

CURRICULUM VITAE



Name	Giuseppe Nicotra
address	
phone	
E-mail	
Orcid	https://orcid.org/0000-0002-7336-4898
citizenship	Italiana
born	05/01/1972
tax number	

Giuseppe Nicotra

Since 2012 he is staff researcher at the headquarters of the IMM-CNR of Catania and from 2013 holds the position of head of the Beyondnano Sub-A lab. From January 2023 is senior researcher.

He began his research studies on January, 2001, at the CNR and University of Catania.

During this time, he worked both in the field of electron microscopy and in the study of processes and synthesis of nanostructures for applications in silicon nanostructure based non-volatile memory.

On February 20, 2006 he obtained the title of PhD in materials science at University of Catania.

From January 2019 Giuseppe Nicotra is coordinator for the Italian team of the EU project ESTEEM3, the most important European consortium on electron microscopy.

His current research is focused on the study of the microscopic structure of materials and the relationships between synthesis, processing and their final properties, through sub-Å resolution electron microscopy. The material studied are mainly oriented for applications in the field of microelectronics, energy, water purification, and catalysis. For such studies spatial, energy resolution are fundamentals skills and for that reason in the 2013 he designed a new “active lab” equipped with a probe corrected ColdFEG scanning transmission electron microscopy (STEM), one of the most stable laboratory for electron microscopy ever built up to know. This lab allows exceptional performances since the simultaneous presence of an active suspension system, electromagnetic fields compensators, radiant panels for the precise control of the thermal stability, and sound proof walls. Thoroughly his studies are oriented toward the low-dose analysis at atomic resolution of new innovative devices based on two-dimensional (2D) materials, such as Graphene, Silicene, Phosphorene, and even bio-materials.

	Due to their high beam sensitiveness, the development of Low-Dose Imaging methods, and protocols are fundamentals. Many of his discovery obtained up to now may than be exported toward the study of the atomic structure and chemistry of key interfaces in both solid-liquid and solid-solid battery technologies in the future complementary study with the partners of University of Liverpool
Bibliometrics	Giuseppe Nicotra, received 7 invited talk and one invited invited talk in international conferences and is author of more than 160 scientific international papers. Scopus (April. 2023): Documents= 168, Citations= 3489, h-index= 34

EDUCATION

- | | |
|---|---|
| <ul style="list-style-type: none"> • Date (from - to) | 20th December 2001 |
| <ul style="list-style-type: none"> • Qualification achieved | Master degree in Physics |
| <ul style="list-style-type: none"> • Name and type of education or training institution | University of Catania |
| <ul style="list-style-type: none"> • Principal subjects / professional skills covered by the study | Physics, Electronics, Physics of semiconductors, Condensed matter |
| <ul style="list-style-type: none"> • Date (from - to) | 20th February 2007 |
| <ul style="list-style-type: none"> • Qualification achieved | PhD in Materials Science |
| <ul style="list-style-type: none"> • Name and type of education or training institution | University of Catania |
| <ul style="list-style-type: none"> • Principal subjects / professional skills covered by the study | PhD thesis titled : "Analysis and structural characterization of the system Si nanocluster/SiOx" supervisor: Prof. E.Rimini |

WORK EXPERIENCE IN ITALY

- | | |
|---|---|
| <ul style="list-style-type: none"> • Date (from – to) | 01/01/2023 - present |
| <ul style="list-style-type: none"> • Employer | CNR-IMM |
| <ul style="list-style-type: none"> • Type of company or sector | national research center |
| <ul style="list-style-type: none"> • Occupation or position held | Permanent senior researcher |
| <ul style="list-style-type: none"> • Date (from – to) | 16/10/2012 - 31/12/2022 |
| <ul style="list-style-type: none"> • Employer | CNR-IMM |
| <ul style="list-style-type: none"> • Type of company or sector | national research center |
| <ul style="list-style-type: none"> • Occupation or position held | Permanent staff researcher |
| <ul style="list-style-type: none"> • Date (from – to) | From 06/03/2002 to 05/09/2003 (1,5 years) |

• Employer	CNR-IMM
• Type of company or sector	national research center
• Occupation or position held	Collaboration contract at the CNR-IMM of Catania funded by European EQUIS project. Topics: Study of Quantum Dot Nucleation of Silicon on SiO ₂ by LPCVD Microstructural characterization of nano-devices using TEM, EFTEM, EELS, EDX
• Date (from – to)	From 01/11/2003 to 31/10/2006 (3 years)
• Employer	CNR-IMM
• Type of company or sector	national research center
• Occupation or position held	PhD in materials science , at the University of Catania and CNR-IMM Catania, under the scientific supervision of Prof. E. Rimini, Dr. C. Spinella and Dr. S. Lombardo
• Date (from – to)	From 06/12/2006 ad 05/12/2010 (4 years)
• Employer	CNR-IMM
• Type of company or sector	national research center
• Occupation or position held	Annual research grant , at the IMM-CNR of Catania, under the scientific supervision of Dr. C. Spinella. Topics: process and study of semiconductor and phase change materials (GST) Microstructural characterization of nano-devices by TEM, EFTEM, STEM, EELS
• Date (from – to)	From 15/12/2010 to 14/06/2011 (6 months)
• Employer	CNR-IMM
• Type of company or sector	national research center
• Occupation or position held	Collaboration contract as part of the "Study of advanced materials and technologies for microelectronics" at the CNR-IMM Catania. Requested skills: expert in EFTEM Transmission Electron Microscopy and / or STEM configuration for the study of nanostructures integrated in Silicon technology Microstructural characterization of nano-devices by TEM, EFTEM, STEM, EELS
• Date (from – to)	From 08/08/2011 to 04/08/2012 (1 year)
• Employer	CNR-IMM
• Type of company or sector	national research center
• Occupation or position held	Annual research grant , at the IMM-CNR of Catania, under the scientific supervision of Dott. A. La Magna. Transmission Electronic Microscopy in EFTEM mode and / or in STEM configurations for the study of nanostructures integrated in silicon technology and Microstructural characterization of nano-devices by TEM, EFTEM, STEM, EELS
• Date (from - to)	From 01/11/1990 al 31/07/1992
• Employer	Telecobaltoterapia SRL di Catania.
• Type of company or sector	electromedical company

