, S.P. Perlepes and G.A. Voyiatzis, "Fe(II) Spin Crossover Coordination Complexes: A Novel Potential Alternative of Temperature Sensors in Food Packaging Industry", 12th Retreat of FORTH 2019, 15-16 October, 2019, Patras, Greece
 32. **Flash&Poster** **Z.G. Lada***, K.S. Andrikopoulos, A. Chrissanthopoulos, S.P. Perlepes and G.A. Voyiatzis, "Temperature Dependent Raman Spectroscopy as a Key-Role Player for the Monitoring of Spin Crossover Phenomenon (SCO): Investigation of SCO on Fe(II) Mononuclear Complexes", 4th BOOK-D: Bordeaux Olivier Kahn Discussions, 25th- 28th June, 2019, Bordeaux, France
 33. **Oral** **Z.G. Lada***, K.S. Andrikopoulos, A. Soto Beobide, S.P. Perlepes and G.A. Voyiatzis, "Novel Nanomaterials as Temperature Sensors in Food Packaging Industry: Fe(II) Coordination Complexes Exhibiting Spin Crossover Phenomenon (SCO) in Food Packaging Polymers", 12th Hellenic Chemical

Engineering Conference, 29-31 May, 2019, Athens, Greece

34. **Oral Z.G. Lada***, K.S. Andrikopoulos, A. Chrissanthopoulos, S.P. Perlepes and G.A. Voyiatzis, *"Fe(II) Coordination Complexes Exhibiting Spin Crossover Phenomenon (SCO): Could it be Possible for Raman Spectroscopy to Play a Key-Role in Monitoring the SCO Behaviour?"*, 8th Workshop on "Current Trends in Molecular and Nanoscale Magnetism", 27-31 May, 2019, Rhodes, Greece
35. **Poster Z.G. Lada***, K.S. Andrikopoulos, A. Soto Beobide, S.P. Perlepes and G.A. Voyiatzis, *"Novel Nanomaterials as Temperature Sensors in Food Packaging Industry: Fe(II) Coordination Complexes Exhibiting Spin Crossover Phenomenon (SCO) in Food Packaging Polymers"*, 4th Workshop of Graduates and Postdocs in Chemical Engineering Sciences, 31st October, 2018, Patras, Greece
36. **Poster K. Pantelis***, N.C. Anastasiadis, **Z.G. Lada**, C.P. Raptopoulou, V. Psycharis and S.P. Perlepes, *"Coordination Properties of Schiff Bases Derived from the Condensation of Salicylaldehyde and 2-aminobenzoic acid and its Derivatives"*, 9th International Conference of the Hellenic Crystallographic Association (HeCrA), 05-07 October, 2018, Patras, Greece
37. **Poster Z.G. Lada***, K.S. Andrikopoulos, A. Soto Beobide, S.P. Perlepes and G.A. Voyiatzis, *"Novel Nanomaterials as Temperature Sensors in Food Packaging Industry: Fe(II) Coordination Complexes Exhibiting Spin Crossover Phenomenon (SCO) in Food Packaging Polymers"*, 12th Hellenic Polymer Society International Conference, 30 September- 3 October, 2018, Ioannina, Greece
38. **Poster Z.G. Lada**, K.S. Andrikopoulos*, A. Soto Beobide, A. Chrissanthopoulos, S.P. Perlepes and G.A. Voyiatzis, *"Development of "Intelligent" Nanomaterials as Temperature Sensors in Food Packaging Industry: Synthesis, Characterization and Study of Fe(II) Coordination Complexes Exhibiting Spin Crossover Phenomenon (SCO)"*, 15th International Conference on Nanosciences & Nanotechnologies (NN18), 3-6 July 2018, Thessaloniki, Greece
