EUROPEAN CURRICULUM VITAE FORMAT



PERSONAL INFORMATION

Name	**VITTORIO MORANDI**
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Nationality	[redacted]
Date of birth	[redacted]

WORK EXPERIENCE

• Dates (from – to)	September 2015 - present
• Name and address of employer	CNR – Institute for Microelectronics and Microsystems (IMM), Bologna Section, via Gobetti 101, I-40129 Bologna, Italy
• Type of business or sector	Material Science, Physics, Engineering
• Occupation or position held	**Head of Unit / Deputy Director**
• Main activities and responsibilities	Coordination and management (scientific and financial) of the Bologna Section of CNR-IMM (http://www.bo.imm.cnr.it) – Total staff (permanent and short-term) > 50 people – Average income from research projects and contracts / year (averaged on the last 3 years): 1.5 MEuro / year.

Main duties:

- management and administration of the staff of the Unit;
- management and administration of the facilities of the Unit (including the clean room facility, 500 m^2 in total, 250 m^2 ISO5);
- responsible of the security management of the Unit;
- responsible of the management of the inventory and of the assets of the Unit;
- management, making and signing of passive (payable) contracts below the EU threshold;
- management and preparation of passive (payable) contracts above the EU threshold;
- management, making and signing of active (receivable) contracts related to technical-scientific services and performances, up the threshold of 50 k€ (CNR Titolo II type)
- management and preparation of all the other types of active (receivable) contracts, responsibility of signing only if properly delegated by the Institute Director

• Dates (from – to)	July 2022 - present
• Name and address of employer	CNR – Territorial Research Area of Bologna
• Type of business or sector	Material Science, Physics, Engineering, Marine, Atmospheric and Polar Science, Bioeconomy
• Occupation or position held	**Acting President of the Territorial Research Area of Bologna**
• Main activities and responsibilities	Coordination and management of the CNR Territorial Research Area of Bologna (https://area-new.bo.cnr.it/en) – Composition: 7 CNR Institutes, 2 INAF Institutes, "Dario Nobili" Library, Congress Center, Accelerator of Innovation, CNR Technopole "AMBI-MAT" Main duties: • management and administration of the staff of the Area; • management and administration of the services and the facilities of the Area; • responsible of the security management of the Area; • responsible of the management of the inventory and of the assets of the Area; • management, making and signing of passive (payable) contracts; • management, making and signing of active (receivable) contracts related to technical-scientific services and performances
• Dates (from – to)	October 2020 - present
• Name and address of employer	CNR – IMM, Bologna Section, via Gobetti 101, I-40129 Bologna, Italy
• Type of business or sector	Material Science, Physics, Engineering
• Occupation or position held	**Research Director – Registration Number (Matricola) no. 9839**
• Main activities and responsibilities	Development of advanced electron microscopy techniques, both at the TEM (HREM, STEM, EDX and EELS, Electron Holography) and at the SEM (STEM, SE and BSE imaging, electron tomography). Development of innovative devices for electron collection in the SEM in transmission mode. Development of a MEMS-based nano-lab for TEM in-situ analyses. Application of electron microscopy techniques to the study of nanomaterials (nanoparticles, nanowires, layered materials, metallic, and semiconducting nanostructures). TEM-based interferometric techniques applied to the study of lowdimensional carbon allotropes, in particular graphene. Synthesis, by means of Chemical Vapour Deposition, characterization, by means of electron microscopy techniques, and technological processing and integration of graphene, both membranes and 3D structures, and graphene-based composites materials, development of nanomaterials and device integration for energy applications such as thermoelectrics, photovoltaics, batteries and electrochemical applications
• Dates (from – to)	November 2022 - present
• Name and address of employer	CNR – IMM, Bologna Section, via Gobetti 101, I-40129 Bologna, Italy
• Type of business or sector	Material Science, Physics, Engineering
• Occupation or position held	**Coordinator of iENTRANCE@ENL - Infrastructure for ENergy TRANsition and Circular Economy**
• Main activities and responsibilities	Coordination and management (scientific and financial) of the infrastructure for ENergy TRANsition and Circular Economy – iENTRANCE@ENL (https://www.ientrance.eu), a new Research Infrastructure financed under the Next Generation EU Program (PNRR), with the vision to become the first distributed, integrated, and fully interoperable Technological Research Infrastructure of European excellence in Italy devoted to Clean Energy Transition Research, and the mission is to address the pressing global challenges represented by Clean Energy Transition, Sustainability, and Circular Economy, by developing a future generation of nanomaterials, processes, and systems specifically designed to mitigate the environmental impact of production, storage, distribution, and use of energy Partners: CNR (IMM Bologna (Coordinator), ISMN Bologna, IMEM Parma, NANO Modena, ISM Roma, ISM Tito Scalo, STEMS Napoli, IPCB Pozzuoli, IMM Catania), Politecnico of Torino, INRIM, University of Bologna, Sapienza University of Rome, University Roma Tre. Total Funding: 75.165.077,63 €
• Dates (from – to)	November 2019 - present
• Name and address of employer	CNR – IMM, Bologna Section, via Gobetti 101, I-40129 Bologna, Italy
• Type of business or sector	Material Science, Physics, Engineering
• Occupation or position held	**Coordinator of EMJoy – CNR-UNIBO Joint Laboratory on Electron Microscopy**
• Main activities and responsibilities	Coordination and management (scientific and financial) of the CNR-UNIBO Joint Laboratory on

Electron Microscopy "EMJoy" (https://emjoy.bo.imm.cnr.it), a collaborative facility with the main objectives of (i) development and application of electron Microscopy for the micro- and nano- scale characterization of materials with particular focus on in-situ (liquid, electrochemical, heating and biasing) TEM techniques, (ii) investigation of functional materials for application in nanomedicine, energy and environment, (iii) development of research collaborations within the framework of the Departments of Excellence national program, (iv) synergic cooperation and application to competitive programs at the regional, national, international level through the Linked Third Party, (v) education, dissemination and training of electron microscopy, development of instrumental techniques and methodologies.

• Dates (from – to)	May 2018 – present
• Name and address of employer	CNR – IMM, Bologna Section, via Gobetti 101, I-40129 Bologna, Italy
• Type of business or sector	Material Science, Physics, Engineering
• Occupation or position held	**Coordinator of It-fab**
• Main activities and responsibilities	It-fab is the network of Italian facilities in the field of micro- and nano-fabrication, working to further develop the Italian node of EuroNanaoLab (ENL). It-fab is coordinated by CNR, includes CNR-IMM and CNR-Nanotec Institutes, PoliFAB from Politecnico di Milano, FBK-SD, Inphotec, Politecnico di Torino and INRIM. The integrated micro/nanofabrication facilities include more than 400 equipment in about 4000 m^2 of cleanrooms, located in 10 different facilities (http://itfab.bo.imm.cnr.it/)

• Dates (from – to)	March 2019 – present
• Name and address of employer	CNR – IMM, Bologna Section, via Gobetti 101, I-40129 Bologna, Italy
• Type of business or sector	Material Science, Physics, Engineering
• Occupation or position held	**Vice Chair of EuroNanoLab**
• Main activities and responsibilities	EuroNanoLab (ENL - http://euronanolab.com) is a consortium, comprising 44 clean rooms in 14 different countries, with CNRS-Renatech (France), MyFab (Sweden), NorFab (Norway), NanoLabNL (Netherlands), CzechNanoLab (Czech Republic), University of Tartu and Tartu Science Park (Estonia), OtaNano (Finalnd), Institute of Micro- and Nanotechnologies at TU Ilmenau (Germalny), International Iberian Nanotechnology Laboratory (INL), Institute of Solid State Physics, University of Latvia (Latvia), MNAAPC (Lithuania), INESC-MN (Portugal), IMT-MINFAB (Romania), MicroNanoFabs (Spain) and It-fab (Italy). ENL is an initiative to establish a large-scale distributed nanofabrication research infrastructure. EuroNanoLab provides world-class nanofabrication research infrastructure and expertise to increase the quality, efficiency and relevance of European basic research within nanotechnology, aiming at (i) enhance excellence, by building superior processing competence, (ii) accelerate research, by process exchange and single-access point to nanofabrication RI and expertise, (iii) share competences, by defining European standards in cleanroom procedures, (iv) strengthening cooperation, by building an alliance between scientist and nanofabrication experts. As Vice-Chair Vittorio Morandi has represented the consortium in several meetings and European Projects and is involved in the definition of the agenda of the ENRIS2023 (http://euronanolab.eu/enris-2023) conference, acting as Chair of the Programme Committee.

• Dates (from – to)	June 2017 – present
• Name and address of employer	CNR – IMM, Bologna Section, via Gobetti 101, I-40129 Bologna, Italy
• Type of business or sector	Material Science, Physics, Engineering
• Occupation or position held	**Steering Committee of EuroNanoLab**
• Main activities and responsibilities	EuroNanoLab (ENL - http://euronanolab.com) is a consortium, comprising 44 clean rooms in 14 different countries, with CNRS-Renatech (France), MyFab (Sweden), NorFab (Norway), NanoLabNL (Netherlands), CzechNanoLab (Czech Republic), University of Tartu and Tartu Science Park (Estonia), OtaNano (Finalnd), Institute of Micro- and Nanotechnologies at TU Ilmenau (Germalny), International Iberian Nanotechnology Laboratory (INL), Institute of Solid State Physics, University of Latvia (Latvia), MNAAPC (Lithuania), INESC-MN (Portugal), IMT-MINFAB (Romania), MicroNanoFabs (Spain) and It-fab (Italy). ENL is an initiative to establish a large-scale distributed nanofabrication research infrastructure. EuroNanoLab provides world-class nanofabrication research infrastructure and expertise to increase the quality, efficiency and relevance of European basic research within nanotechnology, aiming at (i) enhance excellence, by building superior processing competence, (ii) accelerate research, by process exchange and single-access point to nanofabrication RI and expertise, (iii) share competences, by defining European standards in cleanroom procedures, (iv) strengthening cooperation, by building an

alliance between scientist and nanofabrication experts.