- Occupation or position held **permanent staff**

WORK EXPERIENCE ABROAD

- Date (from - to) From 01/09/2005 al 28/02/2006 (6 months)
- Employer Department of Chemical Engineering and Material Science University of California at Davis, Davis, CA , (USA)
- Type of company or sector Università
- Occupation or position held **Visiting Student**
- Principali mansioni e responsabilità Study of biological materials using cryo-STEM microscopy and study of nanostructured materials for microelectronics using STEM microscopy.
- Date (from - to) From 01/09/2005 al 28/02/2006 (6 months)
- Employer National Center for Electron Microscopy, Berkeley ,CA, (USA)
- Type of company or sector national research center
- Occupation or position held **researcher**
- Principali mansioni e responsabilità Study and structural characterization of nanostructured materials for microelectronics using monochromated TEM, EFTEM / STEM, EELS
- Date (from - to) From 11/07/2006 al 10/08/2006 (1 month)
- Employer Center for Functional Nanomaterials (BNL), Brookhaven, NY, (USA)
- Type of company or sector national research center
- Occupation or position held **researcher**
- Principali mansioni e responsabilità Study of biological materials using cryo-STEM microscopy and study of nanostructured materials for microelectronics using STEM microscopy.
Caratterizzazione strutturale mediante TEM, EFTEM, STEM Cs corrected, EELS.
- prot./pers.giur. declaration by prof. Prof Nigel D. Browning

TEACHING ABROAD

- Date (from – to) From 01/09/2005 to 28/02/2005 (6 months)
- Employer Prof Nigel D. Browning, Department of Chemical Engineering and Material Science University of California at Davis, Davis, CA . (USA)
- Type of company or sector University
- Occupation or position held **professor “Introduction to Electron Microscopy (EMS 230)”**
- prot./pers.giur. declaration by prof. Prof Nigel D. Browning

TEACHING IN ITALY

- Date (from – to) From 01/10/1999 to 30/05/2000

• Employer	Queen SRL of Catania
• Type of company or sector	training institution
• Occupation or position held	computer literacy courses for high school teachers
• prot./pers.giur.	copy of the contract
• Date (from – to)	From 26/03/2008 to 30/05/2008
• Employer	CNR-IMM
• Type of company or sector	national research center
• Occupation or position held	Laboratory sessions and tutoring for the course "Researcher expert in materials, their characterization and process technologies for the realization of electronic devices on plastic substrates" within the PLAST_lcs project.
• prot./pers.giur.	as evidenced by the letter of appointment held by the candidate
• Date (from – to)	23/11/2012
• Event name	Electron microscopy School "Pier Giorgio Merli", 19-23 November 2012, Bologna
• Type of company or sector	CNR-IMM Bologna
• Title invited Talk	Electron Energy Loss Spectroscopy
• prot./pers.giur.	as evidenced by the invitation email
• Date (from – to)	2013 (2 months)
• Employer	CNR-IMM, progetto PON Hippocrates
• Type of company or sector	national research center
• Occupation or position held	260 hours of lectures in the framework of the PON Hippocrates training project
• prot./pers.giur.	imm-cnr-imm n. 5703 08/07/2013
• Date (from – to)	From 05/11/2012 to 20/12/2014
• Employer	CNR-IMM, project PON Beyondnano, PON a3_00363
• Type of company or sector	national research center
• Occupation or position held	80 hours of lectures in the framework of the PON Form@beyondnano training project
• prot./pers.giur.	IMM-CNR-IMM, n.6442 31/07/2013; n.5494 01/07/2013; n. 6781 02/09/2013; n.7982 09/10/2013; n. 8756 31/10/2013; n.9770 02/12/2013; n. 1684 28/02/2014; n.762 31/01/2014; n.69 08/01/2014; n. 4246 23/05/2014; n. 5494 01/07/2013
• Date (from – to)	18/11/2016
• Event name	Electron microscopy School "Pier Giorgio Merli", 14-18 November 2016, Bologna
• Type of company or sector	CNR-IMM Bologna
• Title of the talk	Electron energy loss spectroscopy
• prot./pers.giur.	as evidenced by the invitation email from Dott. Balboni

- Date (from – to) 27/05/2014
- Employer SISIM - società italiana di scienze microscopiche
- Type of company or sector società di microscopia elettronica
- Occupation or position held **2 hours of lectures on fundamentals of EELS spectroscopy, in the framework of the “1st italian EELS school ”**
- prot./pers.giur. see website

INVITED TALKS

- Date (from – to) 16/09/2014
 - Event name 2nd Joint AIC-SILS conference, September 15-18, 2014 in Florence, Italy
 - Type of company or sector società italiana cristallografia, Università di Firenze.
 - Title of the invited talk **Advanced characterisation from the nanoscale to the single atom through (S)TEM**
 - prot./pers.giur. as evidenced by the invitation letter from Dott. Massimo Longo
-
- Date (from – to) 30/06/2015
 - Event name Workshop “Tecniche di microscopia e diffrazione elettronica per la caratterizzazione di dispositivi a semiconduttore”, 29-30 Giugno 2015 L'Aquila.
 - Type of company or sector Università La Sapienza Roma
 - Title of the invited talk **Analisi STEM ad alta risoluzione**
 - prot./pers.giur. as evidenced by the invitation email from Prof. Marco Rossi
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- Date (from – to) 12/12/2015
 - Event name First International Conference on Advanced Materials for Power Engineering (ICAMPE-2015), 11-13 Novembre 2016, Kottayam, Kerala, India.
 - Type of company or sector Mahatma Gandhi University
 - Title of the invited talk **Advanced characterization of Black-p at atomic resolution**
 - prot./pers.giur. as evidenced by the invitation email from, Prof. Sabu Thomas
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- Date (from – to) 17/07/2015
 - Event name Fosforene Day 17 Luglio 2015, Firenze
 - Type of company or sector DSFTM-CNR
 - Title of the talk **TEM and EELS investigation on black phosphorus at atomic resolution**
 - prot./pers.giur. as evidenced by the invitation email from. Dott. Sorba
-
- Date (from – to) 09/04/2016
 - Event name EMN Quantum Meeting 2016, 8 -11, Aprile, 2016, Puhiket, Thailandia
 - Type of company or sector University of Electronic Science and Technology of China, Chengdu

- Title of the talk **Advanced characterization from the nanoscale to the single atom through (S)TEM-EELS**
- prot./pers.giur. as evidenced by the invitation letter from. Professor Zhiming Wang
- Date (from – to) 23/06/2016
- Event name New trends in electron microscopy“ at Ringberg castle, 22th-24th June, Munich, Germany
- Type of company or sector Stuttgart Center for Electron Microscopy Max Planck Institute for Solid State Research
- Title of the talk **Atomic structure and electronic properties of phosphorene**
- prot./pers.giur. as evidenced by the invitation email from. Prof. P. van Aken
- Date (from – to) 11/12/2016
- Event name First International Conference on Advanced Materials for Power Engineering (ICAMPE-2015), 11-13 Novembre 2016, Kottayam, Kerala, India.
- Type of company or sector Mahatma Gandhi University
- Title invited Talk **Advanced characterization of Black-p at atomic resolution**
- prot./pers.giur. as evidenced by the invitation email from, Prof. Sabu Thomas

INVITED PLENARY TALKS

- Date (from – to) 24/05/2018 - 26/05/2018
- Event name Annual conference of the Hungarian Microscopy Society Siofok, Hungary from 24th of May to 26th of May, 2018. 04. 05
- Type of company or sector HUNGARIAN SOCIETY FOR MICROSCOPY
- Title invited plenary **S/TEM challenges beyond the nanoscale**
- prot./pers.giur. as evidenced by the invitation letter from, Prof. Pecz Bela