39. **Poster Z.G. Lada***, K.S. Andrikopoulos, S.P. Perlepes and G.A. Voyiatzis, *"Development of New Temperature Sensors in Food Packaging Industry: Synthesis, Characterization and Study of 3d Coordination Complexes Exhibiting Spin Crossover Phenomena (SCO)"*, 11th Retreat of FORTH 2017, 13-14 October, 2017, Heraklion, Crete
40. **Poster Z.G. Lada***, K.S. Andrikopoulos, S.P. Perlepes and G.A. Voyiatzis, *"Development of New Temperature Sensors in Food Packaging Industry: Synthesis, Characterization and Study of 3d Coordination Complexes Exhibiting Spin Crossover Phenomena (SCO)"*, 3rd Workshop of Graduates and Post-Docs of FORTH/ICE-HT, 7 October, 2017, Patras, Greece
41. **Flash&Poster Z.G. Lada***, K.S. Andrikopoulos, S.P. Perlepes, and G.A. Voyiatzis, *"Synthesis, Characterization and Study of New Temperature Sensors in Food Packaging Industry: 3d, 3d/3d' Coordination Complexes Exhibiting Spin Crossover Phenomena (SCO)"*, 3rd BOOK-D: Bordeaux Olivier Kahn Discussions, 26th- 27th June, 2017, Bordeaux, France
42. **Oral Z.G. Lada***, C. S. Andrikopoulos, A. Soto Beobide, S.P. Perlepes, G. Bokias and G.A. Voyiatzis, *"Synthesis, Study and Characterization of Sensors in Food Packaging Materials"*, 22nd Hellenic Conference of Chemistry, 2-4 December, 2016, Thessaloniki, Greece
43. **Oral S.P. Perlepes***, **Z.G. Lada**, E. Katsoulakou, A. Kitos, C.D. Polyzou, P. Danelli, C.P. Raptopoulou, V. Psycharis and M. Turnbull, *"Metal Ion-Assisted Transformations of Carbonyl- and Oxime-Containing Ligands as a Means of Preparing Magnetically Interesting Complexes"*, 6th Workshop on "Current Trends in Molecular and Nanoscale Magnetism", 9-13 October 2016, Pylos, Greece
44. **Oral Z.G. Lada***, K.S. Andrikopoulos, A. Soto Beobide, S.P. Perlepes, G. Bokias and G.A. Voyiatzis, *"In Search of New 3d- and 3d/3d'- Metal Complexes for Sensing Applications: Colour Changes Induced by Spin Crossover (SCO) Phenomena and Redox Processes at Room Temperature"*, 2nd Workshop of Graduates and Post-Docs of FORTH/ICE-HT, 21 September, 2016, Patras, Greece
45. **Poster S.P. Perlepes***, A.A. Kitos, C.G. Efthymiou, C. Papatriantafyllopoulou, C.D. Polyzou, **Z.G. Lada** and P. Danelli, *"Interesting Metal Ion-Assisted Transformations of Carbonyl-and Oxime-Containing Ligands"*, 42nd International Conference on Coordination Chemistry, 3-8 July 2016, Brest, France
46. **Oral Z.G. Lada***, D. Karvouniari, C.P. Raptopoulou, V. Psycharis, M. Turnbull, C.J. Milios, Y. Sanakis, D. Papaioanou, A. Soto Beobide, G.A. Voyiatzis and S.P. Perlepes, *"Copper(II) and Copper(II)/ Lanthanide(III) Coordination Complexes and Polymers Based on Oxime Ligands and Di-2-pyridyl Ketone- Novel Organic Ligand Transformations"*, 6th North America- Greece-Cyprus Workshop on Paramagnetic Materials, 3-6 June 2015, Athens, Greece
47. **Oral S.P. Perlepes***, C.D. Polyzou, H. Nikolaou, **Z.G. Lada**, C. Papatriantafyllopoulou, C.G. Efthymiou and C.P. Raptopoulou, *"Recent Synthetic, Structural, Magnetic and Optical Adventures in the Chemistry of*

