

Curriculum Vitae - Silvia SCALESE

BIBLIOMETRIC PARAMETERS

Number of papers on international peer-reviewed Journals: 128

h-index: 25 (Web of Science); 29 (Google scholar)

Total citations: 1861 (WoS); 2590 (Google scholar)

<https://orcid.org/0000-0002-6371-6714>

EDUCATION

1998: PhD in Physics, Università della Calabria (Italy)

1994: Degree in Physics, Università della Calabria (Italy)

EMPLOYMENT AND RESEARCH EXPERIENCES

Since Dec. 27, 2001: **Researcher** (permanent position) at CNR-IMM in Catania (Italy).

Nov. 2000 – Dec. 2001: Researcher (temporary position) at INFN Research Unit of Catania (Italy)

Jan. 1998 – Oct. 2000: Post-Doc position at INFN Research Unit of Catania (Italy)

ASSIGNMENTS/RESPONSIBILITIES

- Since Oct. 26, 2020: Contact person of the “Functional nanomaterials” workgroup at IMM Headquarters
- March 14, 2018 – March 13, 2020: Contact person of the “Chemical, Physical and Biological Sensors” workgroup at IMM Headquarters
- 2010 - 2014: in charge of the task "MD.P05.005.005 / Materiali nanostrutturati a base di Carbonio" within the CNR-IMM Group (Commessa) "MD.P05.005 / Sviluppo di metodologie avanzate per dispositivi elettronici micro e nano strutturati"
- Since Jan. 05, 2009 to present: in charge of the Carbon nanostructures Laboratory at CNR- IMM Headquarters in Catania
- Since Febr. 23, 2005 to present: in charge of the Scanning Electron Microscopy Laboratory at CNR- IMM Headquarters in Catania

SCIENTIFIC INTERESTS AND EXPERTISE

S. Scalese earlier research activity concerned Surface Physics, Molecular Beam Epitaxy of Si and SixGe1-x alloys and ion implantation of dopants in silicon. Since 2005 her research activity has focused on synthesis and characterization (morphological, structural, electrical and chemical) of nanomaterials, in particular carbon nanostructures and semiconductor oxides. In the last years, her research has mainly focused on the environmental and health application of nanomaterials and nanocomposites, such as sensing, water purification, water splitting.

MAIN PROJECTS

- Febr. 01 2021 to present: Responsible of CNR-IMM Research Unit for the FISR2019_04480 Project “Uso di Graphene Quantum Dots come carrier di agenti teranostici per tumori solidi” GRATA
- Aug. 05 2021 to present: Responsible for CNR-IMM of the Research Contract with Plastica Alfa S.p.A.
- Jan 01, 2017 – Dec. 31, 2020: Participation to European Project “Technology demonstration of large-scale photo-electrochemical system for solar hydrogen production (PECSYS)”
- July 2012 - July 2015: Responsible of electrical transduction biosensing activity in the PON project “Sviluppo di Micro- e Nano-tecnologie e Sistemi avanzati per la salute dell’uomo - Hippocrates” (PON 02_00355_2964193)
- Oct. 1, 2012 – March 31, 2016: WP Leader in the 7th Framework Program (REGPOT-2012-2013-1) European Project “Winning Applications of Nano TEchnology for Resolutive Hydropurification – WATER”

- Sept. 2008 – Oct.2010: Responsible of CNR-IMM Research Unit for the PRIN 2007 project “Nuove strategie per la sintesi di nanostrutture a base di carbonio mediante la formazione di plasmi in ambienti liquidi” (Protocollo 2007K9YPL8_002).
- Jan. 01, 2006 – Dec. 31, 2008: Member of the Technical-Scientific board in the project “Laboratorio pubblico-privato per lo sviluppo di tecnologie di processo e dimostratori di circuiti elettronici ad alte prestazioni e basso costo di fabbricazione realizzati su substrati plastici (PLAST_Ics, FAR prot MIUR DM 17767 art. 12 lab)
- Jan. 2002- Aug.2004: Participation to the European Project FRENDECH (Front-End Models for Silicon Future Technology), within the IST (Information Society Technologies) program.

