

CURRICULUM VITAE

PERSONAL INFORMATION

Name: Dimitra

Surname: Ladika

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Date of birth: 29-03-1993

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EDUCATION

01/2025- present: Postdoctoral researcher at Laser NanoPhotonics Group, Laser Research Center, Physics Faculty, Vilnius University, Lithuania

12/2023-11/2024: Postdoctoral researcher at Nonlinear Lithography group, Institute of Electronic Structure and Laser (IESL), Foundation for Research & Technology-Hellas (FORTH), Crete, Greece

04/2019-10/2023: PhD student at Department of Materials Science and Technology, University of Crete

PhD dissertation: « *Linear and Nonlinear Optical Properties of Materials for the Development of 3D Photonic Nanostructures at Telecommunication Wavelengths* »

Supervisors: Dr. Maria Farsari, Dr. P. A. Loukakos, Prof. M. Kafesaki

09/2016-11/2018: Master's degree in "*Photonics and Nano-electronics*" by the department of Physics, University of Crete

Master Thesis: "*Optical characterization of organic nonlinear materials*"

Supervisor: Dr. Maria Farsari

11/2011-03/2016: Bachelor's degree from the Department of Physics, University of Patras

Bachelor thesis: "*Experimental study of the non-linear optical properties of polymer modified graphene*"

Supervisor: Prof. S. Couris

11/2008-06/2011: Greek high school certificate

TEACHING EXPERIENCE

- Teaching assistant at the laboratory work of the Bachelor course – Nano- and Micro-Technologies, University of Vilnius, Lithuania
- Teaching assistant at the *Mechanics and Thermodynamics Laboratory / Optics and Electricity Laboratory* at the Department of Materials Science and Technology of the University of Crete, Greece
- Teaching assistant at the *Optics Laboratory* at the Department of Physics of the University of Crete, Greece
- Reinforcing teaching to secondary school students, in the framework of a voluntary program of the Municipality of Patras in collaboration with the volunteers of Patras, 2013-2014, Greece

SPECIALIZATION SEMINARS

- Siegman International School on Lasers 2022, Poland
- Siegman International School on Lasers 2020 (virtual)
- 5th Summer School “Photonics meets Biology” at F.O.R.T.H. in Heraklion, Crete, September 2019
- Introduction to the design of photonic and bio-photonic materials using computational methods at the National Hellenic Research Foundation, with A. Avramopoulos, 2016

SECONDMENTS

- **07/2024-08/2024:** Konish.lab, Institute for Photon Science and Technology, the University of Tokyo, Japan. The secondment was funded by H2020 MSCA-RISE-2020 Project CHARTIST (101007896)

GRANTS

- **05/2022-09/2023:** The State Scholarships Foundation (I.K.Y.) - I.K.Y. Scholarship Program for PhD candidates in the Greek Universities. The implementation of the doctoral thesis was co-financed by Greece and the European Union (European Social Fund-ESF).
- **04/2023-05/2023:** Laserlab-Europe (PID:23912) at Laser NanoPhotonics Group, Laser Research Center, Physics Faculty, Vilnius University, Lithuania
- **01/2025-01/2026:** VU Foundation's 2024 Young Scientist Co-funding

PUBLICATIONS

- A. Harnik, G. Merkininkaitė, D. Ladika, A. Čiburys, E. Kabouraki, S. Šakirzanovas, M. Farsari, M. Malinauskas, Laser 3D micro-/nano-structurization of luminescent materials, under review (submitted 2025)
- M. Stavrou, **D. Ladika**, E. Skliutas et al. Direct measurement of Two-Photon Absorption and Refraction properties of SZ2080™-based resists at 515 nm: insights into 3D printing, 29 January 2025, PREPRINT (Version 1) available at Research Square <https://doi.org/10.21203/rs.3.rs-5923278/v1>

