



## PERSONAL INFORMATION

Name, Surname	<b>VALERIA RUSSO</b>	
Date of birth	28 March 1970	
Telephone	+39 02 23996364	
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E-mail	valeria.russo@polimi.it	
Nationality	Italian	

## EDUCATION AND TRAINING

Dates (from -to)	1995-1998
Name of organisation	Politecnico di Milano
Principal subjects/ occupational skills covered	Nuclear Engineering, Physics of Matter, Photonics Thesis: Characterization methods of vibrational properties in materials for optical data switching. Internship at CORECOM (CONSORZIO RICERCHE ELABORAZIONE COMMUTAZIONE OTTICA MILANO - POLITECNICO DI MILANO & PIRELLI CAVI)
Title of qualification awarded	<b>PhD in Science and Technology in Nuclear Plants</b>
Dates (from -to)	1989-1994
Name of organisation	Politecnico di Milano
Principal subjects/ occupational skills covered	Nuclear Engineering, Physics of Matter, Material Science, Mathematics
Title of qualification awarded	<b>Master Degree in Nuclear Engineering</b>
Level in National Classification	100/100 cum laude

## OTHER QUALIFICATIONS

Validity dates (from -to)	2013 –2019
Announcement	ASN - 2012 (DD n. 222/2012)
Name of organisation	MIUR (Italian Ministry of University and Research)
Title of qualification awarded	<b>National Academic Qualification as Associate Professor in Physics of Matter (SSD FIS/03, SC 02/B2)</b>
Date	1995
Name of organisation	Politecnico di Milano
Title of qualification awarded	<b>Professional Practice Licence in Engineering</b>

## WORK EXPERIENCE

<p>Dates (from -to)</p> <p>Type of business or sector</p> <p>Name and address of employer</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p>	<p>2016 - present</p> <p>University</p> <p>Politecnico di Milano, Department of Energy</p> <p>Piazza Leonardo da Vinci 32, 20133, Milano</p> <p><b>Assistant Professor in Physics of Matter (SSD FIS/03, SC 02/B2)</b></p> <ul style="list-style-type: none"> <li>• Experimental activities (see Research Activity) at the Micro and Nano Structured Materials Lab</li> <li>• Lecturer of the Bsc/Msc course Physics of Matter/Atomic Physics</li> <li>• Member of the faculty committees of the Msc Program in Nuclear Engineering and of the Bsc/Msc in Material Engineering and Nanotechnology</li> </ul>
<p>Dates (from -to)</p> <p>Type of business or sector</p> <p>Name and address of employer</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p>	<p>2002 -2016</p> <p>University and Research Institutes</p> <p>Department of Energy, Politecnico di Milano</p> <p>Department of Nuclear Engineering, Politecnico di Milano</p> <p>Department of Physics, Politecnico di Milano</p> <p>Istituto Nazionale di Fisica della Materia (INFN)</p> <p><b>Post Doc positions as Research Scientist</b></p> <p>Assegno di Ricerca (art 22 L. 240/2010) – 4 years</p> <p>Assegno di Ricerca (art. 51 comma 6 L. 27/12/1997 n. 449) – 7 years</p> <p>Contratto di Collaborazione Coordinata e Continuativa – 3 years</p> <ul style="list-style-type: none"> <li>• Experimental activities (see Research Activity)</li> <li>• Analysis, Interpretation and discussion of experimental data.</li> <li>• Papers to be published in international journals</li> <li>• Presentations at international conferences</li> </ul>
<p>Dates (from -to)</p> <p>Type of business or sector</p> <p>Name and address of employer</p> <p>Occupation or position held</p> <p>Main activities and responsibilities</p>	<p>1999-2002</p> <p>Microelectronics Industry</p> <p>ST Microelectronics S.r.l.</p> <p>Via Olivetti 2, 20041 Agrate Brianza (MI)</p> <p><b>Permanent position as Process Engineer</b></p> <ul style="list-style-type: none"> <li>• Optimization and development of dry-etching processes for semiconductor production.</li> <li>• Team work for develop and application of sequential process with the aim to reduce production time.</li> </ul>

