

Curriculum Vitae

Personal information

First name(s) / Surname(s)

BERGENTI Ilaria

RESEARCHER

Google Scholar 3VdbJrQAAAAJ

Orcid ID 0000-0003-0628-9047

Scopus Author ID 6602614257

WoS Researcher ID J-9211-2014

Abilitazione Associate professor

Dates 2010 →

Occupation or position held

Researcher

Name and address of employer

Institute of Nanostructured Materials
National Research Council CNR-ISMN
via Gobetti 101 Bologna, Italy

Dates Jan. 2006-Jan 2010

Occupation or position held

Researcher, temporary position

Main activities and responsibilities

Surface and interface magnetic and electric investigations

Name and address of employer

ISMN- CNR

Type of business or sector

Public research

Dates Jan. 2004-Jan 2006

Occupation or position held

Post-Doc

Main activities and responsibilities

Magneto-optic characterisation and thin film deposition

Name and address of employer

ISMN- CNR

Type of business or sector

Public research

Education and training

Dates Jan 2001- Dec 2003

Title of qualification awarded

Ph. D in Physics

Principal subjects/occupational skills covered

Thesis title: " Spin injection in organic semiconductor"

Name and type of organisation providing education and training

University of Parma, Italy

Dates	1999
Title of qualification awarded	Degree in Physics cum Laude
Name and type of organisation providing education and training	University of Parma, Italy
Technical skills and competences	<p>Scientific technical skills:</p> <ul style="list-style-type: none"> • small-angle neutron scattering, inelastic scattering and quasielastic applied to complex oxides (manganites) and magnetoresistive granular systems. • Thin film deposition in UHV (OMBD, Thermal sublimation, evaporation, channel Spark ablation, magnetron sputtering) • Electrical and magnetic characterization of thin films and bulk (magnetoresistance, impedance spectroscopy AC susceptibility SQUID) • Magneto optic Properties of thin films (MOKE) • Optical characterization of thin films and bulk (Raman spectroscopy, Electroluminescence, Photoluminescence) • XAS, XPS and surface characterizations • Techniques of low temperatures and vacuum <p>Topics covered:</p> <p>Ferromagnetic oxide complexes. Deposition and characterization of colossal magnetoresistance thin films ($\text{La}_{1-x}\text{A}_x\text{MnO}_3$ composition ($\text{A} = \text{Ca}, \text{Sr}$)), deposition and characterization of magnetic oxides (Fe_3O_4, NiFeO_4).</p> <p>Organic spintronics. study of spin injection from thin films of manganite ($\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$) into organic semiconductors (6T, TPD, Alq3 ..) in spin-valve systems and light emitting diodes (OLED) .</p> <p>Spinterfaces. Preparation and optimization of the electronic properties and magnetic properties of interface between film inorganic spin polarized magnetic materials (metals 3D, complex oxides) and organic thin films to govern the injection of spin and charge through these interfaces.</p> <p>Antiferromagnetic spintronics. Preparation and optimization of the Antiferromagnetic layer of NiO and their interfacial properties with Organic semiconductors</p> <p>Molecular ferroelectrics Thin film deposition of electronic-type organic ferroelectric layers and their characterization</p> <p>Unconventional electronics: Neuromorphic, non volatile devices, memristors, MRAM</p> <p>Functional Coatings: Thin film deposition of functional oxides by Channel Spark Ablation- Al_2O_3, Hydroxyapatite, High-K dielectric</p>
Bibliometric Index	<p>74 publication in peer reviewed journals 1 patent Citation: 2870 Google Scholar H-Index 26 WOS H-Index 22</p>

National and Eu Projects

Experience in writing national and European project (Fp7 and H2020) in different calls: MSCA action, FET, Industrial Leadership (LEIT).

Financed projects and role:

H2020 Future and Emerging technologies SINFONIA (2021-2025) Selectively activated INFORMATION technology by hybrid Organic Interfaces. **CNR coordinator** optical manipulation of hybrid molecular/antiferromagnetic interfaces

H2020 Future and Emerging technologies INTERFAST (2021-2024) Gated INTERfaces for FAST information processing

Voltage gating modulation of chemical bonding at hybridised interfaces between metallic and molecular layers

Royal Society –exchange program: IESIR3\170274 (2018-2019) Interfaces with molecular layers: new functionalities for spintronics

FP7-NANoREG (2013-2017) NMP Collaborative Project: Large-scale integrating project. Responsible for ISMN partner. Regulating the nanomaterials

FP7-IFOX (2011-2014) Interfacing Oxides. NMP Large scale. Workpackage leader of WP2 and in charge of supervising for the growth of oxides

FP7-HINTS (2011-2013) NMP small. Next Generation Hybrid Interfaces for Spintronic Applications. Characterization by XPS and XAS of Hybrid organic/inorganic interfaces

