

Luciana Di Gaspare is currently Associate Professor at the Roma Tre University, working in the research group of Physics and Technology of Semiconductors of the Department of Sciences.

PROFESSIONAL EXPERIENCE

2018-present- Associate professor at the Department of Sciences of the Roma Tre University

1998-2018- Assistant professor at the Department of Physics of the Roma Tre University

1993-1998- Post doc fellowships at Department of Physics (Roma Tre University), Department of Electronic Engineering (Roma Tre University) and Department of Physics-INFN (Sapienza University)

ACADEMIC QUALIFICATIONS

1992- PHD in Physics at the La Sapienza University of Rome; 1989-Laurea degree with laude in Physics at the La Sapienza University of Rome.

INSTITUTIONAL ROLES (Roma Tre University)

Member of the Permanent Didactic Commission in Optics and Optometry

Member of the Commission for Orientation of the Department of Sciences

Luciana Di Gaspare has been in charge of the following academic courses: Physics of nanostructures, General Physics 1 for Geology, Laboratory of calculus for optics, Vision optics, Condensed Matter Physics, Atomic and Molecular Physics. She has tutored and co-tutored students working on their BSc, MSc, and PhD thesis.

PROJECTS AND FUNDING

Scientific Coordinator for the research unit of Roma Tre for the PRIN » Nanotechnologies for carbon nanotube devices” (2005).

Scientific Coordinator for the research unit of Roma Tre for CNR National Project: “Nanotechnology and Nanosystems: devices for high density memories” (2003).

RESEARCH ACTIVITY

The research activity has been focused on different fields of condensed matter physics, producing innovative contribution in fields such as epitaxial growth of high quality IV-IV semiconductor heterostructures by Chemical Vapor Deposition, quantum transport study in low dimensional devices, optical, electronic and structural properties of semiconductor interfaces and heterostructures by photoemission spectroscopies and diffraction techniques, graphene on Ge systems. She has a relevant expertise in the field of project and development of CVD growth apparatus.

From 2000 her research activity is mainly related on the growth of SiGe/Si heterostructures by UHV-CVD for the realization of quantum wells, 2DEGs, nanodevices as well as on the study of their optical and magnetotransport properties. In the last 4 years the activity has been focused on the growth of SiGe heterostructures at high Ge content and on their structural and optical characterizations for the development of a Si based quantum cascade laser operating in the THz range.

A parallel research field developed recently concerns the CVD growth of Graphene on Ge, activity devoted to the study of the impact of growth temperature, CH₄ precursor flux and Ge substrate orientation on the quality of the graphene film.

TECHNICAL SKILLS AND EXPERTISE

Epitaxy and Chemical Vapour Deposition for the semiconductor growth. Design, use, maintenance, and development of UHV equipment . UV and X-ray Photoelectron Spectroscopies. IR spectroscopy. Atomic Force Microscopy. Scanning Electron Microscopy . Techniques for magneto transport characterization. RHEED/LEED. Photoluminescence, Photoconductivity and Ellipsometry spectroscopies. Cryogenic techniques.

RESEARCH PRODUCTS. Luciana Di Gaspare is co-author of more than 90 publications on international peer review journals. She is co-authors of more than 80 contributions to international conferences.

<https://scholar.google.it/citations?user=L0dtxeYAAAAJ&hl=it>