• Dates (from – to)	September 2015 – present
• Name and address of employer	CNR – IMM, Bologna Section, via Gobetti 101, I-40129 Bologna, Italy
• Type of business or sector	Material Science, Physics, Engineering
• Occupation or position held	**Scientific Coordinator of Graphene Factory**
• Main activities and responsibilities	GRAPHENE FACTORY (http://grafene.cnr.it) is the CNR web portal born with the aim to show and promote the research on graphene and bi-dimensional materials performed within the CNR network. It also offers contents and information about "graphene" to the scientific community, to the media, to SMEs, Industry and general public.

• Dates (from – to)	January 2011 - present
• Name and address of employer	CNR – IMM, Bologna Section, via Gobetti 101, I-40129 Bologna, Italy
• Type of business or sector	Material Science, Physics, Engineering
• Occupation or position held	**Coordinator of the Graphene Technology Group (now NanoMatERs Group)**
• Main activities and responsibilities	Coordination and management (scientific and financial) of the Graphene Technology Group at IMM Bologna (10-15 people), with main scientific activities focused on electron microscopy characterization of graphene and graphene-based materials, CVD growth of graphene membranes and 3D structures, design, fabrication and characterization of graphene-based MEMS, NEMS and FET devices, development of nanomaterials and device integration for energy applications such as thermoelectrics, photovoltaics, batteries and electrochemical applications.

• Dates (from – to)	October 2016 – present
• Name and address of employer	Department of Physics and Astronomy, University of Bologna
• Type of business or sector	Material Science, Physics, Engineering
• Occupation or position held	**Adjunct Professor**
• Main activities and responsibilities	Modulus on “2-Dimensional Materials” in the framework of the Course “Microscopic Kinetics and Thermodynamics” of the 2nd Cycle Degree in Physics, Curriculum “Materials Physics and Nanoscience”, Department of Physics and Astronomy, University of Bologna

• Dates (from – to)	May 2013 – present
• Name and address of employer	CNR – IMM, Bologna Section, via Gobetti 101, I-40129 Bologna, Italy
• Type of business or sector	Material Science, Physics, Engineering
• Occupation or position held	**Qualified as Professor in Physics**
• Main activities and responsibilities	Qualification granted by the Italian Ministry for Instruction, University and Research (MIUR) after a competitive selection at national level (ASN Bando 2012)

• Dates (from – to)	January 2011 – February 2016
• Name and address of employer	CNR – IMM, Bologna Section, via Gobetti 101, I-40129 Bologna, Italy
• Type of business or sector	Material Science, Physics, Engineering
• Occupation or position held	**Coordinator of CNR PdGP Project “Sviluppo di Modelli Fisici, Simulazioni e Tecniche di Caratterizzazione per le Nanoscienze” - DFM.AD006.045 (former Commessa)**
• Main activities and responsibilities	Coordination and management (scientific and financial) of the CNR DFM.AD006.045 Project (former Commessa) (10-15 people). Yearly contribution to the definition of the scientific and financial Provisional Management Plan of CNR. Main scientific activities: structural and functional characterization of (nano) materials by means of electron microscopy and X-ray methods, development of characterization strategies and devices, development of models and simulations of complex systems and experimental results.

• Dates (from – to)	January 2011 – September 2015
• Name and address of employer	CNR – IMM, Bologna Section, via Gobetti 101, I-40129 Bologna, Italy
• Type of business or sector	Material Science, Physics, Engineering
• Occupation or position held	**Head of the Structural Characterization Division - CNR-IMM Section of Bologna**
• Main activities and responsibilities	Coordination and management (scientific and financial) of the Structural Characterization Division of CNR-IMM (10-15 people). Main scientific activities: structural and functional characterization of

(nano) materials by means of electron microscopy and X-ray methods, development of characterization strategies and devices, development of models and simulations of complex systems and experimental results.

• Dates (from – to)	February 2020 – October 2020
• Name and address of employer	CNR – IMM, Bologna Section, via Gobetti 101, I-40129 Bologna, Italy
• Type of business or sector	Material Science, Physics, Engineering
• Occupation or position held	**Senior Researcher – Registration Number (Matricola) no. 9839**
• Main activities and responsibilities	Development of advanced electron microscopy techniques, both at the TEM (HREM, STEM, EDX and EELS, Electron Holography) and at the SEM (STEM, SE and BSE imaging, electron tomography). Development of innovative devices for electron collection in the SEM in transmission mode. Development of a MEMS-based nano-lab for TEM in-situ analyses. Application of electron microscopy techniques to the study of nanomaterials (nanoparticles, nanowires, layered materials, metallic, and semiconducting nanostructures). TEM-based interferometric techniques applied to the study of lowdimensional carbon allotropes, in particular graphene. Synthesis, by means of Chemical Vapour Deposition, characterization, by means of electron microscopy techniques, and technological processing and integration of graphene, both membranes and 3D structures, and graphene-based composites materials

• Dates (from – to)	February 2009 – February 2020
• Name and address of employer	CNR – IMM, Bologna Section, via Gobetti 101, I-40129 Bologna, Italy
• Type of business or sector	Material Science, Physics, Engineering
• Occupation or position held	**Researcher – Registration Number (Matricola) no. 9839**
• Main activities and responsibilities	Development of advanced electron microscopy techniques, both at the TEM (HREM, STEM, EDX and EELS, Electron Holography) and at the SEM (STEM, SE and BSE imaging, electron tomography). Development of innovative devices for electron collection in the SEM in transmission mode. Development of a MEMS-based nano-lab for TEM in-situ analyses. Application of electron microscopy techniques to the study of nanomaterials (nanoparticles, nanowires, layered materials, metallic, and semiconducting nanostructures). TEM-based interferometric techniques applied to the study of lowdimensional carbon allotropes, in particular graphene. Synthesis, by means of Chemical Vapour Deposition, characterization, by means of electron microscopy techniques, and technological processing and integration of graphene, both membranes and 3D structures, and graphene-based composites materials

• Dates (from – to)	January 2005 – February 2009
• Name and address of employer	CNR – IMM, Bologna Section, via Gobetti 101, I-40129 Bologna, Italy
• Type of business or sector	Material Science, Physics, Engineering
• Occupation or position held	**Researcher (short-term)**
• Main activities and responsibilities	Development of advanced electron microscopy techniques, both at the TEM (HREM, STEM, EDX and EELS, Electron Holography) and at the SEM (STEM, SE and BSE imaging, electron tomography). Development of innovative devices for electron collection in the SEM in transmission mode. Development of a MEMS-based nano-lab for TEM in-situ analyses. Application of electron microscopy techniques to the study of nanomaterials (nanoparticles, nanowires, layered materials, metallic, and semiconducting nanostructures). TEM-based interferometric techniques applied to the study of lowdimensional carbon allotropes, in particular graphene. Synthesis, by means of Chemical Vapor Deposition, characterization, by means of electron microscopy techniques, and technological processing and integration of graphene, both membranes and 3D structures, and graphene-based composites materials.

• Dates (from – to)	January 2004 – January 2005
• Name and address of employer	CNR – IMM, Bologna Section, via Gobetti 101, I-40129 Bologna, Italy
• Type of business or sector	Material Science, Physics, Engineering
• Occupation or position held	**Post-doctoral fellowship**
• Main activities and responsibilities	Study and optimization of the image formation mechanism with secondary, backscattered and transmitted electrons in the Scanning Electron Microscope. Application and extension of the interpretation models and experimental strategies developed at low energy to high energy STEM.

• Dates (from – to)	January 2003 – January 2004
• Name and address of employer	CNR – IMM, Bologna Section, via Gobetti 101, I-40129 Bologna, Italy
• Type of business or sector	Material Science, Physics, Engineering
• Occupation or position held	**Post-doctoral fellowship for Technology Transfer**
• Main activities and responsibilities	Design and fabrication of an innovative detector for the collection of transmitted electrons in a Scanning Electron Microscope (STEM mode at low energy)

• Dates (from – to)	October 1999 – February 2000
• Name and address of employer	CNR LAMEL, via Gobetti 101, I-40129 Bologna, Italy
• Type of business or sector	Material Science, Physics, Engineering
• Occupation or position held	**Research fellowship by Philips Electron Optics**
• Main activities and responsibilities	Development of theoretical models and software package (Monte Carlo simulation code) for the study of electron-matter interaction at low energy and simulation of images in the Scanning Electron Microscope.

ORGANISATIONAL/COORDINATION SKILLS AND COMPETENCES

Working in teams, distributed across different research centers. Coordination and management of more than 50 people as Deputy Director of CNR-IIMM Section of Bologna. Coordination of large research groups (more than 15 researchers); coordination and collaboration in large research projects.

