

EDUCATION

2012 – 2016 Italy	PhD in Physics (field of photonics / optoelectronics) University of Trento / Fondazione Bruno Kessler <i>Dissertation title: "Silicon-based photonic integrated circuit for label-free biosensing"</i>
2010 – 2012 France Poland Italy	Master in nano- and bio-photonics for telecommunications and biotechnologies (Erasmus Mundus Program) Ecole Normale Supérieure de Cachan University of Wroclaw, Wroclaw University of Technology Advanced Photonics and Photovoltaics unit of FBK <i>Thesis title: "Microresonator-based silicon nanocrystals LED"</i>
2004 – 2009 Russia	Telecommunications Engineer Siberian State University of Telecommunications and Informatics Graduated cum laude

EXPERIENCE

Feb 2022 – present	Technologist on advanced silicon devices - Fondazione Bruno Kessler - Micro Nano Facility (MNF) / Sensor & Device Center (SD) <ul style="list-style-type: none">• Control microfabrication processes for the realization of innovative and highly customized sensors• Develop and implement new methods to improve fabrication efficiency and product quality• Develop corrective and preventive actions to address any identified issues and ensure continuous improvement of production quality
Apr 2017 – Feb 2021	TECHNICAL SALES ENGINEER (heating, air conditioning and air treatment), Tecnoclima SpA <ul style="list-style-type: none">• Provided pre- and post-sales assistance to national and international business customers• Developed commercial offers for both standard and customized products• Prepared technical manuals and commercial materials• Conducted target market analysis and participated in trade fairs
Dec 2016 – Jan 2017	EXPERT FOR TECHNOLOGICAL SCOUTING, Fondazione Bruno Kessler -Functional Materials and Photonics Structures unit

- Collaborated on the feasibility study for optical components in industrial manipulation of high-power lasers
 - Analyzed current technologies and patents
 - Characterized samples using reflectance spectroscopy
- Developed microfabrication process for highly integrated electro-optical microchip

Nov 2012 –
May 2016

PhD fellow, University of Trento / Fondazione Bruno Kessler - Functional Materials and Photonics Structures unit

- Developed an optical biosensor chip as a part of the “Symphony” project, dedicated to an integrated system for low-cost toxin detection in milk
- Designed and simulated novel micro/nanodevices (photonic structures), fabricated and characterized samples, and performed data analysis
- Supervised and optimized the microfabrication processes for photonic devices on silicon substrates
- Designed photolithography mask layouts using 2D CAD
- Authored technical reports and scientific articles
- Participated in organization of workshops on microfabrication techniques for silicon photonics

QUALIFICATIONS

Computer skills:

Microsoft Office, LaTeX, COMSOL Multiphysics, L-Edit (CAD software), Origin, Matlab

Technology skills:

- Extensive experience in semiconductor micro/nanofabrication (clean room work) including PECVD, wet and dry etching
- Development of workflows and supervision of all process steps
- Optical and electrical testing of optoelectronic devices and data analysis
- Use of optical and electron (SEM) microscopes, interferometers, and ellipsometers

Languages:

- Russian – Native speaker
- English – Professional proficiency
- Italian – Professional proficiency

Personal skills:

- Effective and accountable team player
- Strong attention to detail, multitasking, and goal-oriented
- Flexible and able to work under pressure

Additional information:

- Driving license: B
 - Permanent Italian residence permit
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