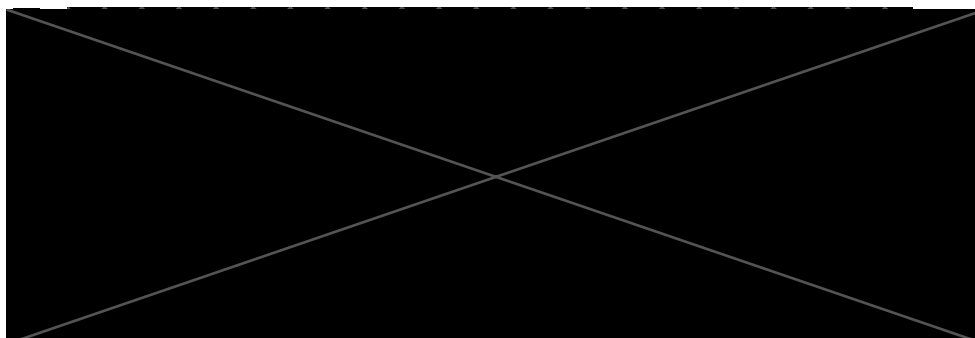


PERSONAL INFORMATION



Daniele Catone



CURRENT POSITION

Researcher (EPR - Level III)

RESEARCH TOPICS

- Molecular chirality in gas phase
- Molecular reactivity
- Carrier dynamics in semiconductor materials
- Non-linear optical processes

EXPERTIES

- Mass spectrometry of chiral molecules
- Time-resolved ultrafast laser pump-probe spectroscopies
- Photoelectron spectroscopy by synchrotron radiation
- Stationary optical spectroscopies
- Ultra-high vacuum techniques

SCIENTIFIC QUALIFICATION

(source: Google Scholar –
05/2024)

- H-index: 23
- No. publications: 130
- No. citations: 1770

EDUCATION AND
TRAINING

2001-2004

Ph.D. in Chemistry at “Università di Roma - La Sapienza”.

2001

Laurea degree in Chemistry at “Università di Roma - La Sapienza”.

2000

Laurea Internship at the laboratory of the “Groupe d’Optique Non Linéaire et d’Optoélectronique” of IPCMS at Strasburg.

WORK EXPERIENCE

since 2009

Permanent position as full-time researcher

Istituto di Struttura della Materia – CNR (ISM-CNR)
Via del Fosse del Cavaliere, 100, 00133 Roma (Italy)

from 04/2009 to 11/2009

Position as researcher with forward contract

Istituto di Struttura della Materia – CNR (ISM-CNR)
Via del Fosse del Cavaliere, 100, 00133 Roma (Italy)

2005-2008

Post-doc position

Istituto di Struttura della Materia – CNR (ISM-CNR)
Via del Fosse del Cavaliere, 100, 00133 Roma (Italy)

PROFESSIONAL PROFILE AND EXPERTISE

He joined the National Research Council of Italy as a permanent researcher in 2009, after a Postdoc position at "Istituto di Struttura della Materia" of the National Research Council (ISM-CNR) and a research grant for Ph.D. at University of Rome La Sapienza (Italy). Currently, he has focused his scientific research interests to the study of ultrafast dynamics in plasmonic, semiconductor and energy-related materials, by means of advanced optical femtosecond pump-probe spectroscopies (Fast Transient Absorption Spectroscopy). In the recent past, his research activity has been mainly devoted to study molecules and clusters through laser and synchrotron radiation, acquiring wide competences in the field of photoelectron and photoion spectroscopies. His Ph.D. was devoted to the study of molecular and chiral recognition processes acting in diastereomeric clusters. During the post-doc period his research activity was principally devoted in Circular Dichroism Photoelectron Spectroscopy measurements of chiral molecules with circular polarized synchrotron radiation. He spent his post-doc period as beamline scientist at CiPo beamline of Elettra Synchrotron (Trieste, Italy), having the opportunity to enlarge his research competences also in the spectroscopies of self-assembled surfaces. Starting from 2015, he is part of the group that coordinates the scientific activity of the EuroFEL Support Laboratory.