PROJECTS

NextGenerationEU (PNRR - Missione 04 “Istruzione e ricerca” – Componente 2 “Dalla ricerca all’impresa” – Investimento 3.1 “Rafforzamento e creazione di IR nell’ambito del Piano Nazionale di Ripresa e Resilienza (PNRR)”) Research Infrastructure Project **“Infrastructure for ENergy TRANsition and Circular Economy - iENTRANCE@ENL”** – Duration 2022-2025 – Role: Project Coordinator

NextGenerationEU (PNRR - Missione 04 “Istruzione e ricerca” – Componente 2 “Dalla ricerca all’impresa” – Investimento 3.1 “Rafforzamento e creazione di IR nell’ambito del Piano Nazionale di Ripresa e Resilienza (PNRR)”)) Research Infrastructure Project **“NFFA Digital Infrastructure – NFFA-DI”** – Duration 2023-2025 – Role: CNR-IMM-BO Unit Coordinator

NextGenerationEU (PNRR - Missione 04 “Istruzione e ricerca” – Componente 2 “Dalla ricerca all’impresa” – Investimento 3.1 “Realizzazione o ammodernamento di Infrastrutture Tecnologiche di Innovazione”) Research Infrastructure for Innovation Project **“Italian MATerials Technologies Infrastructure – i-MATT”** – Duration 2023-2025 – Role: CNR-IMM-BO Unit Coordinator

NextGenerationEU (PNRR - Missione 04 “Istruzione e ricerca” – Componente 2 “Dalla ricerca all’impresa” – Investimento 1.5 “Creazione e rafforzamento di ecosistemi dell'innovazione, costruzione di leader territoriali di R&S”) Ecosystem for Innovation Project **“Ecosystem for Sustainable Transition IN Emilia Romagna - ECOSISTER”** – Duration 2022-2025 – Role: CNR-IMM-BO Unit Coordinator in Spoke 1, Spoke 2, Spoke 3 and Spoke 4

NextGenerationEU (PNRR - Missione 04 “Istruzione e ricerca” – Componente 2 “Dalla ricerca all’impresa” – Investimento 1.3 “Creazione di “Partenariati estesi alle università, ai centri di ricerca, alle aziende per il finanziamento di progetti di ricerca di base”) Partenariato Esteso Project **“Network 4 Energy Sustainable Transition - NEST”** – Duration 2022-2025 – Role: CNR-IMM Unit Coordinator in Spoke 2

HORIZON EUROPE INFRA-DEV Project (EU Project) **“IMPRESS – Interoperable electron Microscopy Platform for advanced RESearch and Services”** – Duration 2023-2027 – Grant agreement: 101094299 - Role: Work Package Leader

HORIZON EUROPE INFRA-EOSC Project (EU Project) **“FAIR-Impact - Expanding FAIR Solutions across EOSC”** – Duration 2022-2025 – Grant agreement: 101057344 - Role: Unit member

H2020 INFRAIA Project (EU Project) **“NEP - Nanoscience Foundries and Fine Analysis (NFFA) Europe Pilot”** – Duration: 2021-2026 – Grant Agreement: 101007417 – Role: CNR-IMM-BO Unit (Linked Third Party Providing Access Against Payment) Coordinator

H2020 NMBP Project (EU Project) **“CHALLENGES – Real-time nano-CHAracterization reLatEd techNIoGiEeS”** – Duration 2020-2023 – Grant agreement: 861857 - Role: Work

Package Leader

H2020 NMBP Project (EU Project) **"NanoFabNet – International Hub for sustainable industrial-scale Nanofabrication"** - Duration 2020-2023 – Grant agreement: 886171 - Role: Unit member

H2020 Future Emerging Technologies Flagship (EU Project) – **"Graphene Flagship Core Project 3"** - Duration: 2020-2023 – Grant agreement: 881603 – WP13 "Functional foams and coatings" - Role: Unit member

H2020 INFRAIA Project (EU Project) - **"ESTEEM3 - Enabling Science and Technology through European Electron Microscopy"** - Duration: 2019-2022 – Grant agreement: 823717 – Role: Unit member

H2020 Future Emerging Technologies Flagship (EU Project) – **"Graphene-based disruptive technologies – Graphene Core2"** – Duration: 2018-2020 – Grant agreement: 785219 – WP13 "Functional foams and coatings" and WP14 "Polymer composites" - Role: Unit member

H2020 FET-OPEN Project (EU Project) - **"Q-SORT – Quantum Sorter"** - Duration: 2017-2021 – Grant agreement: 766970 – Role: Internal referee

FP7 Marie Curie IRSES Project (EU Project) **"INTERNEW - Innovative interfaces for Energy related applications"** - Duration: 2014-2018 – Grant agreement: 612570 - Role: Project coordinator

H2020 Future Emerging Technologies Flagship (EU Project) – **"Graphene-based disruptive technologies – Graphene Core1"** – Duration: 2016-2018 – Grant agreement: 696656 – WP13 "Functional foams and coatings" and WP14 "Polymer composites" - Role: Unit member

FP7 INFRASTRUCTURES Project (EU Project) – **"ESTEEM2 - Enabling Science and Technology through European Electron Microscopy"** - Duration: 2012-2016 – Grant agreement: 312483 - Role: User Selection Panel reviewer

FP7 Future Emerging Technologies Flagship (EU Project) – **"CA-Graphene Flagship"** – Duration: 2013-2016 – Call: Future and Emerging Technologies (FET) Flagships – Grant agreement: 604391 - WP10 "Nanocomposites" - Role: Unit member

MIUR "Progetto Premiale" (National Project) **"ABNanotech: Atom Based Nanotechnologies"** – Duration: 2014-2015 - Call: D.Lgs. MIUR 231/2009 Progetti Premiali 2012 Linea di interevento 1 - Role: Work Package leader

MIUR "Progetto Premiale" (National Project) **"S.M.M.A.R.T. - Sviluppo di nuovi materiali bidimensionali mono-atomici: dalla ricerca di base alle applicazioni tecnologiche"** – Duration: 2014-2015 - Call: D.Lgs MIUR 231/2009 Progetti Premiali 2012 Linea di intervento 1 - Role: Work Package leader

"Merli Detector" Cooperation Agreement (research contract) between CNR-IMM Bologna and Carl Zeiss Microscopy GmbH – Duration: 2012-2013 – Role: Principal Investigator

FIRB RBAU01M97L (National Project) **"Tecniche avanzate di microscopia e olografia elettronica applicate allo studio di giunzioni p-n e nanoparticelle"** – DurationI: 2004-2006 – Call: Decreto Direttoriale MIUR del 02.08.2001 821-Ric - Role: Unit member

PRIN 2007KYAFA9 (National Project) **"Materiali e tecniche per sistemi di conversione fotovoltaica di nuova generazione"** – Duration: 2008-2010 - Call: D.M. MIUR n. 1175 18.09.2007 - Role: Unit member

FP6 Project (EU Project) **"ANNA - European Integrated Activity of Excellence and Networking for Nano and Micro-Electronics Analysis"** – Duration: 2006-2011 - Call: FP6-2004-INFRASTRUCTURES-5 IA-I3 - Integrating activities implemented as Integrated Infrastructure Initiatives – Grant agreement: 26134 - Role: Unit member

POR FESR 2007/2013 - Regione Lazio - Asse I - Attività 1 (National Project) **"Sviluppo di un sistema di tomografia elettronica al microscopio elettronico a scansione - Tomo SEM"** – Duration: 2012-2014 – Grant agreement: F97I12000120007 - Role: Unit coordinator

POR FESR 2007-2013, Asse 1 Attività I.1.1- Regione Emilia-Romagna (National Project) Iniziativa

Tecnopolo **"Tecnopolo Materiali-Ambiente - AMBIMAT"** – Duration: 2010-2014 - Role: Unit Member

FESR 2017-2013 Industria 2015 Project (National Project) **"FLEXSOLAR - Celle fotovoltaiche flessibili a film sottile su substrati metallici a base di materiali semiconduttori II-VI a basso costo ed a basso impatto ambientale"** – Duration: 2009-2013 - Call: PON-CONV-FESR Ricerca e competitivita' Asse 1 Sostegno ai mutamenti strutturali – CUP: – B67I09000110005 - Role: Unit member

INTERNATIONAL CONFERENCES AND SCHOOLS ORGANIZATION

Member of the International Scientific Committee of the Graphene2023 International Conference (Manchester, United Kingdom, 27-30 June 2023 - https://www.grapheneconf.com/2023)

Chair of the Programme Committee of the ENRIS2023 International Conference (Paris, France, 15-17 May 2023 - http://euronanolab.eu/enris-2023)

Director of the "PIER GIORGIO MERLI (S)TEM SCHOOL IN MATERIALS SCIENCE 2022" (Bologna, Italy, 03-14 October 2022 - http://temschool.bo.imm.cnr.it/)

Chairperson at the 16th Multinational Congress on Microscopy 2022 (Brno, Czech Republic, 04-09 September 202) - https://www.16mcm.cz

Member of the Steering Committee of the Conference Nanoinnovation2022 (Rome, Italy, 20-23 September 2022 - https://www.nanoinnovation.eu)

Member of the International Scientific Committee of the Graphene2022 International Conference (Aachen, Germany, 05-08 July 2022 - https://www.grapheneconf.com/2022)

Member of the Steering Committee of the Conference Nanoinnovation2021 (Rome, Italy, 21-24 September 2021 - https://www.nanoinnovation2020.eu)

Member of the International Scientific Committee of the Graphene2021 International Conference (Grenoble, France 26-29 October 2021 - https://www.grapheneconf.com/2021)

Director of the "Aldo Armigliato SEM SCHOOL IN MATERIALS SCIENCE" (Bologna, Italy, 09-13 November 2020 - http://semschool.bo.imm.cnr.it)

Member of the Steering Committee of the Conference Nanoinnovation2020 (Rome, Italy, 15-18 September 2020 - https://www.nanoinnovation2020.eu)