SCIENTIFIC DISSEMINATION ACTIVITIES ON NATIONAL NEWSPAPERS AND WEB TELEVISION

- Date 05/04/2016
- Event name/Author **invited guest at the national Rai TV broadcast MEMEX**, vedere gli atomi e la materia
- Type of company or sector RAI, servizio televisivo nazionale, rai-scuola
- prot./pers.giur. archivio RAI scuola del 05/04/2016
<http://www.scienze.rai.it/articoli/gli-strumenti-per-vedere-linfinitamente-piccolo-a-memex-si-parla-di-microscopi-ottici/33125/default.aspx>
- Date 12/03/2016

- Event name/Author **Article on national press** "NESSUNO AVEVA MAI VISTO IL FOSFORENE NOI SI' " / Giuseppe Nicotra
- Type of company or sector Corriere della sera, national italian newspaper
- prot./pers.giur. archive of CNR ufficio stampa: Date Testata Pag. Articolo (in allegato) Rubrica
27/03/2016 La Lettura (Corriere della Sera) 12 "NESSUNO AVEVA MAI VISTO IL FOSFORENE. NOI SI' " Cnr
- Date 29/05/2013
- Event name/Author **Press release** su almanacco della Scienza del CNR
"Grafene: nuove proprietà miglior utilizzo" / Giuseppe Nicotra
- Type of company or sector ufficio stampa del CNR
- prot./pers.giur. archivio ufficio stampa CNR n.9 - 29 mag 2013
http://www.almanacco.cnr.it/reader/?Mlval=cw_usr_view_articolo.html&id_articolo=4506&id_rub=13&giornale=4543
- Date 29/05/2013

CHAIRMAN

- Date (from – to) 15/12/2016
- Event name Chemistry and functionalization of 2D materials
Materials 2016 12-16 September 2013, Milano
- Type of company or sector Department of Chemical Science and Technology of Materials
- Title **Chairman**
- prot./pers.giur. as evidenced by the invitation email from, Dott.ssa Sorba
- Date (from – to) 09/09/2013 to 13/09/2013
- Event name FisMat 2013 9-13 September 2013, Milano
- Type of company or sector Politecnico di Milano
- Title **Chairman**
- prot./pers.giur. as evidenced by the invitation email from, Dott. Longo

MAIN TASKS AND RESPONSIBILITIES

- Date (from – to) 25/05/2012 al 31 Ottobre
- Event name RESEARCH ACTIVITY IN THE FRAMEWORK of the project CDS_0321 contratto sviluppo ST-CNR
- Type of company or sector IMM
- mansione e tempo **advisor, 6 months**
- prot./pers.giur. IMM-CNR-IMM n. 2770 25/05/2016
- Date 05/11/2012

• Role	Construction manager project Cod. PONA3_00362
• Event name	Construction manager for the realisation of the sub-Angstrom resolution laboratory equipped with scanning electron micrograph with a spherical aberration correction of the probe and post-column energy loss, at the Institute for Microelectronics and Microsystems of the National Research Council grants to Catania. Commercial value of the lab and instrumentation € 4.000,000
• Type of company or sector	IMM- CNR
• prot./pers.giur.	IMM-CNR-IMM n. 5427 05/11/2012
• Date	13/11 /2013
• Role	Committee chairman
• Event name	Testing of the equipment for the stabilization of the thermal and electromagnetic parameters of sub-Angstrom resolution laboratory, commercial value € 140,000 + VAT
• Type of company or sector	IMM- CNR
• prot./pers.giur.	IMM-CNR-IMM n. 7953 08/10/2013
• Date	3/10/2013
• Role	Committee chairman
• Event name	Testing of the active vibration damping system for the ARM200F microscope, commercial value € 75,000 + VAT
• Type of company or sector	IMM- CNR
• prot./pers.giur.	IMM-CNR-IMM n. 7550 26/09/2013
• Date	29/05/2013
• Role	Coordinator of the working group
• Event name	Coordinator of the working group to support the design and construction of the new electron microscopy laboratory at the STMicroelectronics plant in Catania
• Type of company or sector	IMM- CNR
• prot./pers.giur.	IMM-CNR-IMM n. 4512 29/05/2013
• Date	31/10/2013
• Role	Responsible Officer
• Event name	Responsible Officer of the Sub-A electron microscopy lab equipped with a JEOL-ARM200F, total commercial value of the equipment €4.000.000
• Type of company or sector	IMM-CNR
• prot./pers.giur.	IMM-CNR-IMM n. 8781 31/10/2013
• Date	21/04/2015
• Role	Training manager Project PON FORM@BEYONDNANO Cod. PONA3_00362 - F

• Event name	FORM@BEYONDNANO
• Type of company or sector	IMM- CNR
• prot./pers.giur.	IMM-CNR-IMM n. 2708 21/04/2015
• Date	21/04/2015
• Role	task manager High resolution chemical and structural analysis of PCM cells
• Event name	research program between tra IMM and StMicroelectronics Agrate 2017
• Type of company or sector	IMM- CNR & StMicroelectronics (industria)
• prot./pers.giur.	candidato in possesso della lettera di accordo fra le parti
• Date	29/04/2015
• Role	Committee chairman
• Event name	testing scientific instrumentation, fast joint EELS/EDS, value of the equipment €15.500+vat
• Type of company or sector	IMM- CNR
• prot./pers.giur.	IMM-CNR-IMM n. 2759 23/04/2015
• Date	29/04/2015
• Date	07/05 /2015
• Role	Committee chairman
• Event name	testing scientific instrumentation, ion polisher PIPSII, value of the equipment €138.000+vat
• Type of company or sector	IMM- CNR
• prot./pers.giur.	IMM-CNR-IMM n. 2758 23/04/2015
• Date	07/05 /2015
• Date	07/05 /2015
• Role	Committee member
• Event name	public selection concerning the awarding of 2 research grants
• Type of company or sector	IMM- CNR
• prot./pers.giur.	IMM-CNR-IMM n. 2758 23/04/2015
• Date	23/05/2018
• Role	Committee president
• Event name	public selection concerning the awarding of 1 senior research grants
• Type of company or sector	CNR
• prot./pers.giur.	ICNR-AMMCNT n. 37974 23/05/2018

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| • Date | 02/01/2019 |
| • Role | Coordinator of the Italian team |
| • Event name | European Union's Horizon 2020 research and innovation program under grant agreement No 823717 – ESTEEM3, grant 400K€ |
| • Type of company or sector | EU microscopy consortium |

EDITOR

- | | |
|-----------------------------|---|
| • Date | 01/06/2015 |
| • Role | Guest editor |
| • Nome Rivista | Materials Science in Semiconductor Processing |
| • Type of company or sector | Elsevier |
| • prot./pers.giur. | official invitation letter |