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PATENTS

Title: "Method for suppressing transient enhanced diffusion of dopants in silicon",

Authors: A. Carnera, A. Coati, D. Da Salvador, S. Mirabella, E. Napolitani, F. Priolo, S. Scalese

-Italian Patent CODICE BREVETTO: TO2001A001129 (04-12-2001);

-European Patent Application EP1454348 - International Patent n. PCT/EP2002/013659 (03/12/2002);

-US Patent Application No: 2005/0106,824 del 19/05/2005

CONFERENCES ORGANIZATION

- Organizer and Chairman of CARBOMAT (Workshop on Carbon-based Low Dimensional Materials), 6-8 Oct. 2010, Catania (Italy)
- Organizer and Chairman of CARBOMAT 2011 (Workshop on Carbon-based Low Dimensional Materials), 5-7 Dec. 2011, Catania (Italy) (<http://carbomat.imm.cnr.it>)
- Publication Chair in the 9th Nanotechnology Materials and Devices Conference (IEEE NMDC), 12-15 Oct. 2014 Aci Castello (Italy)
- Program Committee Member of the 6th International Conference on NANOSTRUCTURES and nanomaterials Self-Assembly (NanoSEA 2016), 3-8 Jul. 2016, Giardini Naxos (Italy)
- Member of Local Organization Committee of FISMAT 2019 conference, 30 Sept. – 4 Oct. 2019, Catania (Italy)

EDITORIAL BOARDS AND BOOKS AUTHORSHIP

- Carbon-Based Low Dimensional Materials - Proceedings of the 2nd CARBOMAT Workshop - Ed.: Silvia Scalese & Antonino La Magna. Printed in Catania (Italy), Edited by CNR, March 2012, ISBN 978-88-8080-124-5
- Oct. 30, 2018 – May 31, 2020: **Guest Editor** of the Nanomaterials Special issue “Carbon-Based Nanostructures and Nanocomposites for Health and Environmental Applications” (MDPI AG, Basel, Switzerland).
- Since Jan. 2020: **Topic Editor** of the Nanomaterials Topic Board. (https://www.mdpi.com/journal/nanomaterials/topic_editors)
- Since June 16, 2020 – to present: **Guest Editor** the Nanomaterials Special issue “Application of Carbon-Based Nanostructures and Nanocomposites for Sustainable Development” (MDPI AG, Basel, Switzerland).
- Co-author of the “Chapter 9: Carbon-Based Nanomaterials Obtained by Laser Ablation in Liquids and Other Plasma Processes in High-Density Environments” in the Book “Laser Ablation in Liquids: Principles and Applications in the Preparation of Nanomaterials”, *G. Compagnini and S. Scalese*, pages 439-478, Published: February 02, 2012 by Pan Stanford Publishing - 1,192 Pages; Editor(s): Guowei Yang, ISBN 9789814310956; Cat# N10476
- Co-author of the “Chapter 4: Laser-Induced Synthesis and Processing of Nanoparticles in the Liquid Phase for Biosensing and Catalysis”, *G. Compagnini, M. Condorelli, C. La Rosa, L. D’Urso, S. Scirè, R. Fiorenza, S. Filice and S. Scalese*. In: Hu A. (eds) Laser Micro-Nano-Manufacturing and 3D Microprinting. Springer Series in Materials Science, vol 309, pages 133-162, Published Online 29 November 2020. Publisher: Springer, Cham. https://doi.org/10.1007/978-3-030-59313-1_4; Print ISBN 978-3-030-59312-4; Online ISBN 978-3-030-59313-1

REFeree ACTIVITY for peer-reviewed international journals:

ACS Applied Materials & Interfaces; AIP Advances; Applied Surface Science; Arabian Journal of Chemistry; C Journal of Carbon research; Carbon; Catalysis today; Chemical Physics; Desalination; Diamond and related materials; Electrochemical and Solid-State Letters; Environmental Chemistry Letters; Environmental Science: Water research & Technology; IEEE Transactions on Nanotechnology; Journal of the Electrochemical Society; Journal of Raman Spectroscopy; Journal of Nanomaterials; Journal of Nanoscience and Nanotechnology; Journal of Water Process Engineering; Materials; Materials Chemistry and Physics; Materials Letters; Materials Research Xpress; Materials Science in Semiconductor Processing; Membranes; Membrane Water Treatment; Nanomaterials; Nanoscale; New Journal of Chemistry; Polymers; RSC Advances; Separation and Purification Technology; Water science and technology.