Member of the "Physical Sciences Committee - Tools and Techniques" of the European Microscopy Congress (EMC) 2020 (Copenhagen, Denmark 23-28 August 2020 – https://www.emc2020.eu/)

Member of the International Scientific Committee of the Graphene2019 International Conference (Roma, Italy 25-28 June 2019 - http://www.grapheneconf.com/2019/index.php)

Member of the Steering Committee of the Conference Nanoinnovation2019 (Rome, Italy, 11-14 June 2019 - https://www.nanoinnovation2019.eu/)

Member of the Scientific Committee of the "Aldo Armigliato SEM SCHOOL IN MATERIALS SCIENCE" (Trieste, Italy, 9-12 April 2019 - http://semschool.iom.cnr.it/)

Director of the "PIER GIORGIO MERLI (S)TEM SCHOOL IN MATERIALS SCIENCE 2018" (Bologna, Italy, 19-23 November 2018 - http://temschool.bo.imm.cnr.it/)

Member of the Local Organization Committee of the Materiasl.it 2018 conference (Bologna, Italy, 22-26 October 2018 - http://eventi.cnism.it/materials2018)

Member of the Steering Committee of the Conference Nanoinnovation2018 (Rome, Italy, 11-14 September 2018 - http://www.nanoinnovation.eu/2018/)

Director of the "SCANNING ELECTRON MICROSCOPY SCHOOL IN MATERIALS SCIENCE" (Bologna, Italy, 12-15 December 2017 – http://semschool.bo.imm.cnr.it)

Member of the International Scientific Committee of the Graphene2017 International Conference (Barcelona, Spain, 28-31 March 2017 - http://www.grapheneconf.com/2017/index.php)

Member of the Technical-Scientific Committee of the conference Nanoinnovation2016 (Rome, Italy, 20-23 September 2016 - http://www.nanoinnovation.eu/2016/)

Member of the Technical-Scientific Committee of the workshop "L'Italia sostenibile: idee e azioni per il futuro" (Bologna,Italy, 20-21 May 2016 - http://www.bo.cnr.it/convegno-italiasostenibile)

Member of the International Scientific Committee of the Graphene2016 International Conference (Genova, Italy, 19-22 April 2016 – http://www.grapheneconf.com/2016/Scienceconferences_Graphene2016.php)

Member of the International Scientific Committee of the E-MRS Spring Meeting 2016 Symposium Z "Two dimensional crystals and van der Waals heterostructures for nanoelectronics" at the (Lille, France, 2-6 May 2016 – http://www.europeanmrs.com/meetings/2016-spring-meeting)

Member of the Technical-Scientific Committee of the conference Nanoitaly2015 (Rome, Italy, 21-24 September 2015 - http://www.nanoitaly.it/nanoitaly/en/)

Chairman (with Dr. Luca Ottaviano, University of L'Aquila, Italy) of international conference "GraphITA2015 - A Multidisciplinary and Intersectorial European Workshop on Synthesis, Characterization and Technological Exploitation of Graphene and 2D Materials Beyond Graphene", 14-18 September 2015, CNR Bologna Research Area (http://graphita.bo.imm.cnr.it)

Session chairman at the Multinational Congress of Microscopy 2015 (Eger, Hungary, 23-28 August 2015)

Session chairman at the Microscopy Congress 2013 (Regensburg, Germany, 25-30 August 2013)

Member of the International Committee of the GraphEL workshop (Mykons, Greece, 27-30 September 2012 - http://www.nanoconf.com/graphel)

Member of the Committee of the X National Workshop on Nanophase Materials, 6-8 September 2011, Bologna, Italy

Chairman (with Dr. Luca Ottaviano, University of L'Aquila, Italy) of the conference "GraphITA - A Multidisciplinary and Intersectorial European Workshop on Synthesis, Characterization and Technological Exploitation of Graphene", 15-18 May 2011, INFN Gran Sasso National Labs, L'Aquila (http://graphita.bo.imm.cnr.it/graphita2011/index.html)

Session chairman at the Multinational Congress of Microscopy 8 (Prague, Czech Republic, 17-21 June 2007)

MEMBERSHIP AND PROFESSIONAL ROLES

2022 – present: Coordinator of the NextGenerationEU Research Infrastructure Project iENTRANCE@ENL (https://www.ientrance.eu)

2022 – present: Member of the "Collegio di Dottorato" for the National Ph.D. in "Materials, Sustainable Processes and Systems for the Energy Transition" of the Politecnico di Torino

2019 – present: Director of the CNR-UNIBO Joint Lab on Electron Microscopy – EMJoy (https://emjoy.bo.imm.cnr.it)

2019 – present: Vice-Chair of the EuroNanoLab initiative (http://euronanolab.com/)

2019 – present: Member of the "Collegio di Dottorato" for the Ph.D. in Physics of the University of Bologna

2018 – present: Coordinator of the It-fab initiative (http://itfab.bo.imm.cnr.it/)

2018 – present: Member of the Scientific Committee of the Open Infrastructure for Advanced TOmography and Microscopies (ATOM) (https://www.atomcenter.org)

2017 – present: Member of the Steering Committee of the EuroNanoLab initiative (http://euronanolab.com/)

2016 – present: Adjunct Professor at the University of Bologna, Department of Physics and Astronomy (https://www.unibo.it/sitoweb/vittorio.morandi)

2016 – present: member of the Scientific Committee of the Electron Microscopies Center “Laura Bonzi” of CNR in Firenze (Ce.M.E. - http://www.ceme.cnr.it)

2015 – present: Scientific Coordinator of the CNR Graphene Factory (http://grafene.cnr.it), a web portal to disseminate, popularize and promote the research of CNR on graphene and two-dimensional materials

2013 - present: Qualified as Professor in Physics, granted by the Italian Ministry for Instruction, University and Research (MIUR) after a competitive selection at national level (ASN Bando 2012)

2012 – present: Staff Member of the team of the Beyond Nano Electron Microscopy Lab, the largest Italian Transmission Electron Microscopy facility (http://www.beyondnano.it)

2015 – 2022: CNR representative (delegate of the CNR President) in the Assembly of the Associates (1 meeting per year) of Proambiente S.c.r.l. (https://www.consorzioproambiente.it)

2021 (July – August): president of the official commission for the acquisition of a Transmission Emission Electron Microscope for the CNR-ICCOM - total budget 983.606,56 Euro

2020 (September – October) – member of the official commission for the acquisition of a Transmission Emission Electron Microscope (HOLO TEM/STEM) for the University of Salento in the framework of the BIO OPEN LAB (BOL) PON Ricerca e Innovazione 2014-2020 project - total budget 3.565.023,77 Euro

2018 – 2020: member of the technical commission for the definition of the characteristics of the Cryo Transmission Electron Microscope (TEM) to be acquired in the framework of the PON project “EuroBioImaging”, call “Azione II.1 del PON Ricerca e Innovazione 2014-2020” - total budget 4.000.000 Euro

2019 (January): president of the official commission for the acquisition of a Field Emission Scanning Electron Microscope for the University of Bologna - total budget 295.600 Euro (Prot. University of Bologna n. 4125, 14.01.2019)

2018 (August – September): Member of the Commission for the PhD in Physics, 34th series, of the University of Ferrara

2017 (January – July): member of the official commission for the acquisition of a Field Emission Scanning Electron Microscope equipped with Ionic Column in the framework of the Electron Microscopies Center “Laura Bonzi” of CNR in Firenze (Ce.M.E.) (Prot. CNR-NANO n.a.) - total budget 491.800 Euro

2012 - 2016: Member of the User Selection Panel of the European Network of Transmission Electron Microscopy for Material Science - FP7 ESTEEM2 project – Grant agreement: 312483 (http://esteem2.eu)

2014 (January – November): execution director for the acquisition of an Environmental Scanning Electron Microscope (ESEM) by CNR-ISAC Bologna in the framework of the POR FESR 2007-2013 Project Iniziativa Tecnopolo "Materiali- Ambiente, AMBIMAT" – total budget for ESEM acquisition 237.000 Euro (VAT excluded) (Prot. CNR-ISAC n. 5115, 12/11/2014)

2014 (January – June): member of the technical commission for the definition of the characteristics of the Scanning Electron Microscope (SEM) equipped with Electron Beam Lithography (EBL) acquired by CNR-IMM Bologna in the framework of the POR FESR 2007- 2013 Project Iniziativa Tecnopolo "Materiali- Ambiente, AMBIMAT" – total budget for SEM-FIB acquisition 320.000 Euro (VAT excluded) (Prot. CNR-IMM n. 4586, 04/06/2014)

2014 (January – June): member of the technical commission for the definition of the characteristics of the Scanning Electron Microscope (SEM) equipped with Focused Ion Beam (FIB) column acquired by CNR-IMEM Parma in the framework of the POR FESR 2007-2013 Project Iniziativa Tecnopolo "Materiali- Ambiente, AMBIMAT" – total budget for SEM-EBL acquisition 530.000 Euro (VAT excluded) (Prot. CNR-IMEM n. 365, 07/03/2014)

2012 (January - July): member of the technical commission for the definition of the characteristics of the Cs-corrected sub-Angstrom Transmission Electron Microscope (TEM) acquired in the framework of the PON Project “Beyond-Nano: Materials and processes BEYOND the NANO–scale” - CUP: PONa3_00362 – member of the official commission for the acquisition of the TEM - total budget 3.139.000 Euro (Prot. CNR-IMM n. 3651, 10/07/2012)

EDUCATION AND TRAINING

• Dates (from – to)	January 2000 – December 2002
• Name and type of organisation providing education and training	University of Bologna, Department of Physics,
• Principal subjects/occupational skills covered	Thesis title: "On contrast formation in Scanning Electron Microscopy and Scanning Transmission Electron Microscopy: interpretation models, quantitative analysis and Monte Carlo simulation". Supervisors: Dr. P.G. Merli and Prof. A. Cavallini Theoretical and experimental study of image formation mechanism with backscattered and secondary electrons in Scanning Electron Microscopy. Theoretical and experimental study of image formation in Scanning Transmission Electron Microscopy at low energy. Application to semiconductor multilayers, dopant profiles and biological samples.
• Title of qualification awarded	**Ph.D. in Physics**
• Level in national classification (if appropriate)	n. a.

