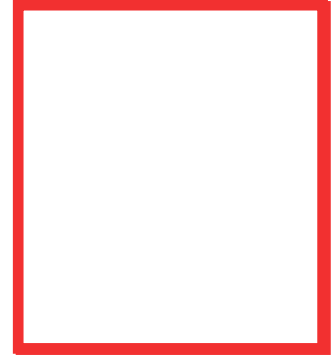


Mauro Mosca

tel. +39 091 23860212

e-mail (work): mauro.mosca@unipa.it

Website: <http://www.dieet.unipa.it/tfl/mosca.html>



PERSONAL DETAILS

Name: Mauro MOSCA

Fiscal Code:

Birth place:

Date of birth:

Address: Department of Engineering, viale delle Scienze, Bdg.9, I90128 - Palermo, Italy

Phone: +39 091 23860212

E-mail: mauro.mosca@unipa.it

Nationality: Italian

EDUCATION AND TRAINING

22/02/2000 - Ph.D. in Electronic Engineering, Computer Science, and Telecommunications at the University of Palermo, Dissertation on "ITO thin films-based optoelectronic devices"

10/04/1996 - 5-years Degree in Electronic Engineering at the University of Palermo, grade 110/110 with honors.

LANGUAGES

English (Reading C1, Writing B2, Oral, B2), French (Reading C1, Writing C1, Oral, C1), Russian (basic knowledge), Italian (mother tongue)

PROFESSIONAL EXPERIENCES

PERMANENT POSITIONS:

31/12/2017 to date - Associate Professor (scientific disciplinary sector ING-INF/01 - Electronics), at the Department of Engineering of the University of Palermo.

31/12/2004-31/12/2017 - Assistant Professor (Electronics) at the Department of Energy, Information Engineering and Mathematical Models of the University of Palermo.

ACADEMIC GUEST:

01/01/2018-30/09/2018 - Visiting professor, at the Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland. Laboratory of Advanced Semiconductors for Photonics and Electronics (LASPE). Research activity: Tunnel junction transparent contacts on GaN-based LEDs. Host Professor: Prof. N. Grandjean, head of LASPE

01/01/2017-30/09/2017, 01/01/2016-30/09/2016, 15/05/2015-30/06/2015, 01/09/2015-30/09/2015 - Visiting scientist, at the Ecole Polytechnique Fédérale de Lausanne (EPFL),

Lausanne, Switzerland, LASPE. Research activity: Advanced technologies for the fabrication of GaN-based LED/Biological applications of blue LEDs (cochlear implants)/White lasers

2009 - Visiting scientist, at the Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland, LASPE. Research activity: ZnO-GaN heterostructure devices

01/02/2005-31/07/2006 - Scientific collaborator at the Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland, LASPE. Research activity: GaN-based intersubband photodetectors/GaN-based electroluminescent devices

FELLOWSHIPS AND POST-DOC POSITIONS:

01/08/2004-31/12/2004 - Post-Doctoral researcher at the Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland, LASPE. Research activity: Microfabrication of optoelectronic devices in GaN. Funds: EPFL

01/02/2002-31/01/2004 – MARIE CURIE FELLOWSHIP at the Research Laboratories of THALES Research and Technology, Orsay, France (5th Framework Programme 1999-2002 - European Commission). Contract n.G5TR-CT-2001-00064. Subject: “Solar-Blind Detectors by Epitaxial Growth of AlGaIn on sapphire”. Funds: European Commission

01/06/2000-31/05/2002 - Post-Doctoral position at the University of Palermo. Research activity: Laser technologies for thin film deposition and related surface treatments. Funds: Italian Ministry of University and Scientific Research.

01/01/1999–30/10/1999 - 10-months internship at the Laboratoire Central de Recherches de THOMSON-CSF, Orsay, France. Research activity: Laser deposition of ITO thin films for organic LEDs. Funds: Italian Ministry of University and Scientific Research.

