PERSONAL INFORMATION

Manno, Daniela Erminia
Researcher unique identifier(s): ORCID: 0000-0002-5843-8772, SCOPUS: 7005705891, **Metrics overview**: 140 Documents, 2731 Citations, *h*-index: 29
Date of birth: 01/08/1960, Italian
URL for web site: https://scholar.google.it/citations?user=XyznRLoAAAAJ&hl=it

EDUCATION

20 dicembre 1984 degree in Physics with 110/110 cum laude at the Faculty of Sciences of the University of Lecce (now the University of Salento)

1985-1988 improvement and deepening of transmission electron microscopy and electron microscopy methods at the graduate schools in "Leeds University" and "Bristol University".

1/9/1988-31/8/1989 CNR annual scholarship - Finalized Project "Materials and Devices for Solid State Electronics"

1/10/1989-30/9/1991 two-year CNR scholarship for the morphological and structural characterization of massive materials and thin films with electron microscopy techniques

CURRENT POSITION

From 2001 **Associate Professor** in Experimental Physics, Department of Matematica e fisica “E.De Giorgi”, Università del Salento, Lecce, Italy

PREVIOUS POSITIONS

1992 – 2001 **Assistant Professor** in Experimental Physics, Department of Material Sciences, Università del Salento, Lecce, Italy

TEACHING ACTIVITIES

Istitutional activity - Università del Salento, Lecce, Italy.

1992-2001 exercises, seminars and tutoring activities in support of the Structure of Matter courses (Degree Course in Materials Engineering) and Physics I (Degree Course in Computer Engineering) at the Faculty of Engineering

2001-2015 physics applied to biotechnology (I level degree course in Biotechnology)

2004-2007 Physical Methodologies for Agro-Industrial Biotechnologies (II level degree course in Industrial Biotechnology)

2007-2010 Physical methodologies for pharmaco-industrial biotechnologies (II level degree course in Biotechnological Sciences)

2011-2019 Physics Applied to biotechnology for diagnosis and therapy (II level degree course in Medical and Nanobiotechnology biotechnologies)

2019-present Solid state Physics (II level degree course in Physics)

Teaching activity at masters and high schools - Università del Salento, Lecce, Italy.

2004-2005 training of "Researchers experts in the field of monitoring and diagnostics of cultural heritage" - Project "Integrated System for Diagnostic of ARTistic heritage (SIDART)".

2011-2014 "Data manager in oncology: expert in the design and management of a clinical study" (1st level Master)

2011-2014 "Advanced microscopy techniques" at the ISUFI high school

2014-2015 "Electron Microscopy Techniques applied to diagnostics" (Molecular Biomedicine Master - DiSTeBA)

ORGANISATION OF SCIENTIFIC SCHOOLS

1996 - 2000 local manager of the GNSM unit of Lecce and the seminar activity of the Department of Materials Science.

INVITED PRESENTATIONS AND TALKS

2002 High-resolution electron microscopy of Zn- and Bi-related superlattices in ion implanted (100) Si: 12th International School on Condensed Matter Physics Location: Varna, Bulgaria Date: Sep 01-06, 2002

2004 Characterization of ablation plasma ion implantation: 8th European Conference on Accelerators in Applied Research and Technology Location: Natl Museum Folk Arts & Tradit, Paris, France Date: Sep 20-24, 2004

2007 Atomic force acoustic microscopy characterization of nanostructured selenium-tin thin films: Meeting of the European-Materials-Research-Society Location: Strasbourg, France Date: May 28-Jun 01, 2007

2009 Local Density of States and Electronic Transport Properties of Homotype SWCNTs Bundles: 9th IEEE Conference on Nanotechnology (IEEE-NANO) Location: Genoa, Italy Date: Jul 26-30, 2009

2009 Shape-dependent plasmon resonances of Ag nanostructures: 9th International Conference on Physics of Light-Matter Coupling in Nanostructures Location: Lecce, Italy Date: 2009

2012 Quantitative evaluation of cellular uptake of saccharides coated silver nanoparticles: WOMEN - Workshop on Nanomedicine and Nanobiosystems Location: Lecce Italy Date: Sep 06- 08 2012

2012 Tunable plasmon resonance nanostructures: SERS application in wines identification: 7th NANOFORUM – Micro, nano & advanced techonologies: where research meets business, Location: Rome, Italy Date: Sep 24 – 26 2012

2013 Solid-to-solid phase transformations of nanostructured selenium-tin thin films induced by thermal annealing in oxygen atmosphere: 8th NANOFORUM Location: Rome, Italy Date: Sep 18-20, 2013

2015 Cryo TEM: pitfalls and benefits, Training school on Cryo electron microscopy and 3D image processing, Location: Lecce, Italy Date: Apr 18-20 2015

2018 Wavelength, fluence and substrate-dependent room temperature pulsed laser deposited B-enriched thick films: 11th International Conference on Photo-Excited Processes and Applications (ICPEPA) Location: Vilnius, Lithuania Date: Sep 10-14, 2018