• Dates (from – to)	July 1998 – March 1999
• Name and type of organisation providing education and training	University of Bologna, Department of Physics,
• Principal subjects/occupational skills covered	Thesis title: "Title: "Simulazione Monte Carlo per l'interazione elettrone materia a basse energie in strtture disomogenee" ("Monte Carlo simulation of the electron-matter interaction at low energies in inhomogeneous structures") (in Italian). Supervisors: Dr. P.G. Merli, Prof. R. Rosa and Prof. A. Cavallini. Theoretical study of the image formation mechanism in Scanning Electron Microscopy, with backscattered and secondary electrons, at low energy. Set-up of a Monte Carlo code and application to the energy filtering of backscattered electrons.
• Title of qualification awarded	**MSc. in Physics**
• Level in national classification (if appropriate)	mark 110/110 cum laude

RESEARCH ACTIVITIES

RESEARCH SECTORS

From a general point of view, his research activities concern the development of advanced electron microscopy techniques, both in transmission (High Resolution Transmission Electron Microscopy (HRTEM) Scanning Transmission Electron Microscopy (STEM), Energy Dispersive X-Ray Microanalysis (EDX), Electron Energy Loss Spectroscopy (EELS), Electron Holography) and in scanning mode, their application to the study of micro- and nanomaterials, and the synthesis, characterization, and technological processing and integration of graphene and graphene-based materials.

The most important achievements has been related to: the study of image formation mechanisms in Scanning Electron Microscopy (SEM), with the definition of a new interpretation scheme for backscattered, secondary and transmitted electrons imaging; the study and development of imaging modes and detection solutions in scanning transmission mode both in the SEM and in the TEM, in particular with the development of a new class of detectors for STEM imaging in the SEM; the structural and compositional characterization of graphene-based materials with high resolution TEM-based techniques, with particular focus on interferometric methods based both on HRTEM and Electron Holography, to determine the properties related to the curvature at the nanoscale; more recently, the development of Chemical Vapor Deposition synthesis of graphene materials, with particular focus on 3D structures (graphene foams) and the integration of graphene membranes in devices and in CMOS compatible technological processes.

RECENT SCIENTIFIC ACTIVITIES

More in detail, the scientific activity has been focused on the following main topics:

- development of Scanning Electron Microscopy (SEM) and Scanning Transmission Electron

Microscopy (STEM) techniques at low and at high energy for the study of dopant profiles multilayers and nanostructures.

- development and application of numerical Monte Carlo methods for the simulation of image formation in the SEM with different types of signals.

- development novel collection strategies and detectors for Low-Energy STEM. This activity has led to the development of an innovative detector for transmitted electrons in the SEM (patent no. WO2008152464), that has been at the basis of the novel a-STEM detector commercialized by ZEISS Microscopy, developed in the framework of a research contract between ZEISS and CNR-IMM in 2012. In the last years the above mentioned detector has been the basis for the development of an innovative system for the application of transmission electron tomography in the SEM, in collaboration with Assing. S.p.A.

- advanced characterization of graphene, graphene-based materials, and 2D materials beyond graphene, with particular focus on the application of HRTME and interferometric techniques, like electron holography and geometric phase analysis techniques.

- development of innovative in-situ systems for TEM, based on a TEM sample holder rod, with electrical connections from outside the TEM and a lodging bay on the top for placing small cartridge containing different devices (Micro- and Nano-Electro Mechanical Systems, MEMS and NEMS), directly under the electron beam of the microscope. This approach allows for the study of the nanostructures directly under external stimuli (thermal, electrical, mechanical), enabling a nano-lab directly inside the TEM.

- synthesis of large area high crystalline quality graphene films by Chemical Vapor Deposition (CVD) methods, and development of innovative transfer strategies for the integration the integration in different devices, like solar cells, OLET, capacitors, and for their exploitation as transparent conductive electrode.

- synthesis of free-standing 3D graphene macrostructures (graphene foams) by means of CVD

- processing and integration of CVD grown graphene membranes in standard CMOS compatible technology processes, for the development of innovative micromachined sensing (thermal, thermoelectric, pressure, strain …) devices.

BOOKS AND ARTICLES

He co-authored more than 180 papers on peer-reviewed international journals of physics, material science and chemistry, with more than 7900 citations (h-index = 40, source Google Scholar, h-index = 36, source Scopus). He has participated to about 50 international conferences with more than 150 oral and poster contributions, on, among others, SEM, STEM, graphene characterization and exploitation

ORCID: http://orcid.org/0000-0002-8533-1540
ResearcherID: C-1322-2013

See ANNEX I for the full list of Scientific Publications
also available at: https://scholar.google.it/citations?user=dIjIBesAAAAJ&hl

INVITED PRESENTATIONS

Huawei's Workshop on New Frontiers for Graphene in Telecommunications, Politecnico di Milano, Italy (28th October 2022) – Invited: "3D structured graphene-based materials, development and applications"

ICRI 2022, Brno, Czech Republic (19-21 October 2022) – Side Event "Long-term sustainability of small and mid-scale distributed RI projects" – Invited: "EuroNanoLab – a distributed research infrastructure for micro- and nano-fabrication"

University of Salento, CEDAD - CEntro di Fisica applicata, DAtazione e Diagnostica del Dipartimento di Matematica e Fisica "Ennio De Giorgi", Mesagne (BR), Italy (6th December 2021) – Invited: "Interferometric Transmission Electron Microscopy characterization of theoretical investigation of the structural and electronic properties of graphene membranes"

E-MRS 2021 - Analytical Techniques for Precise Characterization of Nanomaterials (ALTECH) 2021 – Invited: "Requirements for in-line nano-characterization measurements of semiconductor, photovoltaic, and 2D-material devices"

NANO-M&D 2019, University of Salerno, Salerno, Italy (4-8 June 2019) – Invited: "Graphene Technology: synthesis, characterization and reliability-driven technological device integration"

NANOSCIENCE AND NANOTECHNOLOGY 2018, INFN Frascati, Rome, Italy (19th December 2018) – Invited: “Graphene Technology: synthesis, characterization and technological device integration”

University of L’Aquila, L’Aquila, Italy (11th October 2018) - Invited: “Contrast and resolution in SEM and STEM: an overview”

Workshop “Electron Microscopy: a bridge between research and industry”, ST Microelectronics, Catania, Italy (24th September 2018) – Invited: “Scanning Electron Microscopy techniques for technological applications”

NANOINNOVATION 2018, Rome, Italy (12th September 2018) – Invited: “It-fab and EuroNanoLab: Italian and European networks of micro and nano-fabrication facilities”

TRENDS IN NANOTECHNOLOGY 2018, Lecce, Italy (3-7 September 2018) – Keynote: “Graphene Technology: synthesis, characterization and technological device integration”

Workshop “Enabling Infrastructures for Emerging Technologies”, Politecnico di Milano, Milano, Italy (19th February 2018) – Invited: “The Italian node of “EuroNanoLab”

ENI Versalis, Mantova, Italy (25th January 2017) - Invited: “Graphene Technology @ IMM Bologna”

University “La Sapienza”, Rome, Italy (20th January 2017) – Invited: “GRAFENE - Il materiale a due dimensioni”

University of Camerino, Camerino, Italy (4th October 2016) - Invited: “Graphene Technology: synthesis, characterization and technological device integration of graphene and graphene-based materials”

NANOKOREA 2015, Seoul, Korea (1-3 July 2015) - Invited: “Technological integration of graphene membranes in design and fabrication of innovative devices”

Seoul National University, Seoul, Korea (6th July 2015) – Invited: “Graphene Technology: synthesis, characterization and technological device integration of graphene and graphene-based materials"

Electronics and Telecommunications Research Institute (ETRI), Daejeon, Korea (8th July 2015) - Invited: “Graphene Technology: synthesis, characterization and technological device integration of graphene and graphene-based materials”

Workshop "Grafene: le prospettive italiane" Chemistry Dept., University of Milan (6th February 2015) - Invited: "Lavorazione e integrazione tecnologica del grafene e di materiali a base grafenica"

Workshop CIGS “1974-2014: Quarantennale della fondazione del Centro Interdipartimentale Grandi Strumenti”, Modena, Italy (9th October 2014) - Invited: “Low energy Scanning Transmission Electron Microscopy”

FISMAT 2013, Milan, Italy (9-13 September 2014) - Invited: “Interferometric Transmission Electron Microscopy characterization and theoretical investigation of the structural and electronic properties of graphene membranes”

Workshop CNR-Confindustria “IL CNR PER LE IMPRESE - La presentazione del Patto Confindustria-CNR per la Ricerca e Innovazione”, Bologna, Italy (27th May 2014) - Invited: “Materiali di Frontiera: dispositivi a base di materiali strutturati su scala nanometrica: dal silicio al grafene”

