Stefano Ossicini is Professor Emeritus of Experimental Physics at the University of Modena and Reggio Emilia (Italy).

EDUCATION :
1976 Graduated in Physics with honors, University of Roma La Sapienza (Italy).

PROFESSIONAL EXPERIENCE
2024-today Professor Emeritus, University of Modena and Reggio Emilia (Italy).
2022-2024 Senior Professor, University of Modena and Reggio Emilia (Italy).
2001-2022 Full Professor, Faculty of Engineering and Department of Science and Methods of Engineering, University of Modena and Reggio Emilia (Italy).
1988-2001 Associated Professor, Faculty of Science and Department of Physics, University of Modena (Italy).
1984-1988 Assistant Professor ("ricercatore"), Department of Physics, University of Modena (Italy).
1982-1984 Professor ("a contratto"), Department of Physics, University della Calabria, Cosenza (Italy).
1980-1982 Assistant Professor, Department of Theoretical Physics, Free University, Berlin (Germany).
1978-1980 Research Assistant, Department of Theoretical Physics, Free University in Berlin (Germany).
1977-1978 Research Assistant, Department of Physics, University of Roma la Sapienza (Italy).

PROFESSIONAL SERVICES ACTIVITY/MANAGEMENT RESPONSIBILITIES
2012-2016 Member of the Administrative Council, University of Modena and Reggio Emilia (Italy).
2010-2013 Director of the Interdepartmental Research Center "En&Tech", a collaboration between University of Modena and Reggio Emilia and the Emilia-Romagna Region (www.enetech.unimore.it).
2006-2011 Director, PhD School in Physical and Nanosciences, University of Modena and Reggio Emilia (Italy).
2007-2009 Vice Dean, Faculty of Engineering II, University of Modena and Reggio Emilia (Italy).
2002-2005 Director, PhD School in Physics, University of Modena and Reggio Emilia (Italy).
2004-today Node Coordinator of the ETSF, European Theoretical Spectroscopy Facility (www.etsf.eu).
2002- today Associated Researcher, CNR- Istituto Nanoscienze, S3, Modena (Italy).
2001-today Member of the Psik "Ab initio (from electronic structure) calculation of complex processes in materials" Network, www.psi-k.org.
1988-1994 National Coordinator of the Computing Activity in Condensed Matter Physics of the CNR, Italy

OTHER PROFESSIONAL ACTIVITIES
Referee of a large number of high-impact scientific journals, including Nature, Science, Physical Review Letters, Nano Letters, Nanoscale, Applied Physics Letters, The Journal of Physical Chemistry, etc.. Referee of several international and national funding agencies, including NSF

(USA), CNRS and ANR (France), SFI (Ireland), NSF (Singapore), HPC ISCRA and Mare Nostrum (Europe), ANVUR, CINECA; MIURPRIN, CNR etc. (Italy)
Organizer of more than 20 international and national conferences (several as chairman). He has presented more than 100 invited talks.

VISITS AND OTHER ACTIVITIES AT OTHER SCIENTIFIC INSTITUTIONS
Member of Jury (more than ten times) for PhD defenses in France, Spain, Germany.
2010-2017 Member of the Scientific Council of the Scuola Interpolitecnica di Dottorato (SIPD), Bari, Milano, Torino), Politecnico di Torino (Italy).
2013 Visiting Scientist at Zernike Institute for Advanced Materials, University of Groningen, Groningen (Holland)
2013 Visiting Scientist at Theory for Condensed Matter, Radbound University, Nijmegen (Holland)
2010 Visiting Scientist at Materials Science Department UPV/EHU, San Sebastian (Spain)
2008 Visiting Scientist at the Laboratoire des Solides Irradies, CNRS, Paris (France)
2001 Visiting Scientist at Belarusian State University, Minsk (Belarus)
1999 Visiting Scientist at Belarusian State University, Minsk (Belarus)
1996 Visiting Scientist at IMEL/NCSR "Demokritos", Athens (Greece)
1993 Visiting Scientist at CRMC2, Campus de Luminy, Marseille, (France)
1985 Visiting Scientist at Department of Theoretical Physics, Free University, Berlin (Germany).
1984 Visiting Scientist at Department of Theoretical Physics, Free University, Berlin (Germany).
1983 Visiting Scientist at Department of Theoretical Physics, Free University, Berlin (Germany).

