

# Curriculum Vitae Martina Dell'Angela

Name: Martina Dell'Angela

ORCID ID: [orcid.org/0000-0003-1228-2458](https://orcid.org/0000-0003-1228-2458)

## EDUCATION

16/03/2009 PhD in Physics at University of Trieste, Italy.

26/09/2005 Master degree in Physics at University of Trieste, Italy (Mark: 110/110 cum laude)

26/09/2003 Bachelor degree in Physics (Mark: 110/110 cum laude) at University of Trieste, Italy

## CURRENT POSITION

Permanent Researcher (since 30/12/2016), CNR –IOM SS 14 km 163.5 Trieste (IT)

## PREVIOUS POSITIONS

16/10/2015-29/12/2016 Fixed Term Researcher, CNR –IOM SS 14 km 163.5 Trieste, Italy

17/6/2013-14/10/2015 Post-Doc (*Collaboratore a progetto*) at MAGNEDYN Beamline, group of Prof. F. Parmigiani, FERMI FEL, Elettra Sincrotrone Trieste S.C.p.A., Trieste, Italy

1/3/2010-14/06/2013 Post-Doc, group of Prof. Wilfried Wurth, Institute for Experimental Physics (Hamburg University) and CFEL, Hamburg, Germany

15/1/2009-28/2/2010 Post-Doc (*Assegno di ricerca*), group of prof. Alberto Morgante, INFN CNR-TASC (now CNR-IOM), Trieste, Italy

1/2006-12/2008 PhD in Physics, University of Trieste, Trieste, Italy working at ALOISA beamline (INFN CNR-TASC) at Elettra Sincrotrone Trieste S.C.p.A., Trieste, Italy

## GRANTS and OTHER PROFESSIONAL ACTIVITIES

2015-2020 PI of a research grant funded by the Italian Ministry of Research and Education (MIUR) under the SIR (Scientific Independence of young Researcher) program. Title of the project: "Sunlight-initiated dynamics in organic photovoltaic materials" (SUNDYN, P. Number: RBSI14G7TL). Budget: 465.960 €

2019-2022 MIUR PRIN 2017, "Fast ElectRon dynamics in novel hybrid organic-2D MATerials - FERMAT", PI. Prof. Stefano Baroni; Role: Coordinator of CNR Research unit.

Since 2018 Member of the HZB Proposal Selection Panel college C3a at BESSY synchrotron, Berlin

Since 26/07/2018 Abilitazione Scientifica Nazionale Settore concorsuale 02/B1, Fisica sperimentale della materia

## ACHIEVEMENTS

45 publications in peer-reviewed journals

2 publications in Science (1 as first author)

1 publication in Nanoletters, 1 in Structural Dynamics, 1 in Scientific Reports as first author

1 book chapter

6 publications as first author

7 publications as last or corresponding author

981 citations of peer-reviewed papers (*from ISI Web of Knowledge*)

h-index = 17

## RESEARCH ACTIVITY

My research is focused on the development of time resolved X-ray spectroscopies for the study of the dynamics of the electronic structure.

As a Post-Doc to the group of Prof. Wilfried Wurth in Hamburg (CFEL) I studied the dynamics of the electronic structure in surface reactions of adsorbates or thin films on metals by combining standard synchrotron X-ray core level spectroscopic techniques and the new Free Electron Laser sources. I performed time resolved Resonant X-ray Emission (XES, RIXS) and time resolved PES experiments at the FEL facilities FLASH (Hamburg, DE) and LCLS (Stanford, USA). For the measurements at the SXR instrument of LCLS, I contributed to the construction and commissioning of the Surface Science Endstation (SSE). The femtochemistry work at LCLS has been performed within an international collaboration led by Prof. Anders Nilsson (SLAC, USA and Stockholm University) and Prof. Wilfried Wurth. The most important results on surface femtochemistry at FELs have been published in Science and the experiments continued recently at the FERMI FEL. Time resolved PES experiments have been performed both at LCLS and at FLASH. We studied the change of metal and adsorbate core levels after the optical pump. We deeply studied X-ray and optical laser induced space charge and have been able to distinguish surface and bulk effects in the core levels due to the optical pump.

In June 2013 I moved to ELETTRA (Trieste) as a Post-Doc in the team of Prof. Parmigiani for the design and construction of a FEL beamline (Magnedyn) at the Italian FEL (FERMI). In particular I contributed to the design of the magnetic endstation of the beamline devoted to time resolved XMCD and to the design and construction of an endstation for M-edge RIXS measurements at the FEL (RIXS@FERMI project). The project was in close collaboration with Prof. Wilfried Wurth. I performed the first commissioning of the RIXS endstation temporarily installed at the TIMEX beamline, measuring for the first time at a FEL high resolution RIXS on a case system: CoO and KCoF<sub>3</sub>.

Since 16th October 2015 I moved to CNR-IOM as PI of a project funded by the Italian MIUR under the SIR (Scientific Independence of young Researcher) program. My research is now focused on the development of time resolved X-ray spectroscopies for the study of the dynamics of the electronic structure in organic solar cells under working conditions. I built and commissioned a set-up that allows the possibility to perform on the same sample table top measurements like two photon photoemission measurements and picosecond time resolved photoemission and X-ray absorption measurements with the synchrotron. We successfully studied the dynamics of triplet states in pentacene thick films and the changes in the energy level alignment in organic heterojunctions. We are currently studying heterojunctions formed by polyacenes and transition metal dichalcogenides within the framework of the PRIN 2017 FERMAT.