SCHOOL AND WORKSHOP ORGANIZATION

- | | |
|-----------------------------|--|
| • Date | 26/05/2014 - 29/05/2014 |
| • Role | director and organizer |
| • Type of company or sector | CNR- IMM / SISM (società italiana di scienze di microscopia) |
| • prot./pers.giur. | come attestano dalla locandina dell'evento http://www.beyondnano.it/?q=news/1st-italian-eels-school |

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| • Date | 03/07/2016 - 08/07/2016 |
| • Role | member of the committee program |
| • Type of company or sector | CNR- IMM |
| • prot./pers.giur. | as stated by http://www.nanosea2016.imm.cnr.it/index.php/organizers-committees/organizers |

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| • Date | 12/12/2016 - 16/12/2016 |
| • Role | support organizing committee |
| • Type of company or sector | CNR- IMM |
| • prot./pers.giur. | as per the letter of appointment of the director Dott. Fortunato (CNR-IMM) |

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|-----------------------------|--|
| • Date | 22/07/2019 - 25/07/2019 |
| • Role | director and organizer |
| • Type of company or sector | CNR-IMM / ESTEEM3/ Gatan Inc. |
| • prot./pers.giur. | come attestato dalla locandina dell'evento http://www.beyondnano.it/EELS-2019 |

TUTORING

- Date (from – to) 04/06/2012
- Event name tutor Master Micro e Nano technologies Nanotech, 10 weeks
- Type of company or sector Grenoble INP
- Student name **Dott. Giuseppe Cantarella**
- prot./pers.giur. as evidenced by the invitation email from, Mrs Morfouli (Grenoble INP)

- Date (from – to) 05/09/2014 a 31/12/2014
- Event name research internship 260 hours
- Type of company or sector IMM-CNR
- Student name **Dott. Mario Scuderi**
- prot./pers.giur. IMM-CNR 7156-22/09/2014

- Date (from – to) 04/2014 a 08/2014
- Event name research internship 267 hours
- Type of company or sector IMM-CNR
- Student name **Dott. Mario Scuderi**
- prot./pers.giur. IMM-CNR 2664-01/04/2014

SCIENTIFIC RESPONSIBLE ACTIVITY

- Date (from – to) 02/01/2015 - present
 - Event name research grant for activities in the framework of the project "investments in industrial research and prevalent experimental development"
 - Type of company or sector IMM-CNR
 - Research Fellow **Dott. Mario Scuderi**
 - prot./pers.giur. IMM014/2014/CT prit n. 0008817
 - Date (from – to) 01/10/2017 a oggi
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- Event name Research grant type B Titled "high correlated materials structure and properties
 - Type of company or sector CNR-DSFTM; IMM-CNR; NFFA MIUR
 - Research Fellow **Dott. Enzo Rotunno**
 - prot./pers.giur. prot. CNR 37448 06.06.2017
 - Date (from – to) 02/01/2015 - present

TRAINING COURSES

• Date (from - to)	From 09/12/2015 al 11/12/2015
• Name and type of education or training institution	Course CNR-DSFTM.
• Principal subjects / professional skills covered by the study	Participation in the TRIZ training course "how to find inventive solutions by pursuing a systematic problem solving methodology"
• Date (from - to)	01/04/2014
• Name and type of education or training institution	Course CEERNT
• Principal subjects / professional skills covered by the study	Participation in the training course "Horizon 2020 update study day: for an Italian strategy in European research"
• Date (from - to)	From 23/06/2012 to 05/07/2012
• Name and type of education or training institution	International school of physics "Enrico Fermi", Varenna Italia
• Principal subjects / professional skills covered by the study	Electron and Phonon Confinement in Semiconductor Nanostructures
• Date (from - to)	From 12/01/2004 to 16/01/2004
• Name and type of education or training institution	Arizona State University–Tempe, AZ USA
• Principal subjects / professional skills covered by the study	2004 High Resolution Electron Microscopy Winter school
• Date (from - to)	From 09/06/2004 to 20/06/2004
• Name and type of education or training institution	Ettore Majorana Center, Erice (TP) Italia
• Principal subjects / professional skills covered by the study	International school of electron crystallography, 36th course
• Date (from - to)	From 22/04/2005 to 20/09/2005
• Name and type of education or training institution	Universita' degli studi di Catania
• Principal subjects / professional skills covered by the study	"I CORSO DI MICROSCOPIA ELETTRONICA IN TRASMISSIONE", Dott.C.Spinella CNR-IMM
• Date (from - to)	21/08/2004
• Name and type of education or training institution	36 th European Microscopy Congress 2004, Antwerp, Belgium

- Principal subjects / professional skills covered by the study

"Interpretation of EELS spectra" Prof. J.Mayer, Aachen University of Technology, Germany

Awards and Recognitions

- Date / place: 31/07/2006, Chicago (USA)
- Title: **Presidential Student Award** della Microscopy Society of America ottenuto alla Microscopy & Microanalysis 2006 per la presentazione intitolata "Avoiding Charge Induced Drift In Vitrified Biological Specimens Through Scyearsing Transmission Electron Microscopy "
- prot./pers.giur.: original parchment
- Date / place: 28/02/2006
- Title: **Recognition for praiseworthy research activity** carried out at UCDavis California, in the period From 01/09/2005 to 02/28/2006, by the scientific supervisor Prof. N. D. Browning
- prot./pers.giur.: origina letter
- Date / place: 12/03/2018
- Title: member of the **MIUR's Scientific Experts** in the field of **fundamental research**
- prot./pers.giur.: origina letter
- Date / place: 26/07/2018
- Title: national certification as **associate professor**
- prot./pers.giur.: origina letter by MIUR

Books

- Title: Analysis and characterization of the system Si nanocluster/SiOx
- Author: **Giuseppe Nicotra**
- Language: **English**
- ISBN-13: 978-3-8454-2031-8
- ISBN-10: 3845420316
- categoria: thermodynamic