- Coordination Clusters*", 12th Greece- Cyprus Chemistry Conference, 8-10 May, 2015, Thessaloniki, Greece
48. **Poster** P. Danelli*, **Z.G. Lada**, C.P. Raptopoulou, V. Psycharis, A. Soto Beobide, G.A. Voyiatzis, T.C. Stamatatos and S.P. Perlepes, "*Mercury(I) and Mercury(II) Complexes of 2-pyridyl Oximes*", 12th Greece- Cyprus Chemistry Conference, 8-10 May, 2015, Thessaloniki, Greece
 49. **Poster** **Z.G. Lada***, S. Andrikaki, K. Andrikopoulos, I. Thivaios, G. Bokias, T. Ioannides and G.A. Voyiatzis, "*Oxygen Scavengers in Food Packaging Materials: Migration Control in Various Food Simulants- Detection of Ascorbic Acid and its Derivatives*", 1st Workshop of Graduates and Post-Docs of FORTH/ICE-HT, 27 May, 2015, Patras, Greece
 50. **Poster** **Z.G. Lada***, C.P. Raptopoulou, V. Psycharis, M.M. Turnbull, D. Papaioanou, A. Soto Beobide, G.A. Voyiatzis and S.P. Perlepes, "*One Dimensional Copper(II) Coordination Polymers Containing Alternating Quinoxaline and Quadruplicate Carboxylato Bridges: Synthesis, Structural Characterization, Physical and Spectroscopic Studies, and a Novel Metal-Ion Assisted Organic Transformation*", 10th Hellenic Polymer Conference, 4-6 December 2014, Patras, Greece
 51. **Flash** S.P. Perlepes*, **Z.G. Lada**, C.D. Polyzou, C.G. Efthymiou, C. P. Raptopoulou, A. Georgopoulou, A. Escuer, C. J. Milios, T. Nguyen and G. Christou, "*In Search of 3d/4f- Metal High Spin Molecules and Single-Molecule Magnets*", 14th International Conference on Molecular-Based Magnets, 5-10 July 2014, Saint Petersburg, Russia
 52. **Oral** **Z.G. Lada***, C.D. Polyzou, D. Karvouniari, A. Terzis, C.P. Raptopoulou, V. Psycharis, C.G. Efthymiou, C.J. Milios and S.P. Perlepes, "*Mixed Transition-metal / Lanthanide(III) Complexes Based on 2-pyridyl Oximes and Di-2-pyridyl Ketone*", 5th North America- Greece-Cyprus Workshop on Paramagnetic Materials, 22-26 May 2013, Limassol, Cyprus
 53. **Poster** C.D. Polyzou*, H. Nikolaou, **Z. Lada**, C. Papatriantafyllopoulou, A. Terzis, V. Psycharis, C. Raptopoulou, A. Escuer, S.P. Perlepes and A. Powell, "*Employment of 2-Pyridyl Ketone Oxime based Ligands in 3d/4f-Metal Chemistry*", Koordinationchemie Treffen, 24-26 February 2013, Bayreuth, Germany
 54. **Oral** S.P. Perlepes*, C. Polyzou, E. Nikolaou, K. Alexopoulou, **Z. Lada**, C. Papatriantafyllopoulou, C.G. Efthymiou, C.P. Raptopoulou, V. Psycharis, A. Escuer and G. Christou, "*Mixed Transition Metal-Lanthanide(III) Clusters: Synthetic, Structural and Magnetic Aspects*", 4th Workshop on Current Trends in Molecular and Nanoscale Magnetism, 10-14 June 2012, Ouranopolis, Greece

Peer recognition

Awards

2023: 1st Prize Award in the category "ESG, Environment Technology" of the **Bootcamp Match & Develop a startup Patras 4.0, 2023, NBG Business Seeds**, initiative of National Bank of Greece (Title: "Novel Approaches Towards Smart Food Packaging Materials)