- G. Zyla, G. Maconi, A. Nolvi, J. Marx, **D. Ladika**, A. Salmi, V. Melissinaki, I. Kassamakov, M. Farsari. 3D micro-devices for enhancing the lateral resolution in optical microscopy (2024). *Light: Advanced Manufacturing* **5**, 17, doi: 10.37188/lam.2024.019
- **D. Ladika**, A. Butkus, V. Melissinaki, E. Skliutas, E. Kabouraki, S. Juodkazis, M. Farsari, M. Malinauskas. X-photon 3D lithography by fs-oscillators: wavelength-independent and photoinitiator-free (2024). *Light: Advanced Manufacturing* **5**, 48, doi: 10.37188/lam.2024.048
- M. Stavrou, G. Zyla, **D. Ladika**, F. Dumur, M. Farsari, and D. Gray. Push–Pull Carbazole-Based Dyes: Synthesis, Strong Ultrafast Nonlinear Optical Response, and Effective Photoinitiation for Multiphoton Lithography (2024). *ACS Applied Optical Materials* 2024 **2** (8), 1653-1666, doi: 10.1021/acsaom.4c00241
- Wang, H., Zhang, W., **Ladika, D.**, Yu, H., Gailevičius, D., Wang, H., Pan, C.-F., Nair, P. N. S., Ke, Y., Mori, T., Chan, J. Y. E., Ruan, Q., Farsari, M., Malinauskas, M., Juodkazis, S., Gu, M., Yang, J. K. W., Two-Photon Polymerization Lithography for Optics and Photonics: Fundamentals, Materials, Technologies, and Applications (2023). *Advanced Functional Materials*, 2214211. <https://doi.org/10.1002/adfm.202214211>
- Sereikaite, V.; Navaruckiene, A.; Jaras, J.; Skliutas, E.; **Ladika, D.**; Gray, D.; Malinauskas, M.; Talacka, V.; Ostrauskaite, J. Functionalized Soybean Oil- and Vanillin-Based Dual Cure Photopolymerizable System for Light-Based 3D Structuring. *Polymers* 2022, **14**, 5361. <https://doi.org/10.3390/polym14245361>
- **Ladika, D.**, et al. Synthesis and application of triphenylamine-based aldehydes as photoinitiators for multi-photon lithography. *Appl. Phys. A* **128**, 745 (2022). <https://doi.org/10.1007/s00339-022-05887-1>

CONFERENCES

- Oral presentation and participation at the 9th International Summer School on Trends and new developments in Laser Technology, August 2020 (virtual), entitled:
«Testing Trichomes Designs of 3D Microstructures using Multiphoton Polymerization: Toward Hydrophobic Surfaces» **D. Ladika**, A. Mourka, L. Papoutsakis, M. Vamvakaki, S.H. Anastasiadis and M. Farsari.
- Oral presentation and participation at *Proceedings Volume 11675, Synthesis and Photonics of Nanoscale Materials XVIII; 1167509, 2021, SPIE LASE* (virtual), entitled:
«Triphenylamine-based aldehydes: Photoinitiators for multiphoton polymerization» **D. Ladika**, M. Farsari, F. Dumur, G. Noirbent, D. Gigmes, D. Gray, A. Mourka
- Oral presentation and participation at Photonics meet Biology Summer School and Workshop, 27 July -1 August, 2022, Spetses Island, Greece, entitled:
«3D photonic devices developed via Multiphoton Lithography for application in telecommunication wavelengths» **D. Ladika**, A. Klini, P. Loukakos, M. Kafesaki, D. Gray and M. Farsari

- Oral presentation and participation at the Proc. SPIE LASE PC12410, *Nanoscale and Quantum Materials: From Synthesis and Laser Processing to Applications 2023; PC124100E*, 2023, San Francisco, California, United States, entitled:

«*Three dimensional photonic nanostructures as effective nonlinear devices at telecommunication spectrum*» **D. Ladika**, A. Klini, P. Loukakos, M. Kafesaki, M. Farsari, D. Gray

- Poster and three-minutes presentation at CLEO@/Europe-EQEC 2023, 26 - 30 June 2023, Munich, Germany, entitled:

«*Tailoring the optical response of 3D-printed photonic crystals using Aluminum Zinc Oxide*» **D. Ladika**, A. Theodosi, O. Tsilipakos A. Klini, P. Loukakos, M. Kafesaki, M. Farsari, D. Gray

- Oral presentation and participation at Open Readings 2024, Vilnius, Lithuania, entitled:

«*Photosensitized and non-photosensitized materials for multiphoton lithography* » **D. Ladika**, A. Butkus, M. Stavrou, G. Zyla, V. Melissinaki, E. Skliutas, E. Kabouraki, F. Dumur, D. Gray, S. Juodkazis, M. Farsari, M. Malinauskas

- Oral presentation (**Invited**) and participation at META2024, Toyama, Japan, entitled:

«*Tailoring the optical properties of 3D photonic crystals coated with Aluminum Zinc Oxide in the telecommunication wavelength*» **D. Ladika**, A. Theodosi, O. Tsilipakos, A. Klini, P.A. Loukakos, M. Kafesaki, M. Farsari, D. Gray

SKILLS

- Languages: Certificate of Proficiency in English, Michigan (C2)
- Other skills: Origin Lab, Microsoft Office, 3D-Poli software, 3D-CAD software