PERSONAL SKILLS AND COMPETENCES

NATIVE LANGUAGE ITALIAN

FOREIGN LANGUAGE(S) INGLESE

- Reading skill: EXCELLENT
- Writing skill: EXCELLENT

<ul style="list-style-type: none"> Speaking skill 	EXCELLENT
RELATIONAL SKILLS AND COMPETENCES	<ul style="list-style-type: none"> Attitude to teamwork, and multitasking Ability to work to targets and milestone. excellent ability to present their work in public and organize workshops and business meetings. Excellent relationship ability, communication, and leadership skills.
ORGANIZATIONAL SKILLS	<ul style="list-style-type: none"> Excellent capacity on human resources managing, planning and organizing work, making budgets, and updating project management systems.
TECHNICAL SKILLS AND COMPETENCES	<ul style="list-style-type: none"> operating system: UNIX, LINUX SUSE, LINUX Red Hat, MSDOS 3.x, MSWindows 3.11-95-98-2000-me-nt-xp, MAC OSX Programming languages: ASSEMBLY, PASCAL, FORTRAN, BASIC, VISUAL BASIC, Script DM, C ANSI. Software: Latex, Photoshop, Coreldraw, Lotus, MSOffice, iWork OpenOffice, Gatan DigitalMicrograph, Genplot, ImageProPlus, Microcal Origin, Matlab, CAD Spice, Adobe Photoshop
OTHER SKILLS AND COMPETENCES	<ul style="list-style-type: none"> Available to travel (different work experience abroad: United States, England etc) Hobbies: Biking, swimming, reading, cinema, photography, bricolage .
DRIVE LICENCE	A,B
INVITED TALKS	
<ul style="list-style-type: none"> Date (from – to) Event name Type of company or sector Title of the invited talk prot./pers.giur. 	<p>16/09/2014</p> <p>2nd Joint AIC-SILS conference, September 15-18, 2014 in Florence, Italy</p> <p>società italiana cristallografia, Università di Firenze.</p> <p>Advanced characterisation from the nanoscale to the single atom through (S)TEM</p> <p>as evidenced by the invitation letter from Dott. Massimo Longo</p>
<ul style="list-style-type: none"> Date (from – to) Event name Type of company or sector Title of the invited talk prot./pers.giur. 	<p>30/06/2015</p> <p>Workshop “Tecniche di microscopia e diffrazione elettronica per la caratterizzazione di dispositivi a semiconduttore”, 29-30 Giugno 2015 L’Aquila.</p> <p>Università La Sapienza Roma</p> <p>Analisi STEM ad alta risoluzione</p> <p>as evidenced by the invitation email from Prof. Marco Rossi</p>
<ul style="list-style-type: none"> Date (from – to) Event name Type of company or sector Title of the invited talk 	<p>12/12/2015</p> <p>First International Conference on Advanced Materials for Power Engineering (ICAMPE-2015), 11-13 Novembre 2016, Kottayam, Kerala, India.</p> <p>Mahatma Gandhi University</p> <p>Advanced characterization of Black-p at atomic resolution</p>

- prot./pers.giur. as evidenced by the invitation email from, Prof. Sabu Thomas
- Date (from – to) 17/07/2015
- Event name Fosforene Day 17 Luglio 2015, Firenze
- Type of company or sector DSFTM-CNR
- Title of the talk **TEM and EELS investigation on black phosphorus at atomic resolution**
- prot./pers.giur. as evidenced by the invitation email from. Dott. Sorba
- Date (from – to) 09/04/2016
- Event name EMN Quantum Meeting 2016, 8 -11, Aprile, 2016, Puhiket, Tailandia
- Type of company or sector University of Electronic Science and Technology of China, Chengdu
- Title of the talk **Advanced characterization from the nanoscale to the single atom through (S)TEM-EELS**
- prot./pers.giur. as evidenced by the invitation letter from. Professor Zhiming Wang
- Date (from – to) 23/06/2016
- Event name New trends in electron microscopy“ at Ringberg castle, 22th-24th June, Munich, Germany
- Type of company or sector Stuttgart Center for Electron Microscopy Max Planck Institute for Solid State Research
- Title of the talk **Atomic structure and electronic properties of phosphorene**
- prot./pers.giur. as evidenced by the invitation email from. Prof. P. van Aken
- Date (from – to) 11/12/2016
- Event name First International Conference on Advanced Materials for Power Engineering (ICAMPE-2015), 11-13 Novembre 2016, Kottayam, Kerala, India.
- Type of company or sector Mahatma Gandhi University
- Title invited Talk **Advanced characterization of Black-p at atomic resolution**
- prot./pers.giur. as evidenced by the invitation email from, Prof. Sabu Thomas

INVITED PLENARY TALKS

- Date (from – to) 24/05/2018 - 26/05/2018
- Event name Annual conference of the Hungarian Microscopy Society Siofok, Hungary from 24th of May to 26th of May, 2018. 04. 05
- Type of company or sector HUNGARIAN SOCIETY FOR MICROSCOPY
- Title invited plenary **S/TEM challenges beyond the nanoscale**
- prot./pers.giur. as evidenced by the invitation letter from, Prof. Pecz Bela

**SCIENTIFIC DISSEMINATION
ACTIVITIES ON NATIONAL
NEWSPAPERS AND WEB
TELEVISION**

- Date 05/04/2016
- Event name/Author **invited guest at the national Rai TV broadcast MEMEX**, vedere gli atomi e la materia
- Type of company or sector RAI, servizio televisivo nazionale, rai-scuola
- prot./pers.giur. archivio RAI scuola del 05/04/2016
<http://www.scienze.rai.it/articoli/gli-strumenti-per-vedere-linfinitamente-piccolo-a-memex-si-parla-di-microscopi-ottici/33125/default.aspx>

- Date 12/03/2016
- Event name/Author **Article on national press** "NESSUNO AVEVA MAI VISTO IL FOSFORENE NOI SI" / Giuseppe Nicotra
- Type of company or sector Corriere della sera, national italian newspaper
- prot./pers.giur. archive of CNR ufficio stampa: Date Testata Pag. Articolo (in allegato) Rubrica
27/03/2016 La Lettura (Corriere della Sera) 12 "NESSUNO AVEVA MAI VISTO IL FOSFORENE. NOI SI" Cnr

- Date 29/05/2013
- Event name/Author **Press release** su almanacco della Scienza del CNR
"Grafene: nuove proprietà miglior utilizzo" / Giuseppe Nicotra
- Type of company or sector ufficio stampa del CNR
- prot./pers.giur. archivio ufficio stampa CNR n.9 - 29 mag 2013
http://www.almanacco.cnr.it/reader/?MIval=cw_usr_view_articolo.html&id_articolo=4506&id_rub=13&giornale=4543

- Date 29/05/2013

CHAIRMAN

- Date (from – to) 15/12/2016
- Event name Chemistry and functionalization of 2D materials
Materials 2016 12-16 September 2013, Milano
- Type of company or sector Department of Chemical Science and Technology of Materials
- Title **Chairman**
- prot./pers.giur. as evidenced by the invitation email from, Dott.ssa Sorba

- Date (from – to) 09/09/2013 to 13/09/2013
- Event name FisMat 2013 9-13 September 2013, Milano
- Type of company or sector Politecnico di Milano

• Title	Chairman
• prot./pers.giur.	as evidenced by the invitation email from, Dott. Longo