Progetto Industria 2015-Flexsolar. Contribution to the financial report

P6- OFSPIN(2006-2009) NMP. Involved in the scientific activity and financial reporting

ITALIAN Prin 2008 Proprietà spintroniche e bistabilità in materiali organici. Involved in scientific activity

FIRB H25 Nanomagnetism molecolari su superfici metalliche e magnetiche per applicazioni nella spintronica molecolare (2012-2015) Involved in scientific activity Hybrid interfaces

Role and charges

-External referee for unit "Competitive Electronics Industry" of the European Commission. Action "Smart System Integration" (SSI)

-She is in charge of Laboratorio per il magnetotrasporto e caratterizzazione ottica and Laboratorio Spettro Microscopia vibrazionale

-Teaching activity to students Physics department, University of Bologna

-Tutor of Master thesis and PhD in Physics, University of Bologna

-Board member of AIMAGN: Italian association of Magnetism 2015-2019

-Task Force Scouting e projects ISMN-CNR

-EU expert n EX2006C183681 EU project reviewer

-Referee for project funded by MISE- technology transfer

-European COST project reviewer

-Project referee Research Grants Council (RGC) of Hong Kong

-Project referee Cyprus RPF

Conferences

Member of the following conferences:

-QT2005 Quantum Transport in Synthetic Metals & Quantum Functional Semiconductors (Bologna 2005) Organizing committee

-First conference on organic spintronics "SPINOS Workshop on Spintronic Effects in Organic Semiconductors" (Bologna 2007) Organizing committee

- X conferenza italiana Materiali Nanofasici (Bologna 2011) Organizing committee

- Italian Conference on Magnetism MAGNET (Bologna 2015), Organizing committee

-events for technology transfer: "Il magnetismo attrae l'impresa" (Bologna 2014)

- ECMOLS2016, First European conference on molecular spintronics (Bologna 2016)
scientific board and organizing committee
Program Committee Italian Conference on Magnetism MAGNET 2017
-Chair of the Italian school on Magnetism (Turin 20-25 May 2018)
-Symposium organizer at INTERMAG Conference 2018
-Program Committee Italian Conference on Magnetism MAGNET 2019
-Member of the international BID for Intermag2024 Bologna.

Most cited publications:

1. VA Dediu, LE Hueso, I Bergenti, C Taliani Nature materials 8 (9), 707 2009
Cited by 860
2. C. Barraud, P. Seneor, R. Mattana, S. Fusil, K. Bouzehouane, C. Deranlot, P. Graziosi, L. Hueso, I. Bergenti, V. Dediu, F. Petroff, A. Fert, Nat Phys 2010, 6, 615
Cited by 604
3. V Dediu, LE Hueso, I Bergenti, A Riminucci, F Borgatti, P Graziosi, Physical Review B 78 (11), 115203 2008 **Cited by 369**
4. M Cavallini, I Bergenti, S Milita, G Ruani, I Salitros, ZR Qu, ...Angewandte Chemie International Edition 47 (45), 8596-8600 2008
5. LE Hueso, I Bergenti, A Riminucci, YQ Zhan, V Dediu Advanced Materials 19 (18), 2639-2642 2007
6. YQ Zhan, I Bergenti, LE Hueso, V Dediu, MP de Jong, ZS Li Physical Review B 76 (4), 045406 2007
7. MP de Jong, I Bergenti, VA Dediu, M Fahlman, M Marsi, C Taliani Physical Review B 71 (1), 014434 2005
8. M Cavallini, I Bergenti, S Milita, JC Kengne, D Gentili, G Ruani, I Salitros, .Langmuir 27 (7), 4076-4081 2011
9. M Prezioso, A Riminucci, I Bergenti, P Graziosi, D Brunel, VA Dediu Advanced Materials 23 (11), 1371-1375 2011
10. E Arisi, I Bergenti, V Dediu, MA Loi, M Muccini, M Murgia, G Ruani, ... Journal of applied physics 93 (10), 7682-7683 2003
11. M Prezioso, A Riminucci, P Graziosi, I Bergenti, R Rakshit, R Cecchini, ... Advanced Materials 25 (4), 534-538 2013
12. YQ Zhan, XJ Liu, E Carlegrim, FH Li, I Bergenti, P Graziosi, V Dediu, ...Applied Physics Letters 94 (5), 34 2009
13. I Bergenti, V Dediu, E Arisi, T Mertelj, M Murgia, A Riminucci, G Ruani, ... Organic electronics 5 (6), 309-314 2004
14. A Riminucci, M Prezioso, C Pernechele, P Graziosi, I Bergenti, R Cecchini, ... Applied Physics Letters 102 (9), 092407 2013
15. I Bergenti, V Dediu, M Prezioso, A Riminucci Philosophical Transactions of the Royal Society of London A: Mathematical . 369 3054-3068 2011