

PERSONAL INFORMATION

Daniele Sanvitto

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• TRACK-RECORD

Daniele Sanvitto is author of more than **250 articles** published in international scientific journals based in the peer-review, which altogether received more than **7500 citations** with the most cited paper reaching almost 500 citations, resulting in an **h-index of 45**. Among many such publications stand out **2 Science (IF 41)**, **2 Nature (IF 43)**, **3 Nature Materials (IF 39)**, **1 Nature Nanotechnology (IF 33)**, **3 Nature Physics (IF 20)**, **3 Nature Photonic (IF 31)**, **4 Nature Communications (IF 12)**, **3 Science Advances (IF 13)**, **5 Light Science & Application (IF 14)**, **1 Advanced Materials (IF 26)**, **2 ACS NANO (IF 14)**, **2 Nano Letters (IF 11)** **1 PNAS (IF 9)** and **19 Physical Review Letters** (of which 2 were proposed as Editor Suggestion). He contributed to the writing of **4 books** and he is **editor** of the book entitled "Exciton Polaritons in Microcavities" which was one of the first reference book in the field. He recently wrote a highly cited review paper on polariton devices for **Nature Materials** (> 200 citations). He presented in person his work in more than **60 conferences** as invited or keynote speaker.

In the Institute of Nanotechnology of **CNR** in Lecce he is leading a group of **15 people** working on polariton physics in many material and optical systems (polaritonics.nanotec.cnr.it).

• EDUCATION

2012 **Full Professorship** qualification by the Ministry of Education.

2001 **PhD** Department of Physics and Toshiba research center, University of Cambridge, U.K.

Supervisors: Prof. Mike Pepper, Dr. Andrew Shields

1997 **Master** Department of Physics, Università di Roma "La Sapienza", Italy

• CURRENT POSITIONS

2019 – **Director of Research** Institute of Nanotechnology, National Research Council (CNR), Italy

• PREVIOUS POSITIONS

2010 – 2019 **Senior Researcher** Institute of Nanotechnology, National Research Council (CNR), Italy

2007 – 2010 **Ramon y Cajal Fellow** (Tenure Track Professorship) Departamento de Materiales, Universidad Autonoma de Madrid, Spain

2004 – 2007 **Research assistant** Department of Physics, University of Sheffield, U.K.

• FELLOWSHIPS

2014 First in the ranking of "Exceptional Merits", Ministry of Education receiving the promotion to Senior Scientist at the last salary range (fascia VII).

2002 – 2004 Marie Curie fellowship, Institute Jacques Monod, University of Paris VI, France

2002 Fundacion pour la Research Medicale, University of Paris VI, France

- 1998 – 2002 Toshiba CASE Scholarship, Toshiba Research Center, Cambridge, U.K.
- 1998 – 2002 Isaac Newton European trust Scholarship, Dep. of Physics, University of Cambridge, U.K.
- 1998 – 2002 Trinity College Coutts Trotter Scholarship, Dep. of Physics, University of Cambridge, U.K.
- 1997 – 1998 Seiko-Epson Scholarship, Department of Engineering, University of Cambridge, U.K.

- **SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS**

- 2011 – Supervised 6 Ph.D. students (G. Lerario, B. Silva-Fernandez, F. Todisco, S. Donati, D. Caputo, A. Fieramosca) and 2 Post Docs (V. Ardizzone, G. Lerario); currently supervising 4 Ph.D. students (A. Gianfrate, D. Suarez-Forero, L. Polimeno, F. Riminucci) and 2 graduated students (R. Panico, M. Cinquino); Institute of Nanotechnology – (CNR), Italy
- 2007 – 2010 co-supervised 1 Master student (C. Lingg), 3 Ph.D. students (G. Tosi, A. Amo, D. Ballarini) and 1 Postdoc (R. Spano). Dep. de Fisica des Materiales, Univ. Autonoma de Madrid, Spain

- **TEACHING ACTIVITIES**

- 2009 – 2010 Associate Professor – Physics in the faculty of Biology and Optoelectronics in the faculty of Physics, Universidad Autonoma de Madrid, Spain
- 2007 – 2009 Associate Professor – Physics in the faculty of Education, Universidad Autonoma de Madrid, Spain
- 2005 – 2006 Assistant Professor – Teaching problems of quantum mechanics and electrodynamics, University of Sheffield, U.K
- 1998 – 2001 Tutor for Trinity College, Cambridge, UK

- **ORGANISATION OF SCIENTIFIC MEETINGS**

- 2020 – Member of the Advisory Committee of NanoMT ([International Conference on Frontiers of Nanomaterials and Nanotechnology](#))
- 2021 Memeber of the organising committee of “Room temperature of Exciton-polariton and Polaritonic Devices” at [PIERS2021](#).
- 2019 Chairman of the Conference TERAMETANANO-4 ([Intern. Conf. on Terahertz Emission, Metamaterials and Nanophotonics](#)), Italy
- 2018 Member of the Program Committee of the [Organic & Hybrid Semiconductor Materials and Devices](#), Netherlands
- 2017 Member of the Advisory committee of ICMNPE ([International Conference on MEMS, Nanotechnology and Precision Engineering](#)), Korea
- 2017 Member of the organising committee of the PLASMONICA2017 ([Int. Conference on Plasmonics](#)), Italy
- 2016, 2017 Member of the scientific committee of ANNIC ([Applied Nanotechnology and Nanoscience International Conference](#))
- 2011 Member of the organising committee of the WESSS ([Workshop on Entanglement in Solid State Systems](#)), Italy
- 2009 Member of the organising committee of the OECS11 (Int. Conference on Optics of Excitons in Confined Systems), Spain

