

**Maria Tsoukala**  
PhD student in Chemistry

## Education

**PhD student in Chemistry**, Section of Inorganic and Environmental Chemistry and Technology, Department of Chemistry, National and Kapodistrian University of Athens. Institute of Nanoscience and Nanotechnology, NCSR “Demokritos”. Institute of Nuclear & Radiological Sciences & Technology, Energy & Safety, National Center for Scientific Research “Demokritos”.

Research project: “*Structural, spectroscopic and biological properties of Copper complexes with various imidodiphosphinato ligands και diimines*”.

Section of Inorganic and Environmental Chemistry and Technology, Department of Chemistry, National and Kapodistrian University of Athens. Institute of Nanoscience and Nanotechnology, NCSR “Demokritos”. Institute of Nuclear & Radiological Sciences & Technology, Energy & Safety, National Center for Scientific Research “Demokritos”.

SUPERVISOR: Professor P. Kyritsis

**M.Sc. in Inorganic Chemistry**, National and Kapodistrian University of Athens (2016)

COURSES: Advanced Inorganic Chemistry, Physical Methods for Characterization of Structure (Spectroscopy, Circular Dichroism, Electrochemical methods, NMR, EPR, TGA, IR, Raman), Bioinorganic Chemistry, Photochemistry.

MSc Thesis: “*Synthesis, characterization and biological activity of Cu(II) complexes with the imidodiphosphinato ligand (O,O) = [Ph<sub>2</sub>P(O)NP(O)Ph<sub>2</sub>]<sup>-</sup> and various diimines*”.

Section of Inorganic and Environmental Chemistry and Technology, Department of Chemistry, National and Kapodistrian University of Athens. Institute of Nanoscience and Nanotechnology, NCSR “Demokritos”. Institute of Nuclear & Radiological Sciences & Technology, Energy & Safety, National Center for Scientific Research “Demokritos”.

SUPERVISOR: Professor P. Kyritsis

**B.Sc. in Chemistry**, National and Kapodistrian University of Athens (2014)

Study in Clinical Biochemistry: “*Expression of human Telomerase Reverse Transcriptase (hTERT) splice variants in Cervical Cancer, with RT-PCR*”.

Laboratory of Clinical Chemistry, National and Kapodistrian University of Athens, Greece.

SUPERVISOR: Professor E. Lianidou

## Laboratory experience

**09/2017**, Short-Term Scientific Mission, “*Characterization of two Copper (II) complexes*”.

Aix Marseille Université, CNRS, Centrale Marseille” (Project supported by ECOST-Bio, CM1305. SUPERVISOR, PROF.

SUPERVISOR: Researcher J.-A. Simaan.

**2014-2020**, Laboratory Assistant

National and Kapodistrian University of Athens, Division of Faculty of Chemistry III, Greece, Athens, Greece

Assistant in Laboratory of Inorganic Chemistry, Faculty of Chemistry, training of undergraduate students of faculty of Chemistry and Biology and in the subject of Inorganic Chemistry.

**Experimental Techniques.** *Spectroscopic techniques* of IR, Circular Dichroism, TGA, Cyclic Voltammetry, EPR, NMR, UV-vis, CD. *Electrochemistry*, TGA, HPLC, Crystallography. *Biological techniques*: Protein/DNA Electrophoresis, Polymerase Chain Reaction (PCR), Methylation Specific PCR, Real-time PCR (Light Cycler Technology), DNA Extraction, RNA Extraction, Cell culture, Creation and transformation of competent cells, Isolation and purification of plasmid DNA, Use of optical microscope, Immunohistochemistry, Polymerase Chain Reaction (PCR), Real-time PCR (Light Cycler Technology), Flow cytometry (FACS).

## Publications

### JOURNAL OF COORDINATION CHEMISTRY

Maria Tsoukala, Polydoros-Chrysovalantis Ioannou, Angeliki Panagiotopoulou, Maria Pelecanou, Catherine Raptopoulou, Vassilis Psycharis, Panayotis Kyritsis : “*Self-assembled tetrameric H<sub>2</sub>O clusters in the crystal lattice of Self-assembled tetrameric H<sub>2</sub>O clusters in the crystal lattice of [Cu(μ<sub>2</sub>-OH)<sub>2</sub>{Ph<sub>2</sub>P(O)NP(O)Ph<sub>2</sub>-κ<sub>1</sub>O,O'}(1,10-phen-κ<sub>2</sub>N,N')]<sub>2</sub>·2H<sub>2</sub>O*”, <https://doi.org/10.1080/00958972.2018.1532507>).