2014 – 2019: Fellowship for PhD Studies from FORTH/ICE-HT

2013: Award-Scholarship, Greek State Scholarship Foundation (I.K.Y)/ ESF, NSRF 2008: Award-Financial Support (among the best new entrant in the Chem. Dep., sponsored by GRNET

Distinctions in publications

2024: Front page, Cover, K.N. Pantelis et al., "Hexanuclear {ZnII₄FeII₂} and {ZnII₄CrIII₂} complexes from the use of potentially tetradentate NOO'O" Schiff-base ligands", *New J. Chem.*, 2024, 48, 11221-11232

2023: Editor's Choice list of publications, Z.G. Lada et al., "Tuning the Spin-Crossover Behaviour in Fe(II) Polymeric Composites towards Food Packaging Applications" Special Issue "Molecular Spin Crossover Materials: Recent Trends, Emerging Properties and Applications", *Magnetochemistry*, 2022, 8(2), 16

2022: Front page, title story, 1. Z.G. Lada, "Investigation of Spin-Crossover Systems by Raman Spectroscopy: A Critical Review on the Assets and the Bottlenecks", Special Issue "Molecular Spin Crossover Materials: Recent Trends, Emerging Properties and Applications", *Magnetochemistry*, 2022, Review, 8(9), 108, 2. Z.G. Lada et al., "Tuning the Spin-Crossover Behaviour in Fe(II) Polymeric Composites towards Food Packaging Applications" Special Issue "Molecular Spin Crossover Materials: Recent Trends, Emerging Properties and Applications", *Magnetochemistry*, 2022, 8(2), 16, 3. 28.

Participation in Conderences as Invited Speaker

1. **Oral** **Z.G. Lada**, "Design, Development and Exploitation of Metal Organic Frameworks (MOFs) and Metal Oxide Nanoparticles Towards Sustainable Energy Applications", 15th Energy Forum, 17 March 2026, Patras, Greece
2. **Oral** **Z.G. Lada**, G.N. Mathioudakis, A. Soto Beobide, K.S. Andrikopoulos and G.A. Voyiatzis, "The Surface

- Enhanced Raman Scattering, SERS, as an analytical method for detection of PFAS” Interdisciplinary Symposim on One health and PFAS: an integrated approach to human, animal, and environmental health, Allesandria, Italy, 20th June 2025
3. ^{Oral} **Z.G. Lada**, G.N. Mathioudakis, G. Kaldiris, and G.A. Voyiatzis, “Regulating Spin Crossover (SCO) Transition Temperatures towards SCO based Temperature Sensors in Food Packaging”, 2025 North America-Greece-Cyprus Conference, May 4-9, 2022, Syros, Greece
 4. ^{Oral} **Z.G. Lada**, G.N. Mathioudakis, G. Kaldiris, S. Felton, G.G. Morgan, and G.A. Voyiatzis, “Tuning Spin Crossover (SCO) Transitions for Temperature Sensing Applications”, 9th International Conference on Phase Transition and Dynamical Properties of Spin Transition Materials, Dublin 25-29 May 2025
 5. ^{Oral} **Z.G. Lada**, G.N. Mathioudakis, A. Soto Beobide, K.S. Andrikopoulos and G.A. Voyiatzis, “Food Safety Temperature Indicators for Food Packaging Materials”, International Conference on Safety Food Packaging Systems (ICSFPS-24), 5th -6th June 2024, Paris, France
 6. ^{Oral} **Z.G. Lada**, A. Sultan, S. Sundaresan, D. McLaughlin, H. Müller-Bunz and G.G. Morgan, “Spin State Switching in Non-centrosymmetric Crystals”, 2023 Joint CTMNM/NAGC Conference, May 8-12, 2023, Spetses, Greece
 7. ^{Oral} **Z.G. Lada**, G.N. Mathioudakis, A. Soto Beobide, K.S. Andrikopoulos and G.A. Voyiatzis, “Metal Organic Frameworks (MOFs) based Surface Enhanced Raman Scattering (SERS) substrates towards emerging contaminants detection”, 2022 North America-Greece-Cyprus Conference, May 9-13, 2022, Ayia Napa, Cyprus
 8. ^{Oral} **Z.G. Lada**, K.S. Andrikopoulos, A. Chrissanthopoulos, S.P. Perlepes and G.A. Voyiatzis, “*Fe(II) Coordination Complexes Exhibiting Spin Crossover Phenomenon (SCO): Could it be Possible* for Raman Spectroscopy to Play a Key-Role in Monitoring the SCO Behaviour?”, 8th Workshop on “Current Trends in Molecular and Nanoscale Magnetism”, 27-31 May, 2019, Rhodes, Greece
 9. ^{Oral} **Z.G. Lada**, D. Karvouniari, C.P. Raptopoulou, V. Psycharis, M. Turnbull, C.J. Milios, Y. Sanakis, D. Papaioanou, A. Soto Beobide, G.A. Voyiatzis and S.P. Perlepes, “Copper(II) and Copper(II)/ Lanthanide(III) Coordination Complexes and Polymers Based on Oxime Ligands and Di-2-pyridyl Ketone- Novel Organic Ligand Transformations”, 6th North America- Greece-Cyprus Workshop on Paramagnetic Materials, 3-6 June 2015, Athens, Greece
 10. ^{Oral} **Z.G. Lada**, C.D. Polyzou, D. Karvouniari, A. Terzis, C.P. Raptopoulou, V. Psycharis, C.G. Efthymiou, C.J. Milios and S.P. Perlepes, “Mixed Transition-metal / Lanthanide(III) Complexes Based on 2-pyridyl Oximes and Di-2-pyridyl Ketone”, 5th North America- Greece-Cyprus Workshop on Paramagnetic Materials, 22-26 May 2013, Limassol, Cyprus