2019 Thin Film Characterization: workshop on Resistive Coatings for Gaseous Detectors will be organised (RCDG) Location: Bari, May 13-14, 2019

2019 Nickel doped TiO2 films by a modified laser plasma source for photocatalytic applications: Conference on Plasma Physics by Laser and Applications (PPLA) Location: Univ Pisa, Phys Dept, Pisa, Italy Date: Oct 29-31, 2019

INSTITUTIONAL RESPONSIBILITIES

University of Salento Lecce, Italy:

2001-2016 Joint Didactic Commission of the CdS in Biotechnology

2001-2012 Teaching staff of the PhD in "Chemistry and Physics for the Territory" of the University of Salento

2014-present Teaching staff of the PhD in “Biological and environmental sciences and technologies” of the University of Salento

2019 Board Member of “Centro Linguistico di Ateneo (CLA)” for the 2019-2023 years

COMMISSIONS OF TRUST

- Register of Expert Peer Reviewers for Italian Scientific Evaluation (REPRISE)
- Referee of international journals published by:
  - American Institute of Physics (AIP)

- Institute of Physics (IOP)
- Elsevier Science Ltd

Topics: nanotechnologies, thin films, structural investigation, electron microscopy, x-ray diffraction

MAJOR COLLABORATIONS

Maria Kalitzova Institute of Solid-State Physics of Bulgarian Academy of Sciences di Sofia (Bulgaria), "Analysis of the structural damage caused by ion implantation"

J. Fauré, L. Kilian, P. Bonhomme Laboratoire de Microscopie Electronique, Université de Reims, France, *Preparation and thinning of zinc-implanted silicon samples and characterization with conventional electron microscopy techniques*

Maria Letizia Terranova Dipartimento di Scienze e Tecnologie Chimiche dell'Università "Tor Vergata" di Roma *Synthesis and deposition of carbon-based films*

Marco Rossi Dipartimento di Scienze di Base ed Applicate per l'Ingegneria dell'Università "La Sapienza" di Roma, *Structural characterization of carbon-based thin films.*

Lorenzo Torrisi Dipartimento di Scienze Matematiche e Informatiche, Scienze Fisiche e Scienze della Terra (MIFT), Università di Messina, V.le F.S. d'Alcontres 31, 98166, S. Agata, Messina, Italy

EARLY ACHIEVEMENTS TRACK RECORDS

Professor Daniela Manno carries out scientific research on the structural and morphological characterization of materials by means of transmission electron microscopy, electron diffraction, X-ray diffraction, scanning electron microscopy and related methodologies. To this is added the compositional characterization of the materials by means of energy dispersion X-ray spectroscopy.
In particular, she is interested in the development of new methodological procedures that can implement the potential of electron microscopy. These methodologies have been applied to the study of different materials such as thin films, bulk materials and, more recently, to low-dimensional materials (nanoparticles and nanostructured materials).
Among recent results she set up totally green synthesis processes to the realization of new classes of metallic nanostructures with modulable optical resonances in selected spectral ranges. This activity has made it possible applicate silver nanoparticles in colloidal solution in glucose sensing process. In addition, SERS-active substrates for the identification of protein patterns (e.g. the highly expressed prion protein from neuroblastomas), or of single peptides that act as biomarkers for early diagnostics were obtained.
Among the various analyzed materials, the most interesting are undoubtedly the carbon-based materials on which he worked in the past in the context of two PRINs. In this case she developed electron nano-diffraction methods in order to obtain a diffraction pattern on a single-walled carbon nanotube (SWCNT) and to determine their peculiar chirality. Electron nano-diffraction methods where also applied to crystallographic analysis of a new carbon allotrope: the face-centered cubic n-diamond (space group $F\bar{4}3m$) and its characteristics that differentiate it from conventional nano-diamonds were highlighted.
She is currently working on the potential applications of carbon-based materials in the field of dosimetry and ionizing radiation detection

FUNDED PROJECTS WITH THE ROLE OF PRINCIPAL INVESTIGATOR

Project Title: Optimization of innovative technologies for diagnostics and therapy in the biomedical field
Funding Source: national project M.U.R.S.T
Amount: 150.000,00 Euros
Period: 2000 – December 2004

Project Title: "Synthesis and preparation techniques, functional characterizations and innovative applications of carbon-based nanostructures and nanocomposites"
Funding Source: PRIN
Amount: 46.000,00 Euros
Period: 2004-2006

Project Title: "Electrical, structural and morphological investigation of nanomaterials and nanostructures for devices based on photoemission and field emission"
Funding Source: PRIN

Amount: 26.800,00 Euros
Period: 2008-2010

Project Title: "Research center for human and environmental health" - WP 3 (modeling, synthesis, functionalization and morphological and structural analysis of nano-dimensional materials for biomedical applications)
Funding Source: PON
Amount: 600.000,00 Euros
Period: 2012-2014

Project Title: "Carbon-Based Innovative Materials for Nuclear Physics Applications - CIMA
Funding Source: INFN
Amount: 30.000,00 Euros
Period: 2020-2021

LIST OF SCIENTIFIC PUBLICATIONS
SCOPUS: 7005705891