## TEACHING EXPERIENCE

Dates	Academic year 2017/18
Course title	<b>FISICA DELLA MATERIA u. c. FISICA ATOMICA (10 CFU)</b>
University	Politecnico di Milano
Position held	TEACHER
Dates	Academic year 2013/14 – 2014/15 – 2015/16 – 2016/17
Course title	<b>SOLID STATE PHYSICS (10 CFU) </b>
University	Politecnico di Milano
Position held	TEACHING ASSISTANT
Dates	Academic year 2013/14 – 2014/15 – 2015/16 – 2016/17
Course title	<b>INTRODUCTION TO NANOSCIENCE (5 CFU) </b>
University	Politecnico di Milano
Position held	TEACHING ASSISTANT
Dates	Academic year 2012/13 – 2013/14 – 2014/15 – 2015/16 – 2016/17
Course title	<b>INTRODUZIONE ALLE NANOTECNOLOGIE (10 CFU)</b>
University	Politecnico di Milano
Position held	TEACHING ASSISTANT
Dates	Academic year 2007/08 – 2008/2009 – 2009/2010 – 2010/2011 – 2011/2012 – 2012/2013 – 2013/2014 – 2014/15 – 2015/16 – 2016/17
Course title	<b>FISICA DELLA MATERIA (10 CFU)</b>
University	Politecnico di Milano
Position held	TEACHING ASSISTANT
Dates	Academic year 2002/03 – 2003/04 – 2004/05 – 2005/06 – 2006/07
Course title	<b>FISICA A+B (10 CFU)</b>
University	Politecnico di Milano
Position held	TEACHING ASSISTANT
Dates	Academic year 2004/05 – 2005/06
Course title	<b>FISICA 2 (7,5 CFU)</b>
University	Politecnico di Milano
Position held	TEACHING ASSISTANT
Dates	Academic year 1998/99
Course title	<b>FISICA 2</b>
University	Politecnico di Milano
Position held	TEACHING ASSISTANT

## RESEARCH ACTIVITY

<p>RESEARCH SECTORS</p> <p>Material Science and Nanotechnology</p>	<p>Experimental study of physical properties in nanostructures and nanostructured materials, with particular attention to structural vs. functional properties (electronic, optical, transport) correlation.</p> <ul style="list-style-type: none"> <li>• Oxides (<math>\text{WO}_3</math> and <math>\text{WO}_{3-x}</math>, <math>\text{TiO}_2</math>, <math>\text{Ag}_2\text{O}_3</math>, <math>\text{Al:ZnO}</math> and <math>\text{Ta:TiO}_2</math>)</li> <li>• Thermoelectric materials (<math>\text{Bi}_2\text{Te}_3</math>)</li> <li>• Carbon-based materials (sp linear chain, Graphene, Diamond, Nanotubes, low-density foams)</li> <li>• Nuclear materials</li> </ul> <p>Design, synthesis and study of innovative systems with engineered properties at the nanoscale in view of innovative applications in many fields, particularly in the energy sector (photovoltaic, photo catalysis, nuclear fission and fusion, etc.).</p>
<p>Deposition of nanostructured coatings</p>	<p>Pulsed Laser Deposition (PLD)</p> <p>Plasma-assisted CVD: Direct-Current micro-Plasma (DC-<math>\mu\text{P}</math>)</p>
<p>Structural and Morphological characterization of materials</p>	<p>Raman Spectroscopy</p> <p>Surface-Enhanced Raman Spectroscopy (SERS)</p> <p>Resonant Raman Spectroscopy (RRS)</p> <p>Brillouin Spectroscopy</p> <p>X-ray Diffraction (XRD)</p> <p>Atomic Force Microscopy (AFM)</p> <p>Scanning Electron Microscopy (SEM)</p> <p>Photoluminescence</p>

## SCIENTIFIC PUBLICATIONS

<p>Dates</p>	<p>2000-2017</p> <p><b>70 scientific papers</b> in the field Physics of Matter. Number of co-authors larger than 150.</p> <ul style="list-style-type: none"> <li>• 56 papers on ISI international peer-reviewed journals</li> <li>• 14 Proceeding of International Conferences</li> </ul> <p>Researcher ID: <a href="http://www.researcherid.com/rid/B-2999-2016">http://www.researcherid.com/rid/B-2999-2016</a> Orcid ID: <a href="http://www.orcid.org/0000-0001-9543-0422">http://www.orcid.org/0000-0001-9543-0422</a> Scopus Author ID: 56243310000</p> <p>Scopus: h-index = 21, citations &gt; 1700</p>
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## INTERNATIONAL AND NATIONAL CONFERENCES