MAIN TASKS AND RESPONSIBILITIES

• Date (from – to)	25/05/2012 al 31 Ottobre
• Event name	RESEARCH ACTIVITY IN THE FRAMEWORK of the project CDS_0321 contratto sviluppo ST-CNR
• Type of company or sector	IMM
• mansione e tempo	advisor, 6 months
• prot./pers.giur.	IMM-CNR-IMM n. 2770 25/05/2016
• Date	05/11/2012
• Role	Construction manager project Cod. PONA3_00362
• Event name	Construction manager for the realisation of the sub-Angstrom resolution laboratory equipped with scanning electron micrograph with a spherical aberration correction of the probe and post-column energy loss, at the Institute for Microelectronics and Microsystems of the National Research Council grants to Catania. Commercial value of the lab and instrumentation € 4.000,000
• Type of company or sector	IMM- CNR
• prot./pers.giur.	IMM-CNR-IMM n. 5427 05/11/2012
• Date	13/11 /2013
• Role	Committee chairman
• Event name	Testing of the equipment for the stabilization of the thermal and electromagnetic parameters of sub-Angstrom resolution laboratory, commercial value € 140,000 + VAT
• Type of company or sector	IMM- CNR
• prot./pers.giur.	IMM-CNR-IMM n. 7953 08/10/2013
• Date	3/10/2013
• Role	Committee chairman
• Event name	Testing of the active vibration damping system for the ARM200F microscope, commercial value € 75,000 + VAT
• Type of company or sector	IMM- CNR
• prot./pers.giur.	IMM-CNR-IMM n. 7550 26/09/2013
• Date	29/05/2013
• Role	Coordinator of the working group
• Event name	Coordinator of the working group to support the design and construction of the new electron microscopy laboratory at the STMicroelectronics plant in Catania
• Type of company or sector	IMM- CNR

• prot./pers.giur.	IMM-CNR-IMM n. 4512 29/05/2013
• Date	31/10/2013
• Role	Responsible Officer
• Event name	Responsible Officer of the Sub-A electron microscopy lab equipped with a JEOL-ARM200F, total commercial value of the equipment €4.000.000
• Type of company or sector	IMM-CNR
• prot./pers.giur.	IMM-CNR-IMM n. 8781 31/10/2013
• Date	21/04/2015
• Role	Training manager
• Event name	Project PON FORM@BEYONDNANO Cod. PONA3_00362 - F
• Type of company or sector	FORM@BEYONDNANO
• Type of company or sector	IMM- CNR
• prot./pers.giur.	IMM-CNR-IMM n. 2708 21/04/2015
• Date	21/04/2015
• Role	task manager
• Event name	High resolution chemical and structural analysis of PCM cells
• Type of company or sector	research program between tra IMM and StMicroelectronics Agrate 2017
• Type of company or sector	IMM- CNR & StMicroelectronics (industria)
• prot./pers.giur.	candidato in possesso della lettera di accordo fra le parti
• Date	29/04/2015
• Role	Committee chairman
• Event name	testing scientific instrumentation, fast joint EELS/EDS, value of the equipment €15.500+vat
• Type of company or sector	IMM- CNR
• prot./pers.giur.	IMM-CNR-IMM n. 2759 23/04/2015
• Date	29/04/2015
• Date	07/05 /2015
• Role	Committee chairman
• Event name	testing scientific instrumentation, ion polisher PIPSII, value of the equipment €138.000+vat
• Type of company or sector	IMM- CNR
• prot./pers.giur.	IMM-CNR-IMM n. 2758 23/04/2015
• Date	07/05 /2015

- | | |
|-----------------------------|--|
| • Date | 07/05 /2015 |
| • Role | Committee member |
| • Event name | public selection concerning the awarding of 2 research grants |
| • Type of company or sector | IMM- CNR |
| • prot./pers.giur. | IMM-CNR-IMM n. 2758 23/04/2015 |
| | |
| • Date | 23/05/2018 |
| • Role | Committee president |
| • Event name | public selection concerning the awarding of 1 senior research grants |
| • Type of company or sector | CNR |
| • prot./pers.giur. | ICNR-AMMCNT n. 37974 23/05/2018 |

EDITOR

- | | |
|-----------------------------|---|
| • Date | 01/06/2015 |
| • Role | Guest editor |
| • Nome Rivista | Materials Science in Semiconductor Processing |
| • Type of company or sector | Elsevier |
| • prot./pers.giur. | official invitation letter |

SCHOOL AND WORKSHOP ORGANIZATION

- | | |
|-----------------------------|--|
| • Date | 26/05/2014 - 29/05/2014 |
| • Role | director and organizer |
| • Type of company or sector | CNR- IMM / SISM (società italiana di scienze di microscopia) |
| • prot./pers.giur. | come attestano dalla locandina dell'evento http://www.beyondnano.it/?q=news/1st-italian-eels-school |
| | |
| • Date | 03/07/2016 - 08/07/2016 |
| • Role | member of the committee program |
| • Type of company or sector | CNR- IMM |
| • prot./pers.giur. | as stated by http://www.nanosea2016.imm.cnr.it/index.php/organizers-committees/organizers |
| | |
| • Date | 12/12/2016 - 16/12/2016 |
| • Role | support organizing committee |

- Type of company or sector CNR- IMM
- prot./pers.giur. as per the letter of appointment of the director Dott. Fortunato (CNR-IMM)

TUTORING

- Date (from – to) 04/06/2012
- Event name tutor Master Micro e Nano technologies Nanotech, 10 weeks
- Type of company or sector Grenoble INP
- Student name **Dott. Giuseppe Cantarella**
- prot./pers.giur. as evidenced by the invitation email from, Mrs Morfouli (Grenoble INP)

- Date (from – to) 05/09/2014 a 31/12/2014
- Event name research internship 260 hours
- Type of company or sector IMM-CNR
- Student name **Dott. Mario Scuderi**
- prot./pers.giur. IMM-CNR 7156-22/09/2014

- Date (from – to) 04/2014 a 08/2014
- Event name research internship 267 hours
- Type of company or sector IMM-CNR
- Student name **Dott. Mario Scuderi**
- prot./pers.giur. IMM-CNR 2664-01/04/2014

SCIENTIFIC RESPONSIBLE ACTIVITY

- Date (from – to) 02/01/2015 - present
- Event name research grant for activities in the framework of the project "investments in industrial research and prevalent experimental development"
- Type of company or sector IMM-CNR
- Research Fellow **Dott. Mario Scuderi**
- prot./pers.giur. IMM014/2014/CT prit n. 0008817
- Date (from – to) 01/10/2017 a oggi
- Event name Research grant type B Titled "high correlated materials structure and properties"
- Type of company or sector CNR-DSFTM; IMM-CNR; NFFA MIUR
- Research Fellow **Dott. Enzo Rotunno**
- prot./pers.giur. prot. CNR 37448 06.06.2017