## Presentations

1. Maria Tsoukala, Polydoros C. Ioannou, Catherine P. Raptopoulou, Vassilis Psycharis, George Mitrikas, Panayotis Kyritsis: "Structural and EPR properties of Cu(II) complexes bearing  $\{Ph_2P(O)NP(O)Ph_2\}^-$  and 2,2'-bipyridine as ligands".  
**09/ 2019**, XIth EFEPR Conference Bratislava, Slovakia.
2. Maria Tsoukala, Polydoros C. Ioannou, Catherine P. Raptopoulou, Vassilis Psycharis, George Mitrikas, A. Jalila Simaan and Panayotis Kyritsis: Structural, spectroscopic and DNA cleavage properties of Cu(II) complexes bearing  $[Ph_2P(O)NP(O)Ph_2]^-$  and 2,2'-bipyridine as ligands".  
**10/ 2018**, Athens Conference on Advances in Chemistry (ACAC 2018), National and Kapodistrian University of Athens (NKUA), Athens, Greece.
3. Maria Tsoukala, Polydoros C. Ioannou, Lefteris Ferentinos, Catherine P. Raptopoulou, Vassilis Psycharis, George Mitrikas, Maria Paravatou-Petsotas, Constantinos Methenitis, A. Jalila Simaan and Panayotis Kyritsis "Structural, spectroscopic and cytotoxic properties of Cu(II) complexes bearing  $[(Ph)_2P(O)NP(O)(Ph)_2]^-$  and 2,2'-bipyridine as ligands".  
**05/ 2018**, Copper Bioinorganic Chemistry Symposium (CuBICS 2018), Aix-Marseille Université/CNRS, France.
4. M. Tsoukala, P.-C. Ioannou, C.P. Raptopoulou, V. Psycharis, G. Mitrikas, M. Paravatou-Petsotas, C. Methenitis, P. Kyritsis: "Structural, spectroscopic, DNA-binding and cytotoxic properties of Cu(II) complexes with  $[(Ph)_2P(O)NP(O)(Ph)_2]^-$  and various diimines".  
**04/ 2017**, ECOSTBio: Sixth Scientific Workshop, Lisbon, Portugal.
5. M. Tsoukala, P.-C. Ioannou, C.P. Raptopoulou, V. Psycharis, G. Mitrikas, M. Paravatou-Petsotas, C. Methenitis, P. Kyritsis: "Structural, spectroscopic, DNA-binding and cytotoxic properties of  $[Cu\{Ph_2P(O)NP(O)Ph_2-O\}_2(2,2'-bipy)(H_2O)]^+$ ".  
**07/ 2016**, Summer School, University of Groningen, The Netherlands.  
**09/ 2016**, ECOSTBio: Fifth Scientific Workshop, Krakow, Poland.

## Conferences and Seminars

- 04/2017**: ECOSTBio: Sixth Scientific Workshop, Lisbon, Portugal  
**11/2016**: "Athens International Catalysis Symposium" (Department of Chemistry, NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS, Athens - Greece).  
**07/2016**: Summer School on "Theory and practice in Spectroscopy & Electrochemistry", UNIVERSITY OF GRONINGEN, NETHERLANDS (project of the COST ASSOCIATION).  
**12/2015**: Drug Discovery Symposium on "Targeted therapeutic approaches against cancer and ageing", INSTITUTE OF BIOLOGY, MEDICINAL CHEMISTRY & BIOTECHNOLOGY/NATIONAL HELLENIC RESEARCH FOUNDATION (NHRF), ATHENS.  
**07/2015**: Workshop on "Molecular Medicine" (MEDICAL SCHOOL, UOA). BIOMEDICAL RESEARCH FOUNDATION, ACADEMY OF ATHENS  
**06/2015**: Workshop on "NATURAL PRODUCTS & NEURODEGENERATIVE DISEASES", (MEDICAL SCHOOL, UOA - "GALENICA"). GOULANDRIS MUSEUM OF NATURAL HISTORY, ATHENS.  
**06/2015**: "6th Workshop on Paramagnetic Materials", (NCSR "DEMOCRITOS", UNIVERSITY OF FLORIDA). Acropolis Museum, ATHENS GREECE.  
**09/2009**: "7th International Symposium: MINIMAL RESIDUAL CANCER", (UOA). Astir Palace Vouliagmeni, ATHENS, GREECE.  
**10/2008**: "XVI Meeting of Balcan Clinical Laboratory Federation & 7th Hellenic Congress of Clinical Chemistry" (GREEK SOCIETY OF CLINICAL CHEMISTRY - CLINICAL BIOCHEMISTRY) HILTON, ATHENS - GREECE.

## Honours

**2017, Honors Scholarship** from the Hellenic Foundation for Research and Innovation (HFRI). The research work was supported by the Hellenic Foundation for Research and Innovation (HFRI) and the General Secretariat for Research Technology (GSRT), under the "HFRI PhD Fellowship grant"(GA. no. 14667).

## References

**Dr. Panayotis Kyritsis**, Professor of Inorganic Chemistry, Laboratory of Inorganic Chemistry, Department of Chemistry, National and Kapodistrian University of Athens.

**Dr. George Mitrikas**, Senior Researcher, Institute of Nanoscience and Nanotechnology, NCSR Demokritos.

**Dr. Maria Paravatou-Petsotas**, Principal Researcher, Biologist. Institute of Nuclear & Radiological Sciences & Technology, Energy & Safety, National Center for Scientific Research "Demokritos".