<p>Dates</p>	<p>2000-2017</p> <ul style="list-style-type: none"> <li>• Contributions to more than 50 conferences.</li> <li>• 10 talks and 2 posters.</li> </ul>
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## PARTICIPATION TO RESEARCH PROJECTS

Dates	2004-2017
Project name	<ul style="list-style-type: none"> <li>• ERC-Co Grant 2014 project (P.I. M.Passoni): “Exploring the New Science and engineering unveiled by Ultraintense ultrashort Radiation interaction with mattEr (ENSURE)”</li> <li>• EUROfusion, Euratom Horizon 2020 (dal 2014)</li> <li>• Fondazione CARIPO (settore ricerca scientifica sui materiali avanzati): “Produzione di film sottili e nanostrutture gerarchiche di ossidi, semiconduttori e metalli mediante un plasma supersonico reattivo” (2011-2013)</li> <li>• Fondazione CARIPO 'MATHYS - Nanostructured Materials for innovative HYbrid Solar cells' (2010-2012).</li> <li>• Fondazione CARIPO 'IMMAGINA - IMaging MAGnetic Interfaces and NAnostructures for applications in spintronics' (2009-2011)</li> <li>• Comune di Milano “Pro-Life” (2008-2010)</li> <li>• IIT (Istituto Italiano di Tecnologia) project “Nanobiotechnology: Molecular Imaging” (2006-2008)</li> <li>• Centro di Eccellenza MIUR per l’Ingegneria dei Materiali e delle Superfici Nanostrutturati: NEMAS (2004-2006)</li> </ul>

## SCIENTIFIC COLLABORATIONS

Dates	2004-2017
	<ul style="list-style-type: none"> <li>• European Organization for Nuclear Research - CERN (M. Taborelli)</li> <li>• Center for Nanoscience and Technology-CNST, IIT@POLIMI</li> <li>• Laboratoire de Photonique et Interfaces, Ecole Polytechnique Federale de Lausanne (EPFL) (M. Graetzel)</li> <li>• Istituto di Fisica del Plasma IFP-CNR, Milano (F. Ghezzi).</li> <li>• Dep. of Physics, Technische Universität München (TUM) (J. Kunze)</li> <li>• Dep. of Materials Science&amp;Metallurgy, University of Cambridge (C. Ducati)</li> <li>• Istituto di Fotonica e Nanotecnologie del CNR (R. Osellame)</li> <li>• L-NESS PoliMI, Como (R. Sordan)</li> <li>• Dip. di Chimica, PoliMI (M. Tommasini, C. Castiglioni)</li> <li>• Actinium Chemical Research Srl, Roma, Italy (F. Cataldo)</li> <li>• SENSOR Laboratory, CNR e Università di Brescia (G. Sberveglieri)</li> <li>• Dip. di Fisica, Università di Milano (Paolo Milani)</li> <li>• Netherlands Organisation for Applied Scientific Research - TNO, Delft, Netherlands (A. Illiberi)</li> <li>• Directa Plus SpA, Lomazzo, Como, Italy, (L. Rizzi)</li> <li>• Dip. di Chimica, Università Sapienza, Roma (M. Agostini, J. Hassoun)</li> <li>• Dip. di Chimica e Chimica Industriale, Università di Genova (G. Cacciamani)</li> <li>• ENI Exploration &amp; Production, San Donato Milanese, MI (S. Carminati)</li> <li>• RSE – Ricerca Sistema Energetico (F. Cernuschi)</li> </ul>

## AWARDS

Date	2010
Progetto	Donne al lavoro in Ricerca e Sviluppo Tecnologico (R&ST)- settore ENERGIA promosso da Consigliere di Parità e AFOL - Provincia di Milano
Titolo del progetto proposto	Materiali nanostrutturati per celle solari di terza generazione
Premio	Euro 10000 (diecimila/00)

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