

## Christina-Eleftheria Tzeliou



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### Education

As of 10/2022: Ph.D. Candidate in Computational Quantum Chemistry, Department of Chemistry, National and Kapodistrian University of Athens (NKUA), Greece

10/2020- 06/2022: M.Sc. in Physical Chemistry, Department of Chemistry, School of Science, National and Kapodistrian University of Athens (NKUA), Greece

09/2014-02/2020: B.Sc. in Chemistry, Department of Chemistry, National and Kapodistrian University of Athens (NKUA), Greece

2011-2014: 3<sup>rd</sup> High School of Zografos

### Work Experience

09/2022- Present: Chemistry teacher at “Axia” After School Tutoring Services-Panormou

09/2020- Present: Physics and Chemistry teacher at “Simmetria” After School Tutoring Services-Zografos and Imittos

09/2019- 06/2022: Physics and Chemistry teacher at “Simmetria” After School Tutoring Services-Ilioupolis

09/2017- 07/2020: Administrative Assistant (Part-time) at “Simmetria” After School Tutoring Services-Zografos

### Thesis in Postgraduate Studies

06/2022: Title: “Molecular Logic Gates: Theoretical Study of Metallocene-Naphthalimide Derivatives”  
Supervisor: Assoc. Prof. Demeter Tzeli  
Laboratory of Physical Chemistry, Department of Chemistry, School of Science, National and Kapodistrian University of Athens

### Thesis in Undergraduate Studies

03/2019: Title: “New directions in the production of radioisotopes for Positron Emission Tomography”  
Supervisor: Prof. George A. Souliotis  
Laboratory of Physical Chemistry, Department of Chemistry, School of Science, National and Kapodistrian University of Athens

## Academic Essays

03/2021: “Differential Scanning Calorimetry” in terms of Postgraduate Course “Physical Chemistry – Thermodynamics”

05/2019: “Inorganic Pigments” in terms of Undergraduate Course “Inorganic Chemical Technology”

10/2018: “Endocrine Disruptors” in terms of Undergraduate Course “Environmental Chemistry”

## Publications

<http://jupiter.chem.uoa.gr/pchem/lab/tzeli-group.html>

[1] A 3-input AND molecular logic gate with enhanced fluorescence output: The key atom for the accurate prediction of the spectra

Christina Eleftheria Tzeliou, Demeter Tzeli, *J. Chem. Inf. Model.* **62**, xxx (2022)

[2] Review on the QM/MM methodologies and application to Metalloproteins

Christina Eleftheria Tzeliou, Markella Alik Mermigki, Demeter Tzeli, *Molecules*, **27**, 2660 (2022)

[3] Metallocene-naphthalimide derivatives: The effect of transition metals on absorption spectra.

Christina Eleftheria Tzeliou, Demeter Tzeli (*to be submitted*)

[4] Adsorption and Reactions of N<sub>2</sub>O molecules on MoS<sub>2</sub> and defective MoS<sub>2</sub> monolayers.

Christina Eleftheria Tzeliou, Nektarios Lathiotakis, Demeter Tzeli (*to be submitted*)

## Seminars – Workshops

06-08/07/2021: EGAS52, Virtual Conference of the European Group on Atomic Systems

14-16/05/2021: 6<sup>th</sup> Workshop on New Aspects and Perspectives in Nuclear Physics, Hellenic Institute of Nuclear Physics

05-06/2021: “Digital Transformation in Chemistry and Materials Research”, 3-part webinar, CHEManager, Schrodinger Materials

05-06/2020: Introduction to Environmental Science by Dartmouth College, edX

06/2017: Developments in forensic science and their contribution to criminal proceedings- Hellenic Association of Forensic Sciences

17-19/03/2017: Entrepreneurship and Career Panorama- Business Management Strategy and Entrepreneurship Research Center

## Conferences

04-07/10/2022: *DEEP-GAS 2022: Dynamics of Energetic & Electronic Processes in molecules and clusters in the GAS phase, Madrid, Spain*

“The key atom for the accurate prediction of the absorption and emission spectra of a 3-input AND molecular logic gate”

C. E. Tzeliou, D. Tzeli (poster presentation)

26/06-01/07/2022: *Athens Conference on Advances in Chemistry (ACAC 2022)*

Department of Chemistry, National and Kapodistrian University of Athens

“The effect of transition metals on the absorption spectra of metallocene-naphthalimide derivatives”

C. E. Tzeliou, D. Tzeli (poster presentation)

17-18/03/2022: *Chemistry and its Applications, 1<sup>st</sup> Symposium of Graduate Students of the Chemistry Department of the National and Kapodistrian University of Athens*

“A 3-input AND molecular logic gate with enhanced fluorescence output: The key atom for the accurate prediction of the spectra”

C. Tzeliou, D. Tzeli (poster presentation)

04-08/10/2021: *MD-GAS Molecular Dynamics in the GAS phase, 2<sup>nd</sup> Annual Meeting, COST Action*

“Molecular Logic Gates: The effect of acidity, oxidisability, metal coordination, light, and solvent polarity”

C. Tzeliou, D. Tzeli (poster presentation)

07-08/06/2021: *2021 EMMC-eSENCE Modelling Meeting (Uppsala, Sweden)*

“Theoretical study of the photophysical processes of three-input AND molecular logic gates”

C. Tzeliou, D. Tzeli, G. Theodorakopoulos and I. D. Petsalakis (oral micro-presentation)

10-13/03/2021: *Athens Conference on Advances in Chemistry (ACAC 2020)*

Department of Chemistry, National and Kapodistrian University of Athens

“Theoretical study of the photophysical processes of a three-input AND molecular logic gate with an enhanced fluorescent output”

C. Tzeliou and D. Tzeli (Flash oral presentation)

## Professional Activity

## Teaching Experience

Physics teacher in High School and Chemistry teacher in High School and Lyceum- small groups of students and private tutoring. Certified by the **National Organisation for the Certification of Qualifications & Vocational Guidance (EOPPEP)**.

- Develop and issue educational content including notes, tests, and assignments.
- Supervise classes to ensure all students are learning in a safe and productive environment.
- Organize supplies and resources for lectures and presentations.
- Deliver personalized instruction to each student by encouraging interactive learning.
- Ensure your classroom is clean and orderly.
- Prepare and distribute periodic progress reports and semester report cards.
- Attend parent-teacher meetings.
- Evaluate and document students' progress.
- Allocate and grade homework, assignments, and tests.
- Successful transition of the educational process from in-person method to online due to COVID-19 restrictions.

Volunteer teacher in the ‘Koinoniko Frontistirio’ of Municipality of Zografos to provide teaching support in Chemistry courses to students with financial difficulties.

**Computer skills**

1. Operating Systems: Unix, Windows, macOS
2. Applications: MS Office, GaussView, Chemdraw
3. Codes: GAUSSIAN, Quantum ESPRESSO
4. FORTRAN

**Languages**

1. Greek: Native Speaker
2. English: Fluent- C2 Certification (University of Michigan)