LPE-EPI, Branzate, Italy (25th July 2013) - Invited: “New horizons for graphene and graphene-like research at CNR-IMM”

Workshop CNR “Il ruolo del CNR nella Flagship Grafene e le attivita’ di ricerca su grafene e materiali 2D”, Rome, Italy (28th February 2013) - Invited: “Design, fabrication and advanced characterization of devices based on graphene and graphene-like materials”

E-MRS Fall 2012, Warsaw, Poland (14-18 May 2012) - Invited: “Transmission Electron Microscopy and theoretical investigation of the bending properties of graphene membranes”

MCM2011, Urbino Italy (4-9 September 2011) - Invited: “Quantitative dopant depth profiling in ultra shallow junctions and implants in Si by TSADF-STEM”

EMC2008, Aachen, Germany (1-5 September 2008) - Invited: “On the Spatial Resolution and Nanoscale Features Visibility in Scanning Electron Microscopy and Low-Energy Scanning Transmission Electron Microscopy”

Italian Embassy of Oslo workshop “Materials science at the University of Oslo and at the IMM-CNR”, Oslo, Norway (13-14 October 2004) - Invited: “Damage, strain and dopant profiles determination by structural analyses of ultrashallow implants in Si”

PATENTS

“Device and realization method of luminescent solar concentrators based on silicon nanostructures” no. IT102017000018941A (2017-02-21), published also as WO2018154616A1 (2018-08-30), US Patent App. 16/487.407 (2020)

“Sintesi di materiali tridimensionali a base di ossido di grafene (GO) / Three-dimensional materials based on graphene oxide (GO)” no. IT1020150000038909 and no. ITUB2015A002559A (2017-01-28), published also as WO2017017628A1 (2017-02-02)

"Detection device for electron microscope " no. IT2007BO00409 (2007-06-11) also published as WO2008152464A3 (2009-04-02)

EDITORIAL ACTIVITY

Editorial Board member of MDPI Nanomaterials (https://www.mdpi.com/journal/nanomaterials)

Editorial Board member for Nanomaterials, special section of Frontiers in Nanotechnology (https://www.frontiersin.org/journals/nanotechnology)

Editorial Board of MDPI C (https://www.mdpi.com/journal/carbon)

Editor with Prof. Marco Rossi, Prof. Daniele Passeri, Prof. Francesca A. Scaramuzzo and Dr. Marco Vittori Antisari of the volume “Proceedings of Nanoinnovation 2020”, AIP Conference Proceedings 2416, 010001 (2021); https://doi.org/10.1063/12.0006229

Editor (with Prof. Luca Ottaviano, University of L'Aquila, Italy) of the volume "GraphITA – Selected papers from the Workshop on Synthesis, Characterization and Technological Exploitation of Graphene and 2D Materials Beyond Graphene", V. Morandi and L. Ottaviano Eds., Springer, Series “Carbon Nanostructures” (2017) ISBN: 978-3-319-58134-7

Editor (with Prof. Luca Ottaviano, University of L'Aquila, Italy) of the volume “GraphITA 2011 - Selected papers from the Workshop on Fundamentals and Applications of Graphene” Eds., Springer, Series “Carbon Nanostructures” (2012) - ISBN 978-3-642-20644-3

REFEREE ACTIVITY

Evaluator for the Cyprus Research and Innovation Foundation (RIF) - RESTART 2016-2020 Programmes for Research, Technological Development and Innovation – CONCEPT/0722 Call

Evaluator of the “Bando INRIM Infrastrutture” – November 2022

External Reviewer of the Ph.D. at the UNIVERSITY OF SINDH, Jamshoro Sidh, Pakistan (June 2022) – Thesis “NANOSTRUCTURED MATERIALS FOR ENVIRONMENTAL APPLICATIONS”, candidate Dr. Muhammad Ali

Reviewer of the Italian MUR VQR 2015-2019 Evaluation of Research Performances (VQR) - GEV02 Physical Sciences (July - December 2021)

Evaluator of the Horizon Europe Marie Skłodowska-Curie Postdoctoral Fellowships (MSCA-PF) 2021

Evaluator of the ERC Consolidator Grant 2021

Evaluator for the Czech Large Research Infrastructures - Call 2021

Evaluator for the Hellenic Foundation for Research and Innovation (HFRI) - ”2nd Call for HFRI Research Projects to support Faculty members and Researchers” 2021 in the Scientific Area

"Physical Sciences".

Evaluator for the Cyprus Research and Innovation Foundation (RIF) - RESTART 2016-2020 Programmes for Research, Technological Development and Innovation – EXCELLENCE/0421 Call

Evaluator for the Italian "Ministero dello Sviluppo Economico" – call "Fondo per la Crescita Sostenibile – Accordi per l'innovazione" – 2020-2022

External Examiner for the Ph.D. at the University of Manchester (April 2020) – Thesis "Raman Spectroscopy of Solution-Processed Graphene and Related Materials", candidate Dr. Vaiva Nagyte

External Reviewer for the Ph.D. at Sapienza University of Rome, 25th cycle (October 2020) – Thesis "Ottimizzazione di Processi Tecnologici Critici per Dispositivi GaN HEMT ad Alte Prestazioni ed Alta Affidabilità", candidate Dr. Marco Natali

Evaluator of the Agencie Nationale de la Recherche (ANR) Generic Call 2020

Evaluator of the H2020 Marie Skłodowska-Curie Postdoctoral Fellowships (MSCA-PF) 2020

External Reviewer for the Ph.D. at the Politecnico di Torino, 30th cycle (May 2018) – Thesis "Development and characterization of nanostructured catalysts", candidate: Dr. Luisa Del Mondo

Commission Member for the Ph.D. at the Politecnico di Torino, 30th cycle (February 2018) – Thesis "Graphene-based Supercapacitors", candidate: Dr. Arnaud Gigot

Reviewer of the Italian MIUR VQR 2011-2014 Evaluation of Research Performances (VQR) (March 2016)

Reviewer of proposals of the Czech Science Foundation – GRIS Call 2016

Reviewer of the ERC Advanced Grant 2014 - Call 2015

Reviewer of the Italian MIUR "SIR" Call 2014

Reviewer of the Italian MIUR "FIRB Giovani" Call 2013

2012 - 2016 member of the User Selection Panel of the FP7 Integrated Infrastructure project ESTEEM2 (GA n. 312483) (http://esteem2.eu/)

Reviewer of proposals of the France National EQUIPEX 2011 Initiative (http://www.agencenationale-recherche.fr/investissementsdavenir/AAP-EQUIPEX-2011.html)

Referee for the following Journals:

American Institute of Physics (AIP): Applied Physics Letters, AIP Conference Proceedings

American Physical Society (APS): Physical Review Letters, Physical Review B, Physical Review Applied, Physical Review A, Physical Review Express

Elsevier: Diamond and Related Materials, Carbon, Solid State Communications, Journal of Energy Storage, Journal of Molecular Liquids, Journal of Power Sources, Material Chemistry and Physics, Materials & Design, Surface Science, Ultramicroscopy, Colloids and Surfaces A, Helyon, Journal of Alloys and Compounds Material Chemistry and Physics, Materials and Design, Physica E, Physica B

Nature Publishing Group: Nature Communications, Scientific Reports

Royal Society of Chemistry (RSC): Nanoscale, Physical Chemistry Chemical Physics

Cambridge University Press: Microscopy and Microanalysis

Wiley: Journal of Microscopy

Sage Journals: Nanomaterials and Nanotechnology

IOP Science: 2D Materials

MDPI: Nanomaterials

Frontiers: Frontiers Materials

TEACHING AND

Course at the Ph.D. in Physics at University of Bologna, Department of Physics and Astronomy –

DISSEMINATION ACTIVITY

A.A. 2021-2022 - Title “Surfaces, Interfaces and Nanostructures” (12 hours)

Course (adjunct professor) at the University of Bologna, Department of Physics and Astronomy – A.A. 2021-2022 - Title: “2-Dimensional Materials” (8 hours) in the “Microscopic Kinetics and Thermodynamics” Course, held by Prof. L. Pasquini

Lecture on “Transmission Electron Microscopy for 2D materials characterization & standardization” in the framework of the “Challenges Training School - Real time nano characterization related technologies”, Nanoinnovation 2022, September 2022 (1 hour)

Lecture on “Electron Microscopy: from nanomaterials to life sciences and medicine” in the framework of the Summer School 2021 of the Ph.D. Course “Science and Technology of Bio and Nanomaterials” of the Ca' Foscari University of Venezia (2 hours)

Lecture on “Why electron microscopy for nanomaterials and nanotechnology? - An introduction to the basics and to the capabilities of scanning electron microscopy” in the framework of the Ph.D. Course “Health and Technologies” of the University of Bologna - February 2021 (3 hours)

Course at the Ph.D. in Physics at University of Bologna, Department of Physics and Astronomy – A.A. 2020-2021 - Title “Surfaces, Interfaces and Nanostructures” (12 hours)

Course (adjunct professor) at the University of Bologna, Department of Physics and Astronomy – A.A. 2020-2021 - Title: “2-Dimensional Materials” (8 hours) in the “Microscopic Kinetics and Thermodynamics” Course, held by Prof. L. Pasquini

Course (adjunct professor) at the University of Bologna, Department of Physics and Astronomy – A.A. 2019-2020 - Title: “2-Dimensional Materials” (8 hours) in the “Microscopic Kinetics and Thermodynamics” Course, held by Prof. L. Pasquini

Course (adjunct professor) at the University of Bologna, Department of Physics and Astronomy – A.A. 2018-2019 - Title: “2-Dimensional Materials” (8 hours) in the “Microscopic Kinetics and Thermodynamics” Course, held by Prof. L. Pasquini