- **INSTITUTIONAL RESPONSIBILITIES**

- 2021 – Member of the Steering Committee of EuroNanoLab
- 2020 Member of the National Examination Committee for internal promotion to the Director of Research of the Italian CNR (National Research Council).
- 2019 Member of the National Examination Committee for 4 permanent Researcher positions in the CNR, National Research Council, Italy
- 2017 – Member of the Faculty Committee of the Doctorate in Nanotechnologies, Department of Physics, University of Salento, Italy
- 2016 – Member of the Scientific Advisory Board, Institute of Nanotechnology, National Research Council (CNR), Italy
- 2016 – Member of the Editorial Board, Scientific Reports, Nature Publishing Group, U.K.
- 2016 Member of the National Examination Committee for 4 permanent Researcher positions in the CNR, National Research Council, Italy
- 2015 – Member of the Board of the *Photonics and Optoelectronic* Facility, Institute of Nanotechnology, National Research Council (CNR), Italy
- 2015 – Coordinator of the Advanced Photonics group, Institute of Nanotechnology, National Research Council (CNR), Italy

- **REVIEWING ACTIVITIES**

- Reviewer for the ERC funding scheme
- Reviewer for the Research Foundation Flanders (FWO)
- Rapporteur for the German research foundation Deutsche Forschungsgemeinschaft (DFG)
- Rapporteur for the Swiss National Science Foundation (SNSF)
- Rapporteur for the French National Research Agency (ANR), France
- Rapporteur for the executive government agency of the Polish National Science Centre, Poland
- Review Panel Member for the evaluation of projects by the Romanian National Research Council
- Scientific Evaluator for the New Eurasia Foundation and the Russian Ministry of Science

- **GRANTS AS PI**

- 2021 – Bilateral funding scheme CNR and Russian Foundation for Basic Research, 120,000 €
- 2019 – PRIN (National Ministry of Research and Higher Education) “Interacting Photons in Polariton Circuits (INPhoPOL)”, EU, 600,000 € of which 250,000 € for Nanotec
- 2019 – 2021 Molecular Foundry - Lawrence Berkeley National Laboratory user grant “Polariton Interferometer for All-Optical Devices”
- 2017 – 2019 ERC PoC “*Electro Optical Polariton Devices*” (N. 78075), EU, 150,000 €
- 2017 PE Québec-Italy bi-lateral cooperative project “*Light-matter states for solar energy and infrared detection*”
- 2013 – 2016 CSF-PVE, Brazilian 3 years program for visiting professors of exceptional merits, CNPq and CAPES (N. 23038.007769/2013-50), Brazil, 180,000 R\$ (50,000 €)

2012 – 2017 ERC StG (consolidator) POLAFLOW, “Polariton condensates: from fundamental physics to quantum based devices” (N. 308136), EU, 1,500,000 €

2011 – 2013 PONA3_00362 BEYOND NANO, Italy, 8,400,000 €. Leader of WP “LaC” (1,800,000 €)

2007 – 2010 Ramon y Cajal 5 years Tenure Track Professorship from the Ministerio de Ciencia e Innovación, Spain, 210,000 €

• MAJOR COLLABORATIONS

- B. Pietka, polariton implementation of artificial neural networks, University of Warsaw, Poland
- Q. Xiong, polaritonics in perovskites and TMD materials, Nanyang Technological University, Singapore
- T. Liew, room temperature topological polaritons, Nanyang Technological University, Singapore
- S. Kena-Cohen, collaboration on low-dimensional systems, École Polytechnique of Montréal, Canada
- L. Manna, synthesis of perovskite superlattices, Italian Institute of Technology, Italy
- L. Pfeiffer, epitaxial growth of GaAs based microcavities, Princeton University, New Jersey, US
- J. Finley, realization of semiconductor nanostructure and sample processing, TUM, Munich, Germany
- D. Gerace, Theory on polaritonic systems based on perovskite and plasmons, University of Pavia, Italy
- M. Matuszewski, theory on polariton neural networks, Polish Academy of Sciences, Warszawa, Poland
- F. Laussy, theory on single polaritons effects, University of Wolverhampton, United Kingdom
- F. Sciarrino, P. Mataloni, Experimental support on the generation of entangled photon pairs, Sapienza University of Rome, Italy
- A. Rastelli, Growth of GaAs QDs resonant with our polariton samples, Johannes Kepler University, Linz, Austria
- A. Kavokin, Theory of polariton spintronics, Westlake University, Hangzhou, China
- V. Menon, Realisation of TMDs and deposition on microcavity and BSW samples, City University of New York, USA
- S. Marzena, Theory of BKT transition in quantum polariton fluids, University College London, UK
- J. Gomez-Rivas, Sample preparation for polariton condensation in arrays of plasmonics nanostructures, Eindhoven University of Technology, The Netherlands
- G. Malpuech, D. Solnyshkov, Theory on Topological polaritons, Université Clermont Auvergne, CNRS, France