


Christos Kouzios

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Education

September 2019 – September 2020: Postgraduate studies in the Bristol Centre for Functional Nanomaterials, School of Physics of the Faculty of Science, University of Bristol.

- M.Sc. in Nanoscience and Functional Nanomaterials.
- Diploma Thesis title:
 - *Towards smarter materials: Bottom-up approaches to macroscale functionalities.*
[Focused primarily on the design, chemical synthesis and computational modelling of novel light-responsive materials with tuneable properties.]
- Previous projects include:
 - *Low work function diamond surfaces for thermionic energy conversion and diamond batteries.*
[Investigated the modulation of the properties of oxygen-terminated diamond samples, after lithium deposition on the diamond surface.]
 - *Reinventing the wheel: Nanomachines powered by active matter.*
[Simulated and studied systems of self-propelling active colloidal particles exhibiting unique phase behaviour.]

January 2014 – July 2019: Undergraduate studies in the Department of Physics of the School of Sciences, National and Kapodistrian University of Athens.

- B.Sc. in Physics.
- Section of Astrophysics, Astronomy and Mechanics.
- Diploma Thesis title: *The Character of Dark Matter.*

Professional Experience

July 2021 – Present: National Centre for Scientific Research “Demokritos”:

- Researcher at the Institute of Nanoscience and Nanotechnology (INN).
- Worked on the development of nanostructured superhydrophobic transparent polymer coatings for application on the mirrors of concentrated solar power (CSP) systems.
- Currently conducting research on the passivation of imperfections in novel halide perovskite solar cells.

November 2018 – July 2019: Hellenic Army:

- Served in the technical department of the Hellenic army on the island of Rhodes.
- Specialised in telecommunications services.

July 2018 – August 2018: National Centre for Scientific Research “Demokritos”:

- Professional practice as a research assistant at the Institute of Nanoscience and Nanotechnology through university’s internship programme.

- Involved in the study of magnetic nanomaterials aimed at substituting rare-earth magnetic compounds. Evaluated and established optimal alloy compositions and treatment conditions. Developed the core techniques necessary for manufacturing and processing intermetallic alloys to produce permanent magnets.

Skills

- Proficient in a wide range of material characterisation and analysis techniques (SEM/EDX, XRD, SQUID/VSM, TGA, several spectroscopic methods).
- Familiar with a plethora of materials and surface science treatment and modification processes, including deposition, texturing, etching, coatings and thin films, etc.
- Practical laboratory skills, including the handling of hazardous chemicals, manipulation of air- or moisture-sensitive materials and various methods and procedures for chemical synthesis.
- Experienced with a variety of programming languages and software packages (C, Python, MATLAB, LaTeX, Origin, Microsoft Office), in addition to specialized scientific and data analysis software.
- Excellent communication and teamwork skills, owing to a profusion of essays, reports, scientific and outreach presentations and an extensive history of working as part of a wider research group.
- Trained in the marketability of scientific breakthroughs by attending business bootcamps, through developing a complete business plan for a novel technology and by its subsequent pitch presentation to a panel of investors.

Languages

English – Excellent user:

- Cambridge University's International English Language Testing System (IELTS) – Overall score 8.5 (2018)
- Cambridge University's Certificate of Proficiency in English (2010)
- Michigan University's Certificate of Proficiency in English (2009)

German – Intermediate user:

- Goethe Institute B2 Level Certificate (2011)

Greek – Native speaker.

Publications

S. Ullah, G. Wan, C. Kouzios, C. Woodgate, M. Cattelan, and N. Fox, *Structure and electronic properties of Tin monoxide (SnO) and lithiated SnO terminated diamond (100) and its comparison with lithium oxide terminated diamond*, Applied Surface Science, (2021), p. 149962.