

CURRICULUM VITAE

ELENI GRANTZIOTI


PERSONAL INFORMATION




Date of birth: 26/07/1999

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EDUCATION

May 2023 - Present | European Union (EU) student exchange program
Vrije Universiteit Brussel, Belgium
Department of Applied Physics and Photonics

September 2017 - March 2023 | B.Sc. Physics
University of Crete, Greece
Department of Physics

Bachelor thesis: «Optical fiber sensors for detecting vapors of volatile organic compounds and ammonia» supervised by Dr. Konstantaki Maria. Associate Researcher, Inst. Of Electronic Structure and LASER (IESL), Foundation of Research and Technology Hellas (FORTH).

Bachelor grade: 7.41/10



WORK EXPERIENCE

October 2023 – Present | Research Assistant

Foundation for Research and Technology-Hellas (FORTH)

Institute of Electronic Structure and Laser (IESL)

PHOTONIC MATERIALS & DEVICES LABORATORY

May 2023 – August 2023 | Erasmus Plus Internship

Vrije Universiteit Brussel, Belgium

Department of Applied Physics and Photonics

Traineeship title: «*Towards bio-sensing with 3D-printed micro-ring resonators*»

- Refractive index sensing was studied by lab-on-chip and lab-on-fiber devices level printed micro-ring resonators.
- Optical micro-ring resonators were fabricated utilizing Nanoscribe Professional GT+ machine (Two-photon polymerization 3D-printing technique).
- Stimulation of microfluidics chips using COMSOL Multiphysics.
- Preparation of solutions with different refractive indices and measuring those with optical refractometry technique.
- Optical characterization of the fabricated components using liquid solutions with different concentrations.

May 2022 - March 2023 | Undergraduate Research

Foundation for Research and Technology-Hellas (FORTH)

Institute of Electronic Structure and Laser (IESL)

PHOTONIC MATERIALS & DEVICES LABORATORY

Bachelor Thesis title: «*Optical fiber sensors for the detection of vapors of volatile organic compounds and ammonia*»

- Tilted Bragg grating inscription in photosensitive single-mode fiber utilizing a 193 nm excimer laser and a standard phase mask setup.
- Employing laser-mediated explosive synthesis and transfer (LEST) a few microns thick film of few-layer turbostratic graphene flakes doped with F atoms (5%) were deposited on the fiber at the location of the grating. (*Institute of Chemical Engineering Sciences (ICE-HT), Foundation for Research and Technology-Hellas (FORTH), 26504 Rio-Patras, Greece*).

- The sensor's response in the presence of ammonia vapors was tested.

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- Design and development of optical fiber sensor based on Fabry-Pérot optical cavities.
 - FP cavity was formed using commercially available UV photopolymerizable resin at the end face of a single-mode optical fiber (SMF28e).
 - The sensor was studied under exposure to methanol, ethanol, and isopropanol vapors.



SKILLS

Computer skills

- Knowledge of, Microsoft Word, Excel, and PowerPoint
- Origin Lab
- C programming language
- COMSOL Multiphysics (low level)

Languages

- Greek (Native)
- English (Examination for the Certificate of Proficiency in English (ECPE)
Level: C2, University of Michigan)



CONFERENCES

1. **E. Grantzioti**, N. Samartzis, K. Bhorkar, S. Pissadakis, S. N. Yannopoulos, M. Konstantaki, "Tilted optical fiber Bragg grating with fluorinated graphene-like overlayer for Ammonia detection" EWOFs 2023, 23- 26 May 2023 Mons, Belgium.
2. **E. Grantzioti**, K. Bhorkar, N. Samartzis, S. Pissadakis, S. N. Yannopoulos, M. Konstantaki, "Fluorinated Graphene Flakes as Overlayer on a Tilted Optical Fiber Bragg Grating for Ammonia Vapor Detection" CLEO/Europe-EQEC, 26 – 30 June 2023, Munich, Germany.



PUBLICATIONS

E. Grantzioti, N. Samartzis, K. Bhorkar, S. Pissadakis, S. N. Yannopoulos, and M. Konstantaki "Tilted optical fiber Bragg grating with fluorinated graphene-like overlayer for ammonia detection", Proc. SPIE 12643, European Workshop on Optical Fiber Sensors (EWOFs 2023), 1264316 (23 May 2023); <https://doi.org/10.1117/12.2678525>