Memberships-Reviewer

Member:

- Cost Action CA22147 - European metal-organic framework network: combining research and development to promote technological solutions (EU4MOFs)
- Royal Society of Chemistry (RSC Member)
- Association of Greek Chemists

Topical Advisory Panel Member: International Journal of Molecular Sciences (IF= 6.208),

Editorial Board Member: Frontiers in Chemistry (IF= 5.545),

Guest Editor: 1. Inorganica Chimica Acta (IF= 3.2) **Recent Advances in 4f- and 5f- Metal Chemistry**

2. International Journal of Molecular Sciences (IF= 4.9) **Inorganic Chemistry: From Molecules to Materials**

3. Polymers (IF= 4.7) **Polymers in Inorganic Chemistry: Synthesis and Applications**

4. Chemistry (IF= 2.4) **Coordination Chemistry: Current Developments and Future Perspectives — a Themed Issue in Honor of Professor Spyros P. Perlepes on the Occasion of His 70th Birthday**

5. Magnetochemistry (IF= 2.6) **Molecular Spin Crossover Materials: Recent Trends, Emerging Properties and Applications**

Organizing Committee Member:

- 9th International Conference on Phase Transition and Dynamical Properties of Spin Transition Materials, Dublin 25-29 May 2025
- 12th North America, Greece and Cyprus Workshop on Paramagnetic Materials, Greece, May 2026
- 1st Workshop of Post-Graduate Students in the Chemistry Department of the University of Patras, 3 October 2026, Patras, Greece

Reviewer: 1) Dalton Transactions, 2) Coordination Chemistry Reviews, 3) International Journal of Biological Macromolecules, 4) Inorganica Chimica Acta 5) Separations, 6) New Journal of Chemistry, 7) Chinese Chemical Letters 8) Foods, 9) Journal of Inorganic and Organometallic Chemistry, 10) Polymers, 11) Crystals, 12) Metals, 13) Magnetochemistry 14) Symmetry, 15) Inorganic Chemistry Communications, 16) Applied Sciences, 17) Materials, 18) International Journal of Molecular Science, 19) Molecules, 20) Macromol, 21) BAOJ Physics, 22) Energies, 23) Chemistry, 24) Chemosensors, 25) Environments, 26) ChemistrySelect

RESEARCH ACTIVITIES

Dr. Lada's research activity focuses on the design, synthesis, and physicochemical characterization of advanced inorganic materials, with emphasis on transition metal and lanthanide coordination compounds carrying targeted functional properties for diverse applications.

