CURRICULUM VITAE

CONTACT INFORMATION

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EDUCATION

Ph.D.: Physics, National and Kapodistrian University of Athens and Institute of Material Science, NCSR "Demokritos", 2008.
Thesis: *"Spin-Spin interaction between metallic centers and free radicals of bioinorganic systems. Study of Photosynthetic Water Oxidation Mechanism"*

M.Sc.: Section of Solid State Physics, National and Kapodistrian University of Athens, 2002.
Thesis: *"Dielectric Studies of bioactive molecules"*

Diploma: Physics, National and Kapodistrian University of Athens, 1999
Undergraduate Thesis: *"Structural Study of the protein Concanavalin A"*

EMPLOYMENT

05/2020-07/2021: Postdoctoral Researcher, Laboratory of pulse EPR, Institute of Nanoscience and Nanotechnology (INN), NCSR "Demokritos", Athens, Greece in the framework of the project "Photosynthetic Water Splitting: the critical steps prior to O_2 evolution", co-financed by Greece and the European Union (Supervisors: Dr. George Mitrikas, Dr Yiannis Sanakis)

11/2018-08/2019: Postdoctoral Researcher, Laboratory of EPR and Photosynthesis, Institute of Nanoscience and Nanotechnology (INN), NCSR "Demokritos", Athens, Greece in the framework of the project "Action for the Strategic Development on the Research and Technology sector" funded by the Operational Programme "Competitiveness, Entrepreneurship and Innovation" (NSRF 2014-2020) and co-financed by Greece and the European Union (European Regional Development Fund) (Group of Dr. Yiannis Sanakis)

01/2015-10/2018: Collaborating Researcher, Laboratory of EPR and Photosynthesis, Institute of Nanoscience and Nanotechnology (INN), NCSR "Demokritos", Athens, Greece (Group of Dr. Yiannis Sanakis)

01/2013-12/2014 : Postdoctoral Researcher, Department of Chemistry, University of Crete Island, Greece & Institute of Nanoscience and Nanotechnology (INN), NCSR "Demokritos",

Athens, Greece in the framework of the project "Thales" entitled "Production of Bio-hydrogen (H2) from chlorophytes monocytes" (Group of Prof. Demetrios Ganotakis)

09/2010 – 08/2011 : Post Doctoral Fellow, Biophysical Lab of Photosynthesis, Department of Chemical Sciences, University of Padova, Italy in the framework of the project "HELIOS" entitled "Studio di sistemi fotosintetici naturali ed artificiali mediante tecniche di spettroscopia EPR avanzate" (Group of Prof. Donatella Carbonera).

01/2009 – 04/2010 : Post Doctoral Fellow, Laboratory of EPR spectroscopy and Photosynthesis, Institute of Material Science, National Center of Scientific Research "Demokritos", Agia Paraskevi, Attiki, Greece (Group of Dr. Vasili Petroulea)

01/2003 – 10/2008 : Ph.D Fellow, Laboratory of EPR spectroscopy and Photosynthesis, Institute of Material Science, National Center of Scientific Research "Demokritos", Agia Paraskevi, Attiki, Greece (under supervision of Dr. Vasili Petroulea)

SCHOLARSHIPS AND AWARDS

Young Talent Award, International Meeting on Photosynthesis Research for Sustainability, 22.09.2015-26.09.2015, Colympari, Crete Island, Greece, Oral Presentation "Theoretical study of the EPR spectrum of the $S_3TyrZ^{\bullet}$ metalloradical intermediate of the O_2-evolving complex of Photosystem II"

4th Poster Award, 14th International Congress of Photosynthesis, 23.07.2007-27.07.2007, Glasgow, Scotland (Zahariou G., Ioannidis N., and Petrouleas V. "Temperature dependence of the $S_0Y_Z^{\bullet}$(+MeOH) , $S_1Y_Z^{\bullet}$ and $S_2Y_Z^{\bullet}$(+MeOH) intermediates states of Photosystem II"

Scholarship by the Institute of Material Science, NCSR "Demokritos", Athens, Greece, 01.11.2002-31.05.2007

TALKS IN CONFERENCES AND SEMINARS

1. "Charge Separation Events in Photosystem II during the S_2 to S_3 transition as revealed by EPR Spectroscopy" *12th NAGC International Conference Workshop*, Kephalonia Island, Greece, 11/05-15/05 2026

2. "Investigation of the S_2-S_3 trasnition of the O_2-Evolving Complex of Photosystem II" *CTMN/NAGC International Conference Workshop,* Spetses Island, Greece, 8/05-12/05 2023

