





PERSONAL INFORMATION

Marco Villa



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Sex Male | Date of birth 22/08/1990 | Nationality Italian

WORK EXPERIENCE

2008-2013

Lifeguard

Gesti sport Soc. Coop. A.R.L. Merate(LC), Italy

1/2013-7/2013

University Internship-Research training

Dipartimento di Scienza dei Materiali - Università Milano-Bicocca, Milan (Italy)

Organic Synthesis in the Abbotto group for Bachelor's Thesis about "Study of photosensitizer for dye-sensitized solar cell (DSSC)".

Synthesis of a series of push-pull molecules with a pyridinium ion as acceptor and a hydrazone as donor and photophysical characterization. These new dyes were designed for p-type dye sensitizer solar cell (DSSC)

01/02/2015-25/09/2015

University Internship-Research training

Dipartimento di Chimica G. Ciamician- Alma Mater Studio rum Università di Bologna, Bologna (Italy)

Organic synthesis and photophysical characterization in the Ceroni group for Master's Thesis about "Photocontrolled self-assembly of an azobenzene-based molecule into micelles"

Organic synthesis of the amphiphilic molecule and self-assembly into micelles in water. This system was characterized with different techniques: NMR (^1H , ^{13}C , COSY, DOSY), UV-vis, DLS, fluorescence, fluorescence anisotropy, lifetime measurement, quantum yield measurement, z-potential measurement, surface tension measurement, contact angle measurement and fluorescence microscopy.

EDUCATION AND TRAINING

9/2004-6/2010

Chemistry high school diploma – Diploma di perito chimico

EQF level 4

I.S.S.A. Greppi, Monticello Brianza (Italy)

▪ Graduation grade: 86/100

10/2010-7/2013

Eurobachelor® BSc in Chemistry – Laurea Triennale in Scienze e Tecnologie Chimiche (Eurobachelor®)

EQF level 6

- Università degli Studi di Milano-Bicocca, Milano (Italy)
- Calculus, Physics, General Chemistry, Organic Chemistry, Analytical Chemistry, Inorganic Chemistry, Physical Chemistry (Kinetic and Thermodynamics), Quantum Chemistry, Biochemistry, Bio-Organic Chemistry and Chemistry of Organic and Polymeric Materials
- Graduation grade: 110/110 (summa cum laude)

18/08/14-29/08/2014 **Summer School in Nanomaterials: Science and Application** EQF level 7

- Universiteit Utrecht, Utrecht (Netherlands)
- Quantum dot structures, Colloid science, Photon physics: laser cooling, Catalysis, Multi-scale modeling of complex materials, Optical microscopy of single Nanoparticles
- Final Mark: 7.5/10

10/2013-25/09/2015 **MSc in Photochemistry and Molecular Materials – Laurea Magistrale in Fotochimica e Materiali Molecolari** EQF level 4

- Alma Mater Studiorum University of Bologna (Italy)
- Molecular and supramolecular photochemistry; Biomimetic, nanostructured and molecular materials, Molecular materials properties (statistical thermodynamic); Polymeric materials; Molecular electrochemistry; Organic chemistry (cross-coupling and metathesis); Laser and computational methods; Applied photochemistry and photophysics; Organic electronics; Organometallic complex for optoelectronic; Radiation chemistry.

01/12/2015-14/12/2018 **PhD in chemistry at the university of Marseille in joint agreement with the university of Bologna– Dottorato di ricerca in chimica presso l'università di Marsiglia in cotutela con l'università di Bologna**

- *Title:* Smart and highly phosphorescent asterisks for (bio)sensors, antennae and molecular imaging.
- Molecular and supramolecular photochemistry; nanostructured and molecular materials, organic chemistry.
- I Enerchem School - Firenze 20-24 February 2018 - CHEMISTRY FOR THE ENERGY TRANSITION

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B1	B1	B1
French	A1	A1	A1	A1	A1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Computer skills