Lecture on “Electron microscopy, from nanomaterials to life sciences and medicine” in the framework of the Ph.D. Course “Nanoscience for Medicine and the Environment” of the University of Bologna - May 2019 (3 hours)

Lecture on “Detectors and Image Formation” at the “Aldo Armigliato SEM School in Materials Science” organized by SISM (http://www.sism.it), CNR-IOM Trieste and CNR-IMM Bologna – April 2019 (https://semschool.iom.cnr.it/) (1 hour)

Lecture on “Low Energy STEM Image Formation and Detection” at the “Aldo Armigliato SEM School in Materials Science” organized by SISM (http://www.sism.it), CNR-IOM Trieste and CNR-IMM Bologna – April 2019 (http://semschool.iom.cnr.it/) (1 hour)

Lecture on “Why electron microscopy for nanomaterials and nanotechnology? - An introduction to the basics and to the capabilities of transmission and scanning electron microscopy” Dipartimento di Chimica Industriale “Toso Montanari”, University of Bologna – January 2019 (2 hours)

Lecture on “Why electron microscopies and diffractions for nanotechnology” in the framework of Nanoinnovation 2018 conference – September 2018 (http://www.nanoinnovation.eu/2018) (1.5 hours)

Lecture on “Introduction to electron microscopy and electron diffraction” at the Graphene Study Winter 2018 on “Structural characterization of graphene-based materials” organized by Graphene Flagship – February 2018 (1 hour) (https://graphene-flagship.eu/graphenestudy)

Lecture on “Advanced TEM, HRTEM and applications” at the Graphene Study Winter 2018 on “Structural characterization of graphene-based materials” organized by Graphene Flagship – February 2018 (1 hour) (https://graphene-flagship.eu/graphenestudy)

Course (adjunct professor) at the University of Bologna, Department of Physics and Astronomy – A.A. 2017-2018 - Title: “2-Dimensional Materials” (8 hours) in the “Thermodynamics and Kinetics of Solids, Surfaces and Nanostructures” Course, held by Prof. L. Pasquini

Lecture on “Scanning Transmission Electron Microscopy” at the “Pier Giorgio Merli Theoretical and practical School of Transmission Electron Microscopy in Materials Science” - CNR-IMM

Bologna (http://temschool.bo.imm.cnr.it) - Editions 2022 - 2018 - 2016 - 2014 - 2012 - 2010 – 2008 - 2005 (4 hours theoretical, 8 hours practical)

Lecture on "High resolution electron microscopy image simulations" at the "Pier Giorgio Merli Theoretical and practical School of Transmission Electron Microscopy in Materials Science" - CNR-IMM Bologna (http://temschool.bo.imm.cnr.it) - Editions 2018 - 2014 - 2012 - 2010 – 2008 - 2005 (2 hours)

Lecture on "Electron Sources" at the "Pier Giorgio Merli Theoretical and practical School of Transmission Electron Microscopy in Materials Science" - CNR-IMM Bologna (http://temschool.bo.imm.cnr.it) - Editions 2022 - 2018 - 2016 - 2014 (1 hour)

Lecture on "Detectors and Image Formation" at the "Scanning Electron Microscopy School in Materials Science" organized by SISM (http://www.sism.it) and CNR-IMM Bologna – December 2017 (1 hour) (http://semschool.bo.imm.cnr.it) (1 hour)

Lecture on "Low Energy STEM Image Formation and Detection" at the "Scanning Electron Microscopy School in Materials Science" organized by SISM (http://www.sism.it) and CNR-IMM Bologna – December 2017 (1 hour) (http://semschool.bo.imm.cnr.it) (1 hour)

Course (adjunct professor) at the University of Bologna, Department of Physics and Astronomy – A.A. 2016-2017 - Title: "Materiali bidimensionali" (8 hours) in the "Termodinamica e Cinetica dei Materiali" Course, held by Prof. L. Pasquini

Lecture on "Microscopia elettronica e grafene … il futuro in un atomo" at the DUCATI Summer School "La Fisica in Moto" - July 2016 (2 hours)

Course at the University of Bologna, Department of Physics and Astronomy – A.A. 2015-2016 - Title: "Grafene" (4 hours) in the "Fisica dei Materiali" course, held by Prof. L. Pasquini

Lecture on "STEM: image formation and detectors" at the "School of Scanning Electron Microscopy on nanostructured materials and innovative applications" organized by SISM (http://www.sism.it) and CNR-IOM Trieste – October 2015 (1 hour)

2015 – present: Scientific Coordinator of the CNR Graphene Factory (http://grafene.cnr.it), a web portal to disseminate, popularize and promote the research of CNR on graphene and two-dimensional materials

2010 - 2014: involved in the organization and in the dissemination activities of the project SperimEstate (http://sperimestate.bo.imm.cnr.it), involving more than 60 high school students in summer laboratory stages in several CNR laboratories in Bologna.

Lecture on "Scanning Electron Microscopy" at the "Nanotechnologies of Multifunctional Materials" course at University of Bologna, Department of Chemistry. Editions: 2016 - 2015 - 2014 (2 hours)

Lectures on "Scanning Transmission Electron Microscopy" at the framework of the Beyond- Nano PON Project – July 2013 (6 hours theoretical, 4 hours practical)

Lecture on "Scanning Electron Microscopy" at the CNR-DSFTM Innovative and Atomic Resolution Microscopy Techniques course - CNR-SPIN Genova - December 2012 (2 hours)

Lecture on "Scanning Transmission Electron Microscopy" at the Ph.D. Course in Physics – University of Modena and Reggio Emilia - September 2008 (3 hours)

Lectures on "Scanning Electron Microscopy" in the framework of the Italian Project "DISTEF", Contract no. MUR DM 28539 – CNR-IMM Bologna - July 2008 (6 hours)

Lecture on "Monte Carlo simulation in Electron Microscopy" at the VII Paolo Giordano Orsini School – University of Trento - June 2008 (2 hours)

Lecture on "Monte Carlo simulation in Scanning Electron Microscopy" at the Theoretical and experimental school in Scanning Electron Microscopy in Material Science organized by SISM (http://www.sism.it) – CNR-IMM Lecce - November 2006 (1 hours)

Lecture on "Electron-matter interaction and simulation methods" lectures at the High-resolution SEM in Biology and Material Science School organized by SISM (http://www.sism.it) – University of Pisa - November 2002 (2 hours)

STUDENTS SUPERVISION

He has been supervisor, co-advisor or referee of more than 25 Ms.C. and Ph.D. students in Physics, Chemistry and Engineering

PH.D. SUPERVISION

Co-advisor of a Thesis for the Ph.D. degree in Mathematical Models for Engineering, Electromagnetics and Nanosciences at Sapienza University of Rome – Title (provisional): "PiezOresistive seNsors made of GraphenE-based 3D ordered porous structures for wearable electronic (SPONGE3D)" - Period: 2020–2023 (ONGOING) – Supervisor: Prof. M. Rossi – Candidate: Rossella Galli

Co-advisor of a Thesis for the Ph.D. degree in Physics at University of Ferrara – Title: "Graphene Integration in Silicon Microelectronic Technology for Fabrication of Hybrid Devices" - Period: 2019–2022 – Supervisor: Prof. D. Bisiero – Candidate: Piera Maccagnani

Co-advisor of a Thesis for the Ph.D. degree in Chemistry at the University of Bologna – Title: "Light & Electron Beam– The Perfect Combination fort the Observations and Application of Photo Active Materials" – Period: 2018-2020 - Supervisor: Prof. P. Ceroni - Candidate: Alessandro Gradone

Co-advisor of a Thesis for the Ph.D. degree in Physics at the University of Ferrara – Title: "Design, validation and future perspectives of a setup for operando DRIFT spectroscopy measurements on chemiresistive gas sensors" – Period: 2018-2020 - Supervisor: Prof. V. Guidi - Candidate: Michele Della Ciana

Co-advisor of a Thesis for the Ph.D. degree in Engineering of materials and nanotechnologies at University La Sapienza in Rome - Title (provisional): "Biomedical applications of nanostructured carbon-based materials, such as graphene and CNTs" – Period: 2014-2016 - Supervisor: Prof. M.G. Santonicola - Candidate: Martina Pittori

Co-advisor of a Thesis for the Ph.D. degree in Chemistry at the University of Bologna – Title: "Graphene and semiconductor or metallic nanoparticles for energy conversion" – Period: 2013-2015 - Supervisor: Prof. P. Ceroni - Candidate: Raffaello Mazzaro

Co-advisor of a Thesis for the PhD degree in Physics, University of Bologna - Title: "Lowdimensional carbon allotropes: an electron microscopy investigation" – Period: 2006-2008 – Supervisor: Prof. G. Morandi - Student: Luca Ortolani

M.SC. SUPERVISION

Co-advisor of a Thesis for the M.Sc degree in Functional Chemistry (Laurea Magistrale) at Ca' Foscari University of Venezia and Kyoto Institute of Technology (Japan) – Title: "Production of transparent 3D graphene films towards substrates for photocatalytic electrodes" – January 2023 (ONGOING) – Supervisors: Prof. A. Vomiero and Prof. G. Pezzotti – Candidate: Luca Pierantonio Paracchini

Supervisor of a Thesis for the M.Sc degree in Physics (Laurea Triennale), University of Bologna – Title: "Permeazione attraverso le membrane di ossido di grafene" (in Italian) – September 2020 – Co-advisor: Dr. F. Liscio - Candidate: Claudia Smriglio