3. "The Photosystem II water Oxidation process: An Investigation of the steps leading to O_2 formation" *International Workshop on Applications of EPR spectroscopy in homogeneous, heterogeneous and biocatalysis,* NCSR "Demokritos", Athens, Greece, 19/09-22/09 2022

4. "Possible Role of the Tyrosine Z in the S_2 to S_3 transition of the Oxygen Evolving Complex of Photosystem II" *Athens Conference on Advances in Chemistry*, Athens, Greece, 20/07-25/07 2022

5. "2D-Hyperfine Sublevel Correlated Investigation of the Tyrosyl Radicals of Photosystem II" *Athens Conference on Advances in Chemistry*, Athens, Greece, 10//03-14/03 2021

6. "Spin Heterogeneity of the S_3 oxidation state of the O_2-evolving complex of Photosystem II" 8th Workshop on '*Current trends in Molecular and Nanoscale Magnetism*, Rhodes, Greece, 26/05-30/05 2019

7. "Spin Configuration of the S_3 oxidation state of the Mn_4Ca cluster of Photosystem II" *8th NAGC Workshop on Paramagnetic materials,* Sparta, Greece*,* 18/06-22/06 2018

8. "Theoretical Study of the EPR spectrum of the $S_3Yz^{\bullet}$ metalloradical intermediate state of the O_2-Evolving Complex of Photosystem II" *International Congress of Photosynthesis*, Colympari, Crete Island, Greece, 21/09-26/09 2015

9. "EPR study of the S-oxidation states and the metalloradical states of Photosystem II", *Seminar,* EPFL, Lausanne, Switzerland, 26/10/2011

10. "EPR study of the metalloradical intermediate states of the Oxygen-Evolving Complex of Photosystem II", *Seminar,* University of Padova, Italy, 8/07/2010

11. "The effect of the Temperature on the magnetic interaction between Mn_4O_5Ca cluster and $TyrZ^{\bullet}$ of Photosystem II", *Seminar,* NCSR Demokritos, Greece, 27/11/ 2007

12. "Study of the $S_2TyrZ^{\bullet}$ Metalloradical Intermediate State of the MeOH-containing Photosystem II", *Seminar,* NCSR Demokritos, Greece, 21/12/ 2006

POSTER PRESENTATIONS

1. **Georgia Zahariou,** Maria Drosou, Dimitrios A. Pantazis, Yiannis Sanakis, Nikolaos Ioannidis, Maria Chrysina, "Spin Heterogeneity of the S Oxidation States of the Oxygen Evolving Complex of Photosystem II", *2nd Panhellenic Workshop on Inorganic Chemistry*, National and Kapodistrian University of Athens, 28-30 September 2023

2. Maria Chrysina, **Georgia Zahariou,** Nikolaos Ioannidis, "Trapping of the free radical of TyrZ on the onset of the S_2-S_3 and S_3-S_0 transitions of Photosystem II" *International Conference on Photosynthesis Research for Sustainability,* Colympari, Crete Island, Greece, 21-26 September 2015

3. **Georgia Zahariou,** Nikolaos Ioannidis, Vasili Petrouleas, "Temperature Dependence of the Intermediate States of Photosystem II"*14th International congress on photosynthesis*, Glasgow, 23-27 July 2007

4. Vasili Petrouleas, Nikolaos Ioannidis, **Georgia Zahariou,** Josephine Sarrou, George Sioros, Yiannis Sanakis, "Recent EPR studies of the OEC of Photosystem II. (A) Trapping tyrosylZ center dot in action. (B) The critical S-3 integer-spin state of the Mn cluster" *14th International Conference of Photosynthesis*, Glasgow, 23-27 July 2007

5. **Georgia Zahariou** & Vasili Petrouleas, "EPR study of the $S_2Yz^{\bullet}$ metalloradical intermediate state of the Ca^{2+} depleted Photosystem II", *Summer School*, Wiesbaden, Germany, 20-28 July 2005

6. **Georgia Zahariou,** John Kalogeras, Aglaia Vassilikou-Dova, "Dielectric studies of bioactive tetramic acids and their complexes with Cu(II) and Co(II)", *18th Greek Conference ofSolid State Physics and Material Physics*, 15.09.2002-19.09.2002, Heraklion, Crete Island, Greece

PUBLICATIONS

1. **Georgia Zahariou***. "Charge Separation Events in Photosystem II during the S_2 to S_3 transition as revealed by EPR Spectroscopy", *FEBS Letters* (2026) 600, 493-503