The core research directions include the design of multifunctional materials, such as **Metal-Organic Frameworks (MOFs)**, for environmental and energy applications such as the removal of toxic pollutants from water (e.g. pharmaceuticals, PFAS), CO₂ conversion and gas separation, and controlled release of nutrients and agrochemicals in agri-food systems. Another active research direction concerns the development of water-soluble metal oxide nanoparticles and advanced materials (e.g. MOF-carbon based@ZnO hybrids) as photocatalysts in pollutant degradation.

Particular attention is also given to the investigation of the **Spin Crossover (SCO)** phenomenon and to addressing a major challenge in SCO compounds: controlling the spin-transition curve from the high-spin to the low-spin state. This innovation aims to contribute to the development of a new class of materials with applications like temperature sensors for quality assurance in pharmaceuticals and food products, as well as in multifunctional materials combining additional properties such as energy harvesting, conductivity and information storage.

Ongoing activities also encompass the synthesis and study of **heterometallic d-/d- and d-/p-block complexes** (e.g., Fe(II)/ZnO, Ag(I)/Sn(IV), Ir(III)/Sn(IV)), aiming at the incorporation and investigation of dual functionalities (e.g., temperature sensing/antimicrobial, antimicrobial/anticancer, photophysical/anticancer).

Parallel research lines involve the analysis of substances—particularly organic pollutants such as per- and polyfluoroalkyl substances (PFAS), using **Surface Enhanced Raman Scattering (SERS)** spectroscopy and Raman characterization and observation of phase transition phenomena under normal and extreme conditions.

RESEARCH GRANTS

Project Title	Funding source	Period	Role
Staff Mobility for Teaching Assignment (STA), Erasmus+ KA131	Erasmus+	2025-2026	Teaching mobility
"MEDICUS", Grant No: 83861	University of Patras	2025-2027	PI
Strategies for health protection, pollution Control and Elimination of Next generAtion Refractive Organic chemicals from the Soil, vadose zone and water- SCENARIOS	H2020-GREEN DEAL- LC-GD-8-1-2020 (RIA) Total Budget: 12 M€/FORTH Budget: 945.750 €	2021-2024 (10.2023-to date)	Co-WP leader , FORTH WP leader "Innovative analytical methods for detection and monitoring of PFAS"
Molecular Magnetoelectric Materials	US-Ireland R&D Partnership Programme Total Budget: 13.5 M€	2021-2025 (My involvement: 2024)	Post-Doctoral Researcher, Study of switchable molecules (SMM, SCO)
Novel food packaging materials	"Ideas Incubator" funded by the framework of the Innovative Entrepreneurship Observatory of the Region of Crete Total Budget: 3 k€	2024 (02.2024-10.24)	PI

