

FILIPPO CARACCILO

PERSONAL INFORMATION

Born in Pavia, 10 October 1991

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WORK EXPERIENCE

Oct 2015– Present 2nd Year PhD, UNIVERSITY OF PAVIA, PAVIA, ITALY

PhD student
(expected on 2018)

My PhD work is focused on the study of electronic and nuclear magnetism of materials of practical interest, specially organic biomolecules (for molecular imaging), polymeric films (for inorganic hyperpolarization) and spin crossover systems (for data storage), under external light irradiation, through magnetic resonance techniques (Nuclear Magnetic Resonance (NMR), Dynamic Nuclear Polarization (DNP), Muon Spin Rotation (μ SR), Electronic Paramagnetic Resonance (EPR))

EDUCATION

Oct 2013 - Sep 2015 University of Pavia, Pavia, Italy

Master degree in
Physics

· 2nd level degree · Solid State Physics
Master obtained on 24/09/2015
Final Degree Mark: 110/110 cum laude
Thesis: *The Thermal Mixing regime in hyperpolarization processes: numerical simulations and experimental evidences*

Aug 2010 - Sep 2013 University of Pavia, Pavia, Italy

Bachelor Degree in
Physics

· 1st level degree
Bachelor obtained on 24/09/2013
Final Degree Mark: 110/110 cum laude
Thesis: *Study of hydrogen topology in a matrix of graphene by NMR spectroscopy*

Sep 2005 - Jul 2010 Liceo Scientifico Taramelli, Pavia, Italy

Scientific
Certificate

· Secondary School Diploma
School examination mark: 100/100

PUBLICATIONS

Jan 2014

Author: F. Caracciolo et Al.
Title: Tracking the Hydrogen Motion in Defective Graphene
Journal: American Chemical Society: The Journal of Physical Chemistry C, Vol.118, 7110-7116, 2014
Description: Study of the dynamics of hydrogen atoms bound to defective graphene, using XPS, INS, NMR.

Aug 2016

Author: F. Caracciolo et Al.

Title: Evidence of spin-temperature in dynamic nuclear polarization: an exact computation of the EPR spectrum
Journal: Royal Society of Chemistry: Physical Chemistry Chemical Physics, Vol. 18, 25655-25662 , 2016
Description: Demonstration of the validity of the spin temperature approach in the theoretical description of high radical concentration DNP processes.

INFORMATIC SKILLS

Operating Systems: Linux, Microsoft Windows

Programming languages:PYTHON, C++

Softwares: Microsoft Office, Labview, OriginLab, MantidPlot, NTNMR, Wolfram Mathematica

LANGUAGE SKILLS

ITALIAN : Mothertongue

ENGLISH : Good knowledge

LANGUAGE CERTIFICATES

English: Preliminary English Test(ESOL) obtained on 01/11/2008

EXPERIENCES

Mission

Type: European COST Short Term Scientific Mission
Name: Numerical Simulation Of Hyperpolarization Processes
Place: University Paris-Sud, Orsay (Paris), France
Duration: 1 months (June 2015)
Description: A three weeks collaboration with LPTMS in University of Paris Sud in Orsay,Orsay(Paris)(FR), aimed to study numerical methods able to compute EPR in a DNP scenario.

International School of Physics

Type: ISIS Muon Spectroscopy Training School 2016
Place: ISIS STFC, Harwell, Oxfordshire, Great Britain
Duration: 1 week (March 2015)
Description: A five-day training school aimed to provide basic knowledge(both theoretical and experimental) of Muon Spin Rotation (μ SR).

CEN Congress 2016

Type: 2016 Congress of the European Center of Nanomedicine
Place: University of Milano-Bicocca, Milan, Italy
Duration: 1 day (18 October 2016)
Description: Review of the state of art of the scientific research on nanomedicine.
Role: speaker

ATTENDED CONFERENCES

Workshop: Research and Nanomedicine

Type: UniPv Workshop 2016
Place: University of Pavia, Pavia, Italy
Duration: 1 day (20 June 2016)
Description: A multidisciplinary workshop aimed to explain the role of nanoparticles in medicine, ranging from physical to chemical and farmaceutical approach.

PERSONAL SKILLS

Laboratory Skills: Nuclear Magnetic Resonance(NMR) experiments, Dynamic Nuclear Polarization(DNP)-NMR experiments, μ SR experiments

Technical Skills: Cryogenics and vacuum techniques

November 18, 2016