- Date (from – to) 02/01/2015 - present

TRAINING COURSES

- Date (from - to) From 09/12/2015 al 11/12/2015
- Name and type of education or training institution Course CNR-DSFTM.
- Principal subjects / professional skills covered by the study **Participation in the TRIZ training course "how to find inventive solutions by pursuing a systematic problem solving methodology"**
- Date (from - to) 01/04/2014
- Name and type of education or training institution Course CEERNT
- Principal subjects / professional skills covered by the study **Participation in the training course "Horizon 2020 update study day: for an Italian strategy in European research"**
- Date (from - to) From 23/06/2012 to 05/07/2012
- Name and type of education or training institution International school of physics "Enrico Fermi", Varenna Italia
- Principal subjects / professional skills covered by the study **Electron and Phonon Confinement in Semiconductor Nanostructures**
- Date (from - to) From 12/01/2004 to 16/01/2004
- Name and type of education or training institution Arizona State University–Tempe, AZ USA
- Principal subjects / professional skills covered by the study **2004 High Resolution Electron Microscopy Winter school**
- Date (from - to) From 09/06/2004 to 20/06/2004
- Name and type of education or training institution Ettore Majorana Center, Erice (TP) Italia
- Principal subjects / professional skills covered by the study **International school of electron crystallography, 36th course**
- Date (from - to) From 22/04/2005 to 20/09/2005
- Name and type of education or training institution Università degli studi di Catania
- Principal subjects / professional skills covered by the study **"I CORSO DI MICROSCOPIA ELETTRONICA IN TRASMISSIONE", Dott.C.Spinella CNR-IMM**
- Date (from - to) 21/08/2004

- | | |
|---|---|
| <ul style="list-style-type: none"> • Name and type of education or training institution | 36 th European Microscopy Congress 2004, Antwerp, Belgium |
| <ul style="list-style-type: none"> • Principal subjects / professional skills covered by the study | "Interpretation of EELS spectra" Prof. J.Mayer, Aachen University of Technology, Germany |

Awards and Recognitions

- | | |
|--|--|
| <ul style="list-style-type: none"> • Date / place | 31/07/2006, Chicago (USA) |
| <ul style="list-style-type: none"> • Title | Presidential Student Award della Microscopy Society of America ottenuto alla Microscopy & Microanalysis 2006 per la presentazione intitolata "Avoiding Charge Induced Drift In Vitrified Biological Specimens Through Scyarsng Transmission Electron Microscopy " |
| <ul style="list-style-type: none"> • prot./pers.giur. | original parchment |
| | |
| <ul style="list-style-type: none"> • Date / place | 28/02/2006 |
| <ul style="list-style-type: none"> • Title | Recognition for praiseworthy research activity carried out at UCDavis California, in the period From 01/09/2005 to 02/28/2006, by the scientific supervisor Prof. N. D. Browning |
| <ul style="list-style-type: none"> • prot./pers.giur. | origina letter |
| <ul style="list-style-type: none"> • Date / place | 12/03/2018 |
| <ul style="list-style-type: none"> • Title | member of the MIUR's Scientific Experts in the field of fundamental research |
| | |
| <ul style="list-style-type: none"> • prot./pers.giur. | origina letter |
| | |
| <ul style="list-style-type: none"> • Date / place | 26/07/2018 |
| <ul style="list-style-type: none"> • Title | national certification to be qualified as associate professor |
| <ul style="list-style-type: none"> • prot./pers.giur. | origina letter |

Books

- | | |
|--|--|
| <ul style="list-style-type: none"> • Title of the chapter | Chapter 4. Measuring Techniques for the Semiconductor's Parameters |
| <ul style="list-style-type: none"> • Author | Giuseppe Nicotra |
| <ul style="list-style-type: none"> • Language | English |
| <ul style="list-style-type: none"> • ISBN-13 ebook | 978-3-030-79827-7 |
| <ul style="list-style-type: none"> • ISBN-13 print | 978-3-030-79826-0 |
| <ul style="list-style-type: none"> • categoria | Springer Handbook of Semiconductor Devices |
| | |
| <ul style="list-style-type: none"> • Title | Analysis and characterization of the system Si nanocluster/SiOx |
| <ul style="list-style-type: none"> • Author | Giuseppe Nicotra |
| <ul style="list-style-type: none"> • Language | English |
| <ul style="list-style-type: none"> • ISBN-13 | 978-3-8454-2031-8 |
| <ul style="list-style-type: none"> • ISBN-10 | 3845420316 |

- categoria thermodynamic

PERSONAL SKILLS AND COMPETENCES

NATIVE LANGUAGE ITALIAN

FOREIGN LANGUAGE(S) INGLESE

- Reading skill EXCELLENT
- Writing skill EXCELLENT
- Speaking skill EXCELLENT

RELATIONAL SKILLS AND COMPETENCES

- Attitude to teamwork, and multitasking
- Ability to work to targets and mailstone.
- excellent ability to present their work in public and organize workshops and business meetings.
- Excellent relationship ability, communication, and leadership skills.

ORGANIZATIONAL SKILLS

- Excellent capacity on human resources managing, planning and organizing work, making budgets, and updating project management systems.

TECHNICAL SKILLS AND COMPETENCES

- **operating system:** UNIX, LINUX SUSE, LINUX Red Hat, MSDOS 3.x, MSWindows 3.11-95-98-2000-me-nt-xp, MAC OSX
- **Programming languages:** ASSEMBLY, PASCAL, FORTRAN, BASIC, VISUAL BASIC, Script DM, C ANSI.
- **Software:** Latex, Photoshop, Coreldraw, Lotus, MSOffice, iWork OpenOffice, Gatan DigitalMicrograph, Genplot, ImageProPlus, Microcal Origin, Matlab, CAD Spice, Adobe Photoshop

OTHER SKILLS AND COMPETENCES

- Available to travel (different work experience abroad: United States, England etc)
- Hobbies: Biking, swimming, reading, cinema, photography, bricolage .

DRIVE LICENCE A,B

MOST RELEVANT PUBLICATIONS

Authors	Title	Year	Source title	Cited by	DOI
Di Mauro A., Cantarella M., Nicotra G., Pellegrino G., Gulino A., Brundo M.V., Privitera V., Impellizzeri G.	Novel synthesis of ZnO/PMMA nanocomposites for photocatalytic applications	2017	Scientific Reports	119	10.1038/srep40895
Di Mauro A., Cantarella M., Nicotra G., Privitera V., Impellizzeri G.	Low temperature atomic layer deposition of ZnO: Applications in photocatalysis	2016	Applied Catalysis B: Environmental	77	10.1016/j.apcatb.2016.05.015
Matteini P., Cottat M., Tavanti F., Panfilova E., Scuderi M., Nicotra G., Menziani M.C., Khlebtsov N., De Angelis M., Pini R.	Site-Selective Surface-Enhanced Raman Detection of Proteins	2017	ACS Nano	72	10.1021/acs.nano.6b07523
Jin L., Sirigu G., Tong X., Camellini A., Parisini A., Nicotra G., Spinella C., Zhao H., Sun S., Morandi V., Zavelani-Rossi M., Rosei F., Vomiero A.	Engineering interfacial structure in "Giant" PbS/CdS quantum dots for photoelectrochemical solar energy conversion	2016	Nano Energy	62	10.1016/j.nanoen.2016.10.029