BIBLIOMETRIC INDICATORS

1. Total number of publications indexed by Scopus: 57
2. Number of academic years: 24 (1998-2022)
3. Total number of citations: 1188 (SCOPUS), 1454 (GOOGLE SCHOLAR)
4. h-index: 19 (last update: February 21th, 2022).

ABILITY TO MANAGE RESEARCH TEAMS

The ability to direct (and participate) in research groups and to promote technology transfer activities are attested by:

- Publications in international peer-reviewed scientific journals and books of high prestige (Applied Physics Letters, Applied Physics Express, Semiconductor Science technology, Journal of Applied Physics, etc. Publishers: Scrivener-Wiley, NATO Science Series, SPIE, MRS, Kluwer)
- Head of the Thin Films Laboratory (TFL) of the Engineering Department of University of Palermo
- Speaker at International Conferences
- Chairman at International Conferences and member of local organizing committee
- Topic Editor of the international journal “Electronics” (MDPI – Switzerland)

- Member of international and national research projects
- Consulting for industries and for national and international research institutes (EVATEC, LUMILOG)
- National and international scientific collaborations (EXALOS, NOVAGAN, 3D-OXIDES)
- Thesis supervisor of PhD students and Master's degree students (>50) in Italy and Switzerland.
- Member of the Joint Committee of Professors and Students (Commissione Paritetica Docente-Studente - CPDS)

PROCESS ENGINEERING SKILLS

- Clean-room processing and microfabrication
- Optical lithography and mask preparation
- GaN-based LED and laser fabrication
- Nitride-based detector fabrication
- Organic LED fabrication

RESEARCH PROJECTS

FINANCED PROJECTS:

2022 Project METEOR (Funding: Ministero della Difesa Italiano)

2018-19 - Ordinary and extraordinary maintenance of research laboratories.

Financing: University of Palermo. Role: Responsible for the funds

2015-16 - Next-generation auditory brainstem implants: Translation to clinical implementation

Financing: Bertarelli grant. Role: Head of LED microfabrication. Academic guest

2015 - Integrated Network of Technological Laboratories of Sicilian Universities (RILTUS).

Financing: POR ERDF Sicily 2007-2013 axis IV. Role: Researcher

2012-14 - Growth and characterization of metal/oxide, metal/polymer, and metal/oxide/polymer interfaces for engineering applications. Financing: University of Palermo. Role: Researcher

2013 - Ambition Power. Financing: PON 01. Role: Researcher

2012 - Smart Cities and Communities: Innovation for green Exchange in Transportation (i-NEXT)

Financing: PON 04. Role: Researcher

2004-07 - Laser photoablation aimed at the deposition of non-linear optical materials. Financing: PRIN – MIUR. Role: Research activity on the deposition of YIG and YAG films by pulsed laser ablation

2007 - Blue and UV ZnO-based LEDs. Financing: University of Palermo. Role: Principal investigator

ORGANIZATIONAL AND MANAGEMENT ACTIVITIES
CONFERENCE AND SCHOOL ORGANIZER:

2018 - Organization of the 4th IEEE-RTSI International Forum, 10-13 September, 2018, Italy.

Track Chair for the "Smart emerging technologies for Industry 4.0" section.

Moderator of the Panel discussion on "Smart Technologies and Best Practices for Industry 4.0 and Digital Transformation".

2017 - Organizer and Head of the International Graduate School for PhD students in Electronics of the Italian Society of Electronics (SIE), 19-21 June, 2017, Palermo, Italy.

LABORATORY HEAD:

2017 to date - Head of the Thin Films Laboratory (TFL), www.dieet.unipa.it/tfl, of the Department of Engineering of the University of Palermo.

TEACHING ACTIVITY
LECTURER:

AY 2021-2022 - Course of Advanced Optoelectronic Devices, for students of the Digital Academy ForTHEM (asynchronous online) (30 lessons).

AY 2021-2022 - Course of Laser and Optical Communications, for students of the Master in Electronic and Telecommunication Engineering (asynchronous online) of the University of Palermo, (6 credits).

AYs 2013 to 2022 - Course of Optoelectronic Devices, for students of the Master in Electronic Engineering of the University of Palermo, (6-9 credits, equivalent to 54-81 hours).