APPROVED PROJECTS
PI of tens of international (EU, bilateral, NATO), national (INFM, CNR, MIUR, PRIN, MAE) and local (Emilia Romagna Region, Fondazione Cassa di Risparmio Modena, Università di Modena e Reggio Emilia) research projects.
PI of a large number of High parallel computing (HPC) projects at the major computer facilities in Europe.
The overall budget Stefano Ossicini rose from 2006 accounts for more than 1M€.

MENTORING AND SUPERVISING
Leader of the research group on low-dimensional systems and nanostructures. Mentor of more than 10 PhD students, all now involved in research activities, and of a very large number of Master students (www.nanomodelling.unimore.it).

HONORS
Member of the "Accademia Nazionale delle Scienze, Lettere ed Arti", Modena (Italy).
Former Fellow of the American Chemical Society.
2013 Fermi-Città di Cecina National Book Prize.

RESEARCH INTERESTS
My research activity has mainly focused on condensed matter theory, in particular on numerical simulations and modelling of the structural, electronic and optical properties of metal and semiconductors, with special emphasis on surfaces, interfaces and heterostructures. From the beginning of my activity. a special role has been played by the fruitful collaborations at

international level and, in particular, with experimental groups, aiming at the investigation of novel materials. Actually the central topic of my activity is related to the investigation of fundamental properties of low-dimensional systems and nanostructures for applications in photonics, optoelectronics, photovoltaic and thermoelectric. This work has been done in close collaboration with leading theoretical and experimental groups in the field within a large number of national and international granted research projects. My group has a widely known research activity concerning development and application of theoretical and computational methods, such as DFT, TDDFT, GW-BSE, empirical approaches based on pseudopotentials, tight-binding, classical interatomic potentials, valence force fields and molecular dynamics simulations. The group has experience and access to most state-of-the-art packages (ESPRESSO, Abinit, VASP, DP, EXC, YAMBOO, Octopus) and has developed several suitable new routines, in particular for the calculation of non-linear optical properties, charge recombination processes and multiple exciton generation.

SCIENTIFIC PRODUCTION

More than 270 scientific papers, including articles on international journals (included 2 Nature and several Physical Review Letters, Nanoletters, Applied Phyiscs Letters, Nanoscale, etc.), several review articles and chapter of books. Author (together with L. Pavesi and F. Priolo) of the book "Light Emitting Silicon for Microphotonics", Springer Verlag Berlin 2003 (first edition) and 2009 (second edition). Author (together with V. E Borisenko) of the book "What is What in the Nanoworld" Wiley-VCH Verlag Weinheim, 2004 (first edition), 2008 (second edition), 2012 (third edition). Co-Editor (with L. T. Canham and D. Bensahel) of the book “Optical properties of Low Dimensional Silicon Structures, Kluwer, Dordrecht 1993 . Guest Editor (with L. Khriachtchev, F. Iacona, F. Gourbilleau) of the Special Issue “Photonic Properties of Silicon Based Materials” for The International Journal of Photoenergy, 2012.

230 articles in international scientific journals , 1 well renowned, 1000+ quotes, 4 famous, 250-499 quotes, 12 very well known, 100-249 quotes. Sum of Times Cited 9760, h-INDEX 48.

OUTREACH

Since long time I’m active also regarding the link between science and society. Author of the books “L’universo è fatto di storie non solo di atomi” (Neri Pozza, Vicenza 2012) about error, illusion and fraud in the scientific research and “L’inganno di Mesmer e la commissione Franklin-Lavoisier. Come la scienza ha imparato ad affrontare le controversie pubbliche” (Meltemi edizioni 2019), “Breve viaggio multilingue nel nanomondo” (Scienza Express 2020), the novel “Il cristallo e la balena” (con Charlotte Ossicini, Giovane Holden Edizioni 2021), “L’invenzione del concetto di “razza”. Nominare, misurare, classificare. Il ruolo di filosofi e scienziati del Settecento” (Meltemi Edizioni 2024). Author of two theater plays: “Non ho nulla da rimproverarmi. 1911 Stoccolma e dintorni” about the figure of Marie Curie (Scienza Express, 2013) and “L’aureola della Gloria: Newton, Huygens e la natura della luce” (La Bussola 2023). These plays were staged several time, in particular at universities, schools, theaters and at the Festival della Scienza in Genova