

Nikolaos Korakis

Graduate Assistant

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EDUCATION

Michigan State University (Aug. 2025 – present)

- Ph.D. Candidate in Theoretical and Computational Chemistry
- Research Advisor: Professor Piotr Piecuch

National and Kapodistrian University of Athens, Greece (Oct. 2020 – Jun. 2024)

- B.Sc. in Chemistry
- Undergraduate Thesis: Theoretical review of radioactive beta decay and spectral derivation of nuclear matrices

Foundamentals Overview

- Physical Chemistry, Quantum Mechanics, Nuclear Chemistry, Fundamentals of spectroscopy
- Inorganic Chemistry, Chemistry of MOFs, Analytical Chemistry, Organic Chemistry

RESEARCH EXPERIENCE

National and Kapodistrian University of Athens, Greece (July 2024 – July 2025)

Research Associate on Professor's Demeter Tzeli's group- Theoretical Chemistry

- Contributing research on Electronic Structure and bonding analysis of transition metal compounds

National Hellenic Research Foundation (Mar. 2023 – June 2025)

Research Assistant

- Contributed in developing a novel ab initio model of Thermoluminescence

SOFTWARE SKILLS

Scientific Programming: Python

Computational Software: Chemdraw, Quantum Espresso, MolPro, Matlab, Origin, Igor

ACADEMIC RESEARCH

Contribution in

1. Thermoluminescence characteristics of BeO doped with Si, Mg, and Cr: Density Functional Theory calculations and One Trap – One Recombination Center model simulations”, E. Tsoutsoumanos, D. Tzeli, A. Avramopoulos, N. Laskaris, P.G. Konstantinidis, E. Travlou, N. Korakis, N.N. Lathiotakis, G. Kitis, G.S. Polymeris, T. Karakasidis, Physica B: Condensed Matter, <https://doi.org/10.1016/j.physb.2024.416700>
2. Projectile fragments from peripheral collisions of 25 MeV/nucleon ^{64}Ni on ^{64}Ni ”, E. Kontogianni, G.A. Souliotis, Ch. Giannitsa, K. Gkatzogias, N. Korakis, S. Koulouris, E.Travlou, M. Veselsky, S.J. Yennello, and A. Bonasera, EPJ Web of Conferences 04, 01016 (2024), <https://doi.org/10.1051/epjconf/202430401016>

Talks and Posters Presented by Nikolaos Korakis

1. **Poster:** Projectile fragments from peripheral collisions of 25 MeV/nucleon ^{64}Ni on ^{64}Ni ”, E. Kontogianni, G.A. Souliotis, Ch. Giannitsa, K. Gkatzogias, N. Korakis, S. Koulouris, E.Travlou, M. Veselsky, S.J. Yennello, and A. Bonasera, EPJ Web of Conferences 04, 01016 (2024) at 7th International Workshop of the Hellenic Institute of Nuclear Physics, 2024
2. **Poster:** Electronic structure of the MoLi, MoBe, and RuB molecules: Ground and Low-Lying States”, Constantinos Demetriou, Nikolaos Korakis, Demeter Tzeli, at Athens Conference on Advances in Chemistry 2024
3. **Poster:** Theoretical investigation of substitutional Si, Mg, and Cr doping effects in BeO via Density Functional Theory and One Trap – One Recombination center model for Thermoluminescence analysis, Nikolaos Korakis, Eleftheria Travlou, 3rd symposium of graduate students, department of chemistry, National and Kapodistrian University of Athens of the Chemistry Department
4. **Talk:** ”Conductivity-Superconductivity”, 8th conference of chemistry department - Student talks, National and Kapodistrian University of Athens

Volunteering Experience

- Athens Science Festival 2022 & 2024: Volunteer member of the event organization committee. Performed chemical experiments to a wide audience

Courses/Seminars Attended

- **Demokritos** - Summer school 2022 & 2023 & 2024
- Transmission Electron Microscopy and Spectroscopy: Exploring Analytical and In-Situ Techniques”

Languages

- Greek (Native)
- English (C2 – 104 TOEFL IBT)