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WORK EXPERIENCE

01/01/2023 – CURRENT Catania, Italy
SENIOR RESEARCHER CNR INSTITUTE FOR MICROELECTRONICS AND MICROSYSTEMS

- Computational materials science
- Solid state physics
- Ab initio methods

25/11/2012 – 31/12/2022 Catania, Italy
RESEARCHER CNR INSTITUTE FOR MICROELECTRONICS AND MICROSYSTEMS

- Computational materials science
- Density functional theory
- Classical and *ab initio* molecular dynamics
- Quantum transport and device modeling
- Simulations of experimental techniques
- Hybrid perovskites, low-dimensional materials, materials for microelectronics and energy

02/01/2011 – 24/11/2012 Catania, Italy
POST-DOC RESEARCH FELLOW CNR INSTITUTE FOR MICROELECTRONICS AND MICROSYSTEMS

- Computational study of low-dimensional systems
- Development of computational codes for materials science

29/02/2004 – 04/03/2008 Catania, Italy
RESEARCH COLLABORATOR CNR INSTITUTE FOR MICROELECTRONICS AND MICROSYSTEMS

- Development of computational codes for materials science

EDUCATION AND TRAINING

31/12/2007 – 15/12/2010 Italy
DOCTOR OF PHILOSOPHY (PHD) IN NANOSCIENCE University of Catania

31/08/2000 – 10/07/2002 United Kingdom
MASTER OF SCIENCE (MSC) IN MUSIC TECHNOLOGY University of York

29/09/1994 – 19/03/2000 Greece
DEGREE IN PHYSICS Aristotle University of Thessaloniki

ADDITIONAL INFORMATION

PROJECTS

16/10/2023 – CURRENT
CN HPC - Spoke 7 Materials & Molecular Sciences - Innovation Grant: Atomistic simulations of damage, adhesion and drag reduction of graphene-based coatings Role: Partner Representative

01/01/2020 – 30/06/2023
Modeling Unconventional Nanoscaled Device FABrication (MUNDFAB) Type: Horizon 2020 project. Role: Deputy Partner Representative

18/08/2019 – 18/08/2020
Structure Prediction, Kinetic Evolution and Carrier Transport in Hybrid Perovskites for Solar Cell Applications (HYPERSOL) Type: ISCRA-CINECA Class B computational project. Role: Principal Investigator

08/08/2017 – 08/05/2018
Large-scale ab initio molecular dynamics simulations for the stability of hybrid perovskite solar cells (MD-HYPER) Type: ISCRA-CINECA Class C computational project. Role: Principal Investigator

18/12/2011 – 18/02/2013
Ab initio quantum transport simulations of substrate-supported graphene (SUBGRAPH) Type: ISCRA-CINECA Class C computational project. Role: Principal Investigator

01/04/2019 – 30/09/2022
Metrology Advances for Digitized ECS industry 4.0 (MADEin4) Type: Horizon 2020 project. Role: Participant

31/12/2016 – 29/06/2021
3C-SiC Hetero-epitaxiALLy grown on silicon compliancE substrates and 3C-SiC substrates for sustaiNable wide-band-Gap powEr devices (CHALLENGE) Type: Horizon 2020 project. Role: Participant

31/01/2016 – 29/01/2019
Graphene heterostructures with Nitrides for high frequency Electronics (GraNitE) Type: FLAG-ERA Joint Transnational Call. Role: Participant

25/11/2012 – 30/12/2013
Graphene on SiC wafers for high performance RF transistors (GRAPHIC-RF) Type: European Science Foundation (ESF), EuroGRAPHENE. Role: Participant

OTHER INFORMATION

Metrics

- Number of publications: 127
- H-index: 27 (Scopus)
- Number of citations: 2431 (Scopus)

Reviewer activity

Reviewer for
- Energy & Environmental Science
- Advanced Materials
- Advanced Energy Materials
- ACS Nano
- Applied Physics Letters
- Journal of the American Chemical Society
- Journal of Physical Chemistry Letters
- Journal of Materials Chemistry A
- Nanoscale
- Nanotechnology
- Scientific Reports

Invited talks

- 36th European Conference on Surface Science 28 Aug - 1 Sep 2023, Lodz, Poland. School of “Thin film materials - theory and applications” – PCAM. Title: “Applications of the Density Functional Theory in surface science and 2D materials”
- 'Electron quantum transport in disordered graphene', CIMTEC 2014 - 13th International Conference on Modern Materials and Technologies.
- 'Introduction to DFT modeling for EELS simulations', 1st Italian EELS school, Catania, 2014
- 'Theory and process simulation of epitaxial graphene on SiC', Workshop on the Science and Applications of Epitaxial Graphene on SiC (EPIGRAPHIC), 2012

Teaching

- The Erasmus Mundus Joint Master Degree (EMJMD) in Theoretical Chemistry and Computational Modelling (TCCM) - Theoretical Methods for Simulation of Materials (6 ECTS) / Catania, Nov 28th - December 2nd 2022
- 'Quantum-mechanical derivation methods for the simulation of complex systems', Scuola Superiore, University of Catania, 2019-2020
- 'Computational Complexity Course', Scuola Superiore, University of Catania, 2012-2013