MAIN ROLES AND RESPONSIBILITIES

- since 2015 ▪ Team Member of EuroFEL Support Laboratory (EFSL) at ISM-CNR - <http://efsl.ism.cnr.it/en/>
- since 2009 ▪ Beamline scientist of Circular Polarization (CiPo) beamline at Elettra Synchrotron - <https://www.elettra.eu/>
- 2021-2023 ▪ Scientific Manager of a post-doc position on "Fabrication and optimization of the broadband photodetector based on topological insulator and silicon", funded by POR FESR LAZIO 2014-2020.
- 2017-2019 ▪ Scientific Manager of a post-doc position on "Plasmonics at transparent conductive oxides", funded by CNR and Nanoscience Foundries & Fine Analysis (NFFA)

SERVICE TO NATIONAL AND INTERNATIONAL COMMUNITY

- 2021-2023 ▪ Scientific supervisor of a PhD student of Department of Electronic Engineering at University of Rome Tor Vergata.
- 2018-2021 ▪ Tutor of 4 masters ("Laurea magistrale") students and 2 bachelor students.

MAIN RESEARCH EXPERIENCE

- since 2015 ▪ Participant in the **EUROFEL** national project integrated in the ESFRI roadmap. Funding for the EuroFEL Support Laboratory: 900.000 €.

- 2023- ▪ Institute Coordinator in MAECI project “**ULTRAFast DYNAMICS IN MATERIALS FOR ENERGY CONVERSION (U-DYNAMEC)**” (CONTRIBUTO MAECI MAE02035882023-11-16 PROTCNR-NANO 0350911 DEL 16/11/2023). Funding: 205.000 €. Funding for the CNR Unit: 85.000 €.
- 2023- ▪ Unit Coordinator in PRIN project “**Effective Light management in 2D perOvskite absorberS for A disruptive tanDem phOtovoltaic technology. (ELDORADO)**” (PRIN: PROGETTI DI RICERCA DI RILEVANTE INTERESSE NAZIONALE – Bando 2022Prot. 2022K9PFSJ). Funding: 385.600 €. Funding for the ISM Unit: 75.000 €.
- 2021-2023 ▪ Unit Coordinator in Regional project “**Fabrication and Optimization of the broadband phoTodeTectOr based oN topologIcal insulator and Silicon (FOTONICS)**” (POR FESR LAZIO 2014-2020 – POR A0375E0062). Funding: 143.398 €. Funding for the CNR Unit: 75.000 €.
- 2020-2023 ▪ Task leader in the European project “**CITYSOLAR - Energy harvesting in cities with transparent and highly efficient window-integrated multi-junction solar cells**” (Grant Agreement n. 101007084). Funding: 3.779.242 €. Funding for the task: 80.000 €.
- 2020-2023 ▪ Participant in the project of Ministero Sviluppo Economico (MISE) - FESR, entitled “**ARPA - AUTONOMOUS AND FLEXIBLE MANUFACTURING AND AUGMENTED REALITY TECHNIQUES FOR PROCESSES AUTOMATION**” (n. F/190046/01-03/X44). Funding: 4.753.190 €.
- 2019-2024 ▪ Participant in the European project “**AHEAD 2020 - Integrated Activity for the High Energy Astrophysics Domain**” (Grant Agreement n. 871158). Funding: 9.977.472,50 €.
- 2017-2021 ▪ Principal Investigator of CNR project entitled “**Study of ultrafast processes in materials**” (DFM.AD005.173)
- 2017-2020 ▪ Participant in the international CERIC project “**Dyna Chiro – Spectroscopy and Dynamics of Chiral Systems**”. Funding: 450.000 €.
- 2017-2020 ▪ Participant in the PRIN2015 project “**NEWLI: NEW Light on transient states in condensed matter by advanced photon-electron spectroscopies**” (MIUR Protocol n. 2015CL3APH_005). Funding: 582.894 €.

OTHER RELEVANT EXPERIENCES

- since 2005 ▪ Principal Investigator in 13 approved projects and participant to more than 50 approved projects for beamtimes at Elettra Synchrotron (Trieste)
- since 2010 ▪ Journal reviewer for Nature Communications (Elsevier), Journal of Physical Chemistry A (ACS), Journal of Physics D: Applied Physics (IOP), Physical Chemistry Chemical Physics (RSC), Solar RRL (Wiley) and ChemSusChem (Wiley).

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV.

02 April 2024

Daniele Catone