Optical and Magnetic Integration of Surface Molecules-OptiMISM	Science Foundation Ireland (SFI) Total Budget: 1.01 M€	2021-2024 (My involvement: 2023-to date)	Post-Doctoral Researcher, Characterization and technological development of hybrids comprised of coordination complexes onto surfaces
Strategies for health protection, pollution Control and Elimination of Next generAtion RefractIve Organic chemicals from the Soil, vadose zone and water- SCENARIOS	H2020-GREEN DEAL- LC-GD-8-1-2020 (RIA) Total Budget: 12 M€/FORTH Budget: 945.750 €	2021-2026 (My involvement: 2021-2026)	Co-WP leader, FORTH WP leader “Innovative analytical methods for detection and monitoring of PFAS”
Development and scaled Implementation of sAfe by design tools and Guidelines for multicOmponent aNd hArn nanomaterials- DIAGONAL	H2020-NMBP-TO-IND-2020-twostage (RIA) Total Budget: 6.34 M€/FORTH Budget: 321.250 €	2021-2024 (My involvement: 2021- 2024)	FORTH/LAMS: “Physicochemical properties, and transformation-degradation analysis of selected MCNMs and HARNs”
Industrial development of lightweight protection body armor for military and civil-commercial applications- THORAX-D	Operational Programme "Specific Action Industrial Materials" (NSRF 2014-2020) Total Budget: 599.571 €/ FORTH Budget: 114.954 €	2021-2023 (My involvement: 2021-2023)	FORTH/LAMS: Characterization of materials and intermediate products & evaluation of the protection panels against ballistic and knife-proof tests in molecular level
Biotransformation of Food Industry Waste in Biopolymers for Packaging Products in the Context of a Biorefinery- Wastes-to-Biopolymers	Operational Programme "Competitiveness, Entrepreneurship and Innovation" (NSRF 2014-2020)- GSRT	2018-2022 (My involvement: 2021-2022)	Post-Doctoral Researcher, Experimental characterization of packaging materials and migration release study of molecular species from food packaging to food simulants
Development of Surface Coating Processes in Cotton Yarns / Fabrics for Single Stage Dyeing with Reduced Environmental Impact – Chromasurf	Operational Programme "Competitiveness, Entrepreneurship and Innovation" (NSRF 2014-2020)- GSRT- Total Budget: 803 k€/ FORTH Budget: 195 k€	2018-2022 (My involvement: 2018-2021)	Post-Doctoral Researcher, Synthesis and characterization of materials, fibers and dyes by spectroscopic techniques- Partners: COLORA SA, SOULIS-KUEHNIS AG, MHK ELVIFA; MIRTEC SA, UNIV. PATRAS
Advanced Research Activities in Biomedical and Agro alimentary Technologies” (MIS 5002469), Implemented under the Action for the Strategic Development on the Research and Technological Sector	Operational Programme "Competitiveness, Entrepreneurship and Innovation" (NSRF 2014-2020) and co-financed by Greece and the European Union (European Regional Development Fund- Total Budget: 2.32 k€	2014-2017 (My involvement: 2018)	Research Associate, Synthesis and characterization of sensors and migration release study from food packaging materials
Lightweight, flexible and smart protective clothing for law enforcement personnel – SMARTPRO	CEU, FP7-SEC- 2013.1.4-1: Smart and protective clothing for law enforcement and first responders – Capability Project- Total Budget: 3.837k€	2014-2017 (My involvement: 2014-2016)	Research Associate, Assessment of stabbing & shooting impact on the materials at the molecular level- Partners: EBETAM AE (Coord) (GR), LEITAT (ES), NTT (IT), SIAMIDIS (GR), RWTH (DE), BCB, International Lt (UK), SOILANI EMC (IT), CIMA (ES), INT (ES),

Extended shelf-life biopolymers for sustainable and multifunctional food packaging solutions – NanoBarrier	CEU, FP7-NMP-2011 Large scale integrating collaborative project 5 NMP-2011.1.1-1 Smart and multifunctional packaging concepts using nanotechnology- Total Budget: 9.94 M€	2012-2016 (My involvement: 2016)	Research Associate, Development of iron-based oxygen scavengers- Partners: SINTEF (NO), MPI (DE), UM (SLO), UAV (PT), ITE (ES), INN (SE), LOG (PT), ARG (GR), GRA (FR), PLA (DE), PRA (PT), ELA (FI), BOR (NO), SCA (SE) ICE/HT
Atmospheric Organic Particulate Matter, Air Quality and Climate Change Studies – ATMOPACS	European-FP7-IDEAS-ERC research project Total Budget: 2500 k€	2011-2015 (My involvement: 2015)	Research Associate