2. Eleftherios Halevas*, Barbara Mavroidi, Despoina Varna, **Georgia Zahariou**, George Litsardakis, Maria Pelecanou, Antonios G. Hatzidimitriou*, Structurally Characterized Cobalt and Nickel Complexes of Flavonoid Chrysin as Potential Scavenging Compounds, *Inorganics* (2025) *13*, 230

3. Jessica M. Lo´pez-Pla´, Mohammed Obies, **Georgia Zahariou**, Michael Pissas, Yiannis Sanakis*, John E. McGrady * and Raphael G. Raptis *, Pyrazolate-supported $Cr_3(\mu_3\text{-}O)$ cores; homovalent Cr^{III}_3 and mixed-valent $Cr^{III}_2Cr^{IV}$, *Chemical. Communications* (2024) *60*, 14117

4. Eleftherios Halevas*, Barbara Mavroidi, **Georgia Zahariou,** Maria Pelecanou, Antonios G. Hatzidimitriou, "Structurally characterized copper complexes of

flavonoid naringenin with enhanced radical scavenging activity", *Inorganica Chimica Acta* (2023) 546, 121325

5. **Georgia Zahariou***, Yiannis Sanakis, Nikolaos Ioannidis, Evidence for the Mn-Yz$^{\bullet}$ Magnetic Interaction in Ca^{2+}-depleted PSII, *Polyhedron* (2021) 206*,* 115335

6. Konstantina Nano, **Georgia Zahariou,** Polydoros-Chrisovalantis Ioannou, Md Mehbood Alam, Dimitrios A. Pantazis, Catherine P. Raptopoulou, Vassilis Psycharis*, Yiannis Sanakis*, Panayiotis Kyritsis*, Electronic properties of the S = 5/2 Mn(II) complexes [Mn{PhC(O)NP(O) PPh2}(N,N)(NO3)], (N,N)=phenanthroline, neocuproine, 2,2′ -bipyridin, *Polyhedron* (2021) 207*,* 115374

7. Constantinos Stoumpos Panagiota Danelli, **Georgia Zahariou**, Michael Pissas, Vassilis Psycharis, Catherine P. Raptopoulou, Yiannis Sanakis*, Spyros P. Perlepes*, "Di-2-pyridyl ketone-based ligands as evergreen "trees" in the "forest" of manganese chemistry: Mononuclear Mn(III) complexes from the use of MnF_3" *Polyhedron* (2021) 207*,* 115350

8. Maria Chrysina†, **Georgia Zahariou†,** Nikolaos Ioannidis, Yiannis Sanakis, George Mitrikas* (2021) "Electronic Structure of Tyrosyl D Radical of Photosystem II, as Revealed by 2D-Hyperfine Sublevel Correlation Spectroscopy" *Magnetochemistry* (2021)7, 131 [† These authors contributed equally to this work]

9. Maria Drosou, **Georgia Zahariou,** Dimitrios A. Pantazis*, "Orientational Jahn-Teller Isomerism in the Dark-Stable State of Nature's Water Oxidase" *Angewandte Chemie Int. Ed* (2021) 60, 13493-13499

10. **Georgia Zahariou***, Nikolaos Ioannidis, Yiannis Sanakis, and Dimitrios A. Pantazis*, "Arrested Substrate Binding Resolves Catalytic Intermediates in Higher Plant Water Oxidation" *Angewandte Chemie Int. Ed* (2021) 60, 3156-3162 4.

11. Eleftherios Halevas,*Anna Pekou, Rigini Papi, Barbara Mavroidi, Antonios G. Hatzidimitriou, **Georgia Zahariou,** George Litsardakis, Marina Sagnou, Maria Pelecanou, Anastasia A. Pantazaki, A. "Synthesis, Physicochemical Characterization and biological properties of two novel Cu(II) complexes based on natural products curcumin and quercetin" "*Journal of Inorganic Biochemistry* (2020) 208,11108

12. Dimitris Matiadis*, Dimitrios Tsironis, Valentina Stefanou, Konstantinos Kordatos, **Georgia Zahariou**, Nikolaos Ioannidis, Vickie McKee, Angeliki Panagiotopoulou, Olga Igglessi-Markopoulou, and John Markopoulos*, "Synthesis, characterization and antimicrobial activity of N-acetyl-3-acetyl-5-benzylidene tetramic acid-metal complexes. X-Ray analysis and identification of the Cd(II) complex as a potent antifungal agent", *Journal of Inorganic Biochemistry* (2019) 194, 65-73