Nicotra G., Ramasse Q.M., Deretzis I., La Magna A., Spinella C., Giannazzo F.	Delaminated graphene at silicon carbide facets: Atomic scale imaging and spectroscopy	2013	ACS Nano	58	10.1021/nn305922u
Giannazzo F., Fisichella G., Greco G., Di Franco S., Deretzis I., La Magna A., Bongiorno C., Nicotra G., Spinella C., Scopelliti M., Pignataro B., Agnello S., Roccaforte F.	Ambipolar MoS2 Transistors by Nanoscale Tailoring of Schottky Barrier Using Oxygen Plasma Functionalization	2017	ACS Applied Materials and Interfaces	55	10.1021/acsami.7b04919
Esposito M., Tasco V., Todisco F., Cuscunà M., Benedetti A., Scuderi M., Nicotra G., Passaseo A.	Programmable Extreme Chirality in the Visible by Helix-Shaped Metamaterial Platform	2016	Nano Letters	53	10.1021/acs.nanolett.6b02583
Cosentino S., Mirabella S., Miritello M., Nicotra G., Lo Savio R., Simone F., Spinella C., Terrasi A.	The role of the surfaces in the photon absorption in ge nanoclusters embedded in silica	2011	Nanoscale Research Letters	53	10.1186/1556-276X-6-135
Di Mauro A., Zimbone M., Scuderi M., Nicotra G., Fragalà M.E., Impellizzeri G.	Effect of Pt Nanoparticles on the Photocatalytic Activity of ZnO Nanofibers	2015	Nanoscale Research Letters	48	10.1186/s11671-015-1126-6
Scuderi V., Impellizzeri G., Romano L., Scuderi M., Brundo M.V., Bergum K., Zimbone M., Sanz R., Buccheri M.A., Simone F., Nicotra G., Svensson B.G., Grimaldi M.G., Privitera V.	An enhanced photocatalytic response of nanometric TiO2wrapping of Au nanoparticles for eco-friendly water applications	2014	Nanoscale	48	10.1039/c4nr02820a
Fabbri F., Rotunno E., Cinquanta E., Campi D., Bonnini E., Kaplan D., Lazzarini L., Bernasconi M., Ferrari C., Longo M., Nicotra G., Molle A., Swaminathan V., Salviati G.	Novel near-infrared emission from crystal defects in MoS 2 multilayer flakes	2016	Nature Communications	46	10.1038/ncomms13044
Zhao H., Sirigu G., Parisini A., Camellini A., Nicotra G., Rosei F., Morandi V., Zavelani-Rossi M., Vomiero A.	Dual emission in asymmetric "giant" PbS/CdS/CdS core/shell/shell quantum dots	2016	Nanoscale	46	10.1039/c5nr08881j

Nechaev I.A., Aguilera I., De Renzi V., Di Bona A., Lodi Rizzini A., Mio A.M., Nicotra G., Politano A., Scalese S., Aliev Z.S., Babanly M.B., Friedrich C., Blügel S., Chulkov E.V.	Quasiparticle spectrum and plasmonic excitations in the topological insulator Sb ₂ Te ₃	2015	Physical Review B - Condensed Matter and Materials Physics	44	10.1103/PhysRevB.91.245123
Scuderi V., Impellizzeri G., Romano L., Scuderi M., Nicotra G., Bergum K., Irrera A., Svensson B.G., Privitera V.	TiO ₂ -coated nanostructures for dye photo-degradation in water	2014	Nanoscale Research Letters	43	10.1186/1556-276X-9-458
Srivastava D., Norman C., Azough F., Schäfer M.C., Guilmeau E., Kepaptsoglou D., Ramasse Q.M., Nicotra G., Freer R.	Tuning the thermoelectric properties of A-site deficient SrTiO ₃ ceramics by vacancies and carrier concentration	2016	Physical Chemistry Chemical Physics	41	10.1039/c6cp05523k
Caporali M., Serrano-Ruiz M., Telesio F., Heun S., Nicotra G., Spinella C., Peruzzini M.	Decoration of exfoliated black phosphorus with nickel nanoparticles and its application in catalysis	2017	Chemical Communications	38	10.1039/c7cc05906j
Ostler M., Deretzis I., Mammadov S., Giannazzo F., Nicotra G., Spinella C., Seyller Th., La Magna A.	Direct growth of quasi-free-standing epitaxial graphene on nonpolar SiC surfaces	2013	Physical Review B - Condensed Matter and Materials Physics	36	10.1103/PhysRevB.88.085408
Scuderi M., Esposito M., Todisco F., Simeone D., Tarantini I., De Marco L., De Giorgi M., Nicotra G., Carbone L., Sanvitto D., Passaseo A., Gigli G., Cuscunà M.	Nanoscale Study of the Tarnishing Process in Electron Beam Lithography-Fabricated Silver Nanoparticles for Plasmonic Applications	2016	Journal of Physical Chemistry C	33	10.1021/acs.jpcc.6b03963
Busby Y., De Seta M., Capellini G., Evangelisti F., Ortolani M., Virgilio M., Grosso G., Pizzi G., Calvani P., Lupi S., Nardone M., Nicotra G., Spinella C.	Near- and far-infrared absorption and electronic structure of Ge-SiGe multiple quantum wells	2010	Physical Review B - Condensed Matter and Materials Physics	32	10.1103/PhysRevB.82.205317
Nicotra G., Lombardo S., Spinella C., Ammendola G., Gerardi C., Demuro C.	Observation of the nucleation kinetics of Si quantum dots on SiO ₂ by energy filtered transmission electron microscopy	2002	Applied Surface Science	27	10.1016/S0169-4332(02)01155-8

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Mirabella S., Cosentino S., Failla M., Miritello M., Nicotra G., Simone F., Spinella C., Franzò G., Terrasi A.	Light absorption enhancement in closely packed Ge quantum dots	2013	Applied Physics Letters	14	10.1063/1.4805 356
Cantarella M., Gorrasi G., Di Mauro A., Scuderi M., Nicotra G., Fiorenza R., Scirè S., Scalisi M.E., Brundo M.V., Privitera V., Impellizzeri G.	Mechanical milling: a sustainable route to induce structural transformations in MoS ₂ for applications in the treatment of contaminated water	2019	Scientific Reports	13	10.1038/ s41598-018-377 98-8
Simeone D., Esposito M., Scuderi M., Calafiore G., Palermo G., De Luca A., Todisco F., Sanvitto D., Nicotra G., Cabrini S., Tasco V., Passaseo A., Cuscunà M.	Tailoring Electromagnetic Hot Spots toward Visible Frequencies in Ultra- Narrow Gap Al/Al ₂ O ₃ Bowtie Nanoantennas	2018	ACS Photonics	13	10.1021/ acsphotonics.8b 00665
Pécz B., Nicotra G., Giannazzo F., Yakimova R., Koos A., Kakanakova- Georgieva A.	Indium Nitride at the 2D Limit	2021	Advanced Materials	12	10.1002/ adma.20200666 0

I declare that I am in possession of the necessary certificates attesting that everything declared in this curriculum vitae is true.

I declare that the information contained in this curriculum vitae is provided in accordance with Articles 46 and 47 of Presidential Decree no. 445/2000.

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

Catania 27/04/2023