- Microsoft Office Word, Excel and Power Point
- Basic knowledge of Computational Chemistry software and codes (Gaussian 09, MOLDEN)
- Basic knowledge of Data Analysis software ORIGIN
- Knowledge of Data Analysis software Specfit and Sigmaplot
- Knowledge of Mercury, MestReNova and ChemDraw software

Chemistry skills

- Organic synthesis and purification
- Interpretation of 1D and 2D NMR spectra (^1H , ^{13}C , ^{19}F , COSY, DOSY)
- Interpretation of FT-IR spectra
- Interpretation of HPLC-MS and GC-MS spectra
- Photophysical techniques (UV-vis, fluorescence and phosphorescence spectra, fluorescence anisotropy, DLS, lifetime measurement, quantum yield measurement)
- Chemical physical techniques (surface tension measurement, contact angle measurement)

ADDITIONAL INFORMATION

HONOURS AND AWARDS:

- Chemistry Olympiads 2009 regional competition: 4th of chemistry student
- Chemistry Olympiad 2010 regional competition: 3th of chemistry student
- Chemistry Olympiads 2010 national competition: 10th of chemistry student
- PhD fellowship from the French-Italian University

ORAL PRESENTATIONS:

- THERMAL AND OPTICAL APPLICATIONS OF SEMICONDUCTOR QUANTUM DOTS UTRECHT summer school, final exam, 18/08/2014
- SELECTIVE Pb^{2+} TURN-ON PHOSPHORESCENCE SENSORS IN WATER WITH CONCOMITANT SELF-ASSEMBLY 27/04/2017 SCF- 25^{ème} Journée de la Chimie PACA
- METAL IONS TURN-ON PHOSPHORESCENCE SENSORS IN WATER, 9th International Symposium on Nano & Supramolecular Chemistry (9th ISNSC) Napoli, 04-07/09/2017
- TURN-ON PHOSPHORESCENCE SENSORS IN WATER 46[°] Congresso nazionale di Chimica inorganica, Bologna, 10-13/09/2018

PUBBLICATION (accepted):

- A Chiral Nanographene Propeller Embedding Six Enantiomerically Stable [5]Helicene Units, V. Berezhnaia, M. Roy, N. Vanthuyne, M. Villa, J.-V. Naubron, J. Rodriguez, Y. Coquerel, M. Gingras, *J. Am. Chem. Soc.* **2017**, 139, 18508-18511.

POSTERS:

- Selective Pb^{2+} Turn-on Phosphorescence Sensors in Water With Concomitant Self-Assemblies, 9èmes Journées Scientifiques du C'Nano-PACA, JSP 2017 C'NANO PACA Porquelolles
- Selective Pb^{2+} Turn-on Phosphorescence Sensors in Water With Concomitant Self-Assemblies, Rencontres Scientifiques des Doctorants en Chimie de Marseille-7ème édition 2017
- Molecular Asterisks with a Persulfurated Benzene Core Are Among the Strongest Organic Phosphorescent Emitters in the Solid State, 9èmes Journées Scientifiques du C'Nano-PACA ,JSP 2017 C'NANO PACA Porquelolles
- Multichromophoric Highly Luminescent Polysulfurated Pyrenes as Efficient Light-Harvesting Antenna and Their Metal Coordination, 9èmes Journées Scientifiques du C'Nano-PACA ,JSP 2017 C'NANO PACA Porquelolles
- Molecular Asterisks with a Persulfurated Benzene Core Are Among the Strongest Organic Phosphorescent Emitters in the Solid State, SCF- 25ème Journée de la Chimie PACA 2017, Marseille
- Multichromophoric Highly Luminescent Polysulfurated Pyrenes as Efficient Light-Harvesting Antenna and Their Metal Coordination, SCF- 25ème Journée de la Chimie PACA 2017, Marseille
- Molecular Asterisks with a Persulfurated Benzene Core Are Among the Strongest Organic Phosphorescent Emitters in the Solid State, Journées Franco-Italienne de Chimie 2016, Avignon
- Multichromophoric Highly Luminescent Polysulfurated Pyrenes as Efficient Light-Harvesting Antenna and Their Metal Coordination, Journées Franco-Italienne de Chimie 2016, Avignon