AYs 2006-07, 2008 to 2013, 2018 to 2022 - Course of Fundamentals of Electronics, for students of the Bachelor in Electrical Engineering/Computer Engineering of the University of Palermo (6-9 credits, equivalent to 54-81 hours)

Quality index (based on students' answers survey) ranges between 9.2/10 and 9.4/10.

TEACHING ASSISTANT:

AYs 2012-13 - Experimental and Practical Exercises of the course of Electronics I, for students of the Bachelor in Electronic Engineering of the University of Palermo, 36 hours.

Ays 2005 to 2012 - Exercises of the course of Electronic Devices, for students of the Bachelor in Electronic Engineering of the University of Palermo, 72 hours.

TEACHING ASSISTANT AT EPFL, SWITZERLAND:

AYs 2004-05 - Theoretical and experimental exercises (in French) on Electronic Signals Treatment at the Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland, 72 hours. Responsible: Prof. R. Sanjines. Member of the Examination Board

TEACHING IN 2ND LEVEL UNIVERSITY MASTER'S DEGREE:

AYs 2011 to 2013 - Frontal lessons for the 2nd level Master's Degree: "Expert in Home and Building Automation Systems" (in English) (University of Palermo), 50 hours. Teachings: Electronic devices, Fundamentals of Electronics

AYs 2007-08 - Frontal lessons and experimental exercises for the 2nd level Master's Degree: in "Nanotechnologies for cultural heritage" (University of Palermo, Coordinator: Prof. P. Livreri), 15 hours. Teachings: Properties, technologies, and applications of thin films

SPEAKER TO NATIONAL AND INTERNATIONAL CONFERENCES. MAIN ORAL PRESENTATIONS

- "Chemical bath deposition as a simple way to grow isolated and coalesced ZnO nanorods for light-emitting diodes fabrication", IEEE-RTSI 4th International Forum (Palermo, Italy, September 10-13, 2018).
- "Warm white LED light by frequency downconversion of mixed perylene-based dyes", SPIE Microtechnologies (Grenoble, France, April 24-26, 2013).
- "Growth of Device-Quality ZnO Films by Pulsed-Laser Deposition", 14th EL2008 (Tivoli, Italy, September 9-12, 2008).
- "Al(In)N/GaN heterostructures for intersubband transitions", 32nd International Symposium on Compound Semiconductors (ISCS) (Rust, Germany, September 18-22, 2005).
- "Effects of the Electrode Geometry on (Al,Ga)N Ultraviolet Photodetectors Performances", 12th heTech'03 (San Rafael, Spain, October 12-15, 2003).
- "Contact reporting in solar blind Al_xGa_{1-x}N metal-semiconductor-metal devices for low-current flame detection", MRS (Material Research Society) Spring Meeting (San Francisco, CA, US, April 21-25, 2003)

IL SOTTOSCRITTO, A CONOSCENZA DI QUANTO PRESCRITTO DALL'ART. 76 DEL D.P.R. 28 DICEMBRE 2000 N. 445, SULLA RESPONSABILITÀ PENALE CUI PUÒ ANDARE INCONTRO IN CASO DI FALSITÀ IN ATTI E DI DICHIARAZIONI MENDACI, NONCHÉ DI QUANTO PRESCRITTO DALL'ART. 75 DEL D.P.R. 28 DICEMBRE 2000 N. 445, SULLA DECADENZA DAI BENEFICI EVENTUALMENTE CONSEGUENTI AL PROVVEDIMENTO EMANATO SULLA BASE DI DICHIARAZIONI NON VERITIERE, AI SENSI E PER GLI EFFETTI DEL CITATO D.P.R. N. 445/2000 E SOTTO LA PROPRIA PERSONALE RESPONSABILITÀ DICHIARA CHE TUTTE LE INFORMAZIONI CONTENUTE NEL PROPRIO CURRICULUM VITAE SONO VERITIERE

Date: 06/04/2022

SIGNATURE