Supervisor of a Thesis for the M.Sc degree in Physics (Laurea Triennale), University of Bologna – Title: "Trasferimento di grafene planare: confronto tra metodi allo stato dell'arte e metodi innovativi" (in Italian) – February 2020 – Co-advisor: Dr. R. Mazzaro - Candidate: Marco Salvi

Co-advisor of a Thesis for the M.Sc degree in Electronic Engineering (Laurea Magistrale), Politecnico di Torino – Title (provisional): "Polymer - graphene foams composites for deformation sensing applications" – December 2019 - Supervisor: Prof. F.C. Pirri - Candidate: Rossella Galli

Supervisor of a Thesis for the M.Sc degree in Physics (Laurea Triennale), University of Bologna – Title (provisional): "Metodi di trasferimento di grafene sintetizzato per deposizione chimica da fase vapore" (in Italian) - ONGOING - Co-advisor: Dr. P. Maccagnani - Candidate: Cristiana Antonella Mastropierro

Supervisor of a Thesis for the M.Sc degree in Physics (Laurea Triennale), University of Bologna – Title: "Studio di assorbimento di acqua in membrane di ossido di grafene" (in Italian) – March 2019 – Co-advisor: Dr. F. Liscio - Candidate: Nicolò Galvani

Supervisor of a Thesis for the M.Sc degree in Physics (Laurea Triennale), University of Bologna – Title: "Misure di evaporazione attraverso materiali porosi a base di grafene" (in Italian) – March 2018 – Co-advisor: Dr. M. Christian - Candidate: Valentina Girelli Consolaro

Co-advisor of a Thesis for the M.Sc degree in Chemistry (Laurea Magistrale), University of Bologna - Title: “Concentratori solari luminescenti ” (in Italian) - December 2017 - Supervisor: Prof. P. Ceroni - Candidate: Alessandro Gradone

Co-advisor of a Thesis for the M.Sc degree in Physics (Laurea Magistrale), University of Bologna - Title: “Membrane di grafene porose tridimensionali: deposizione chimica da fase vapore e proprietà elettromeccaniche ” (in Italian) - March 2017 - Supervisor: Prof. L. Pasquini - Candidate: Federico Giuliano

Co-advisor of a Thesis for the M.Sc degree in Physics (Laurea Magistrale), University of Bologna - Title: “Deposizione di grafene su superfici porose 3D col metodo CVD ” (in Italian) - March 2016 - Supervisor: Prof. D. Cavalcoli - Candidate: Linda Venturi

Co-advisor of a Thesis for the M.Sc degree in Physics (Laurea Triennale), University of Bologna - Title: “Grafene: proprieta', sintesi e trasferimento con il ciclododecano” (in Italian) - March 2016 - Supervisor: Prof. C. Degli Esposti Boschi - Candidate: Massimo Cardoni

Co-advisor of a Thesis for the M.Sc degree in Physics (Laurea Triennale), University of Bologna - Title: “Criticita' nel trasferimento di grafene prodotto da CVD su rame” (in Italian) - June 2015 - Supervisor: Prof. C. Degli Esposti Boschi - Candidate: Mattia Benini

Co-advisor of a Thesis for the M.Sc degree (Laurea Magistrale) in Biomedical Engineering at University La Sapienza in Rome - Title: “Design and fabrication of graphene-based sensors with supported lipid membranes for biomedical applications” - July 2014 - Supervisor: Prof. M.G. Santonicola - Candidate: Martina Pittori

Co-advisor of a Thesis for the M.Sc degree in Physics (Laurea Magistrale), University of Bologna - Title: “Integrazione tecnologica di grafene cresciuto per deposizione chimica da fase vapore per applicazioni termiche e termoelettriche” (in Italian) – October 2014 - Supervisor: Prof. D. Cavalcoli - Candidate: Andrea Pedrielli

Co-advisor of a Thesis for the M.Sc degree in Physics, University of Bologna - Title: “Grafene: Proprieta', Sintesi e Applicazioni” (in Italian) - December 2013 – Supervisor:Prof. F. Ortolani - Student: Dimitri Reali

Co-advisor of a Thesis for the M.Sc. Degree in Electronic Engineering, University of Parma - Title: “Studio delle proprietà di trasporto termico e di piezoresistenza di membrane di graphene deposto mediante CVD per applicazioni sensoristiche” (in Italian) - December 2013 – Supervisor: Prof. I. De Munari - Student: Marco Mita

Co-advisor of a Thesis for the M.Sc. Degree in Electronic Engineering, University of Parma - Title: “Sviluppo di un sistema di tomografia elettronica al microscopio elettronico a scansione” (in Italian) - May 2013 - Supervisor: Prof. I. De Munari - Student: Alessandro Pezza

Co-advisor of a Thesis for the M.Sc degree in Chemistry, University of Bologna - Title: “Hybrid materials based on graphene and silicon nanoparticles” - December 2012 – Supervisor: Prof. P. Ceroni - Student: Raffaello Mazzaro

Co-advisor of a Thesis for the M.Sc. degree in Physics, University of Bologna - Title: “Scanning Transmission Electron Microscopy study of Concentration Dopant Profiles in Silicon” (in Italian) - July 2008 – Supervisor: Prof. A. Cavallini - Student: Andrea Salvatore Mezzotero

HONOURS AND AWARDS

November 2013 - Qualified as Professor in PHYSICS, granted by the Italian Ministry for Instruction, University and Research (MIUR) after a competitive selection at national level (ASN Bando 2012)

December 2006 - Runner-up of the 2006 Prize of the Italian Society of Microscopy (SISM) in Material Science

September 2004 - Runner-up for the prize of the Italian Physics Society (SIF) for the presentation of the contribution “Study of concentration profiles in nanostructured materials by means of Scanning Transmission Electron Microscopy”

December 2003 - Winner of the Material Science “Carla Milanesi” prize of the Italian Society of Microscopy (SISM) for the work presented at the 6th MCM congress (Pula, Croatia 1-5 June 2003)

June 2003 - Winner of the fellowship of the Italian Society of Microscopy (SISM) for the participation to the 6th MCM congress (Pula, Croatia 1–5 June 2003)

PERSONAL SKILLS AND COMPETENCES

MOTHER TONGUE **Italian**

OTHER LANGUAGES

English

- Reading skills: good
- Writing skills: good
- Verbal skills: good

German

- Reading skills: basic
- Writing skills: basic
- Verbal skills: basic

SOCIAL SKILLS AND COMPETENCES

Involvement in political parties, organizations and syndicates. Syndicate representative (FLC-CGIL) of the RSU of Bologna (2012-2015). Verbal and written communication of ideas and findings. Good communication skills gained in coordination and management roles both in political and work environments. Team spirit. Working in cooperative environment.

ORGANISATIONAL SKILLS AND COMPETENCES

Working in teams, both in work and political environments. Coordination and management of small and large groups. Responsible of the communication (web and newspapers) of Rhythmic Gymnastics of Polisportiva Pontevecchio Bologna for 10 years (2007-2016). Founder of the Scienziati Responsabili group at the CNR in Bologna. Founder of PreacArea, committee of Precarious Workers of the CNR-INAF Research Area of Bologna. Member of main organizers group of "La Ricerca Calpestata" (http://www.arcoiris.tv/scheda/it/11377).

TECHNICAL SKILLS AND COMPETENCES

- High-experienced user of computers (Mac, Linux and Windows), network management, operating system management.
- Good command of office suite (word processor, spread sheet, presentation software) for both Microsoft Office and Libre Office/Open Office.
- Good command of image processing software (Gatan Digital Micrographs, ImageJ) and photo editing software (Gimp, Adobe Photoshop)
- Good programming skills with different languages (Fortran, Fortan 90, C, C++, HTML, LaTeX, Java).
- Image digital processing
- Website design and maintenance
- Knowledge of parallel programming (MPI and OpenMP)

ARTISTIC SKILLS AND COMPETENCES

Writing, Poetry, Photography

OTHER SKILLS AND COMPETENCES

[redacted]

DRIVING LICENCE (S)

B

ADDITIONAL INFORMATION none

TRATTAMENTO DEI DATI PERSONALI, INFORMATIVA E CONSENSO

Il D.Lgs 30/06/2003, n. 196 "Codice in materia di protezione dei dati personali" regola il trattamento dei dati personali, con particolare riferimento alla riservatezza, all'identità personale e al diritto di protezione dei dati personali; l'interessato deve essere previamente informato del trattamento.
La norma in considerazione intende come "trattamento" qualunque operazione o complesso di operazioni concernenti la raccolta, la registrazione, l'organizzazione, la conservazione, la consultazione, l'elaborazione, la modifica, la selezione, l'estrazione, il raffronto, l'utilizzo, l'interconnessione, il blocco, la comunicazione, la diffusione, la cancellazione e la distruzione di dati, anche se non registrati in una banca dati.
In relazione a quanto riportato, autorizzo il CNR al trattamento dei dati contenuti nel presente curriculum vitae e nella documentazione della quale fa parte integrante.

The Undersigned hereby authorises the CNR to utilize and store the personal sensitive data contained in the attached Curriculum Vitae for the purposes of bilateral Joint research projects and within the framework of the Data protection Act No. 196, dates 30 June 2003 as promulgated by the Italian Government.

(barrare la casella) ☒ Si, acconsento

ANNEXES ANNEX I - Vittorio Morandi Publications List – December 2022

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016,
I hereby express my consent to process and use my data provided in this CV

[redacted]

L'originale compilato e sottoscritto è depositato presso gli Uffici dell'Ente