13. Maria Chrysina, Juliana Cecilia de Mendonca Silva, **Georgia Zahariou,** Dimitrios A. Pantazis*, Nikolaos Ioannidis*, "Proton Translocation via Tautomerization of Asn298 During the $S_2 \rightarrow S_3$ State Transition in the Oxygen-Evolving Complex of Photosystem II" *Journal of Physical Chemistry B* (2019) 123, 3068-3078

14. **Georgia Zahariou*** "Characterization of the High-Spin Co(II) Intermediate Species of the O_2-Evolving Co_4O_4 Cubic Molecules", *Inorganic Chemistry* (2017) 56*,* 6105-6113

15. **Georgia Zahariou*** & Nikolaos Ioannidis, "Theoretical Study of the EPR spectrum of the $S_3TyrZ^{\bullet}$ metalloradical intermediate state of the Oxygen Evolving Complex of Photosystem II" *Photosynthesis Research* (2016) 130*,* 417-426

16. **Georgia Zahariou,** Maria Chrysina, Vasili Petrouleas, and Nikolaos Ioannidis*, "Can we trap the $S_3TyrZ^{\bullet}$ metalloradical intermediate during the S-state transitions of Photosystem II? An EPR investigation" *FEBS Letters* (2014) 588*,* 1827-1831

17. Stefano D'Alessadro, Bianca Posocco, Alex Costa, **Georgia Zahariou,** Fiorella Lo Schiavo, Donatella Carbonera,* and Michela Zottini*, "Limits in the use of cPTIO as nitric oxide scavenger and EPR probe in plant cells and seedlings" *Frontieres in plant science* (2013) 4, 1-7

18. Maria Chrysina, **Georgia Zahariou**, Yiannis Sanakis, Nikolaos Ioannidis, and Vasili Petrouleas*,"Conformational changes of the $S2Yz^{\bullet}$ intermediate of the S_2 to S_3 transition in photosystem II" *Journal of Photochemistry and Photobiology B* (2011) 104, 72-79

19. Maria Chrysina, **Georgia Zahariou,** Nikolaos Ioannidis* and Vasili Petrouleas* "Conversion of the g=4.1 EPR signal to the multiline conformation during the S_2 to S_3 transition of the Oxygen Evolving Complex of Photosystem II" *Biochimica et Biophysica Acta* (2010) 42, 6252-6259

20. Xiao Y., **Georgia Zahariou**, Yiannis Sanakis, and Liu, P.*, "IspG Enzyme Activity in the Deoxyxylulose Phosphate Pathway: Roles of the Iron-Sulfur Cluster" *Biochemistry* (2009) 48, 10483-10485

21. George Athanasellis, **Georgia Zahariou**, Stafanos Kikionis, Olga Igglessi-Markopoulou, and John Markopoulos*, "Coordination behavior of 3-Ethoxycarbonyltetronic Acid towards Cu(II) and Co(II) metal ions" *Bioinorganic Chemistry and Applications 2008: Article ID547915,* 6 pages

22. Nikolaos Ioannidis, **Georgia Zahariou**, and Vasili Petrouleas*, "The EPR Spectrum of Tyrosine $Z^{\bullet}$ and Its Decay Kinetics in O_2-Evolving Photosystem II Preparations" *Biochemistry* (2008) 47*,* 6292-6300

23. **Georgia Zahariou**, Nikolaos Ioannidis, George Sioros, and Vasili Petrouleas*, "The Collapse of the Tyrosine Z•-Mn Spin-Spin Interaction above 100 K Reveals the Spectrum of Tyrosine Z•. An Application of Rapid-Scan EPR to the Study of Intermediates of the Water Splitting Mechanism of Photosystem II" *Biochemistry* (2007) 46*,* 14335-14341

24. Nikolaos Ioannidis, **Georgia Zahariou**, and Vasili Petrouleas*, "Trapping of the S_2 to S_3 State Intermediate of the Oxygen-Evolving Complex of Photosystem II" *Biochemistry* (2006) 42*,* 6252-6259

25. **Georgia Zahariou,** Efstathios Gavrielatos, Ioannis Kalogeras, George Athanasellis, Aglaia Vassilikou-Dova*, Olga Igglessi-Markopoulou, and John Markopoulos, "Dielectric Studies of a bioactive tetramic acid and its complexes with Cu(II) and Co(II)" *Radiation Effects and Defects in Solids* (2002) 157*,* 1057-1062