



POLITECNICO
MILANO 1863



ATTOSECOND
RESEARCH
CENTER

Post doctoral position in Attosecond Physics

A Post doctoral position is available in the field of attosecond physics at the Attosecond Research Center (ARC) - Physics Department of Politecnico di Milano (Italy).

Attosecond Research Center – Politecnico di Milano

The activity of the Attosecond Research Center is based on the application of ultrashort EUV pulses to the investigation of ultrafast phenomena in atoms, molecules and solids on timescales ranging from a few femtoseconds to a few tens of attoseconds. The experimental activity is performed in three laboratories equipped with two attosecond beamlines and a femtosecond beamline with a time-delay compensated EUV monochromator. The current research is highly interdisciplinary: laser technology, extreme nonlinear optics, XUV optics, atomic, molecular and solid-state physics, molecular modelling, inorganic and organic chemistry, biophysics. Read more in ARC website: www.attosecond.fisi.polimi.it.

Subject description

The goal of the project is to overcome the femtosecond time-scale bottleneck and get direct information on the early stages of electron and charge transfer generated by visible and ultraviolet light absorption on organic optoelectronic systems, by extending the tools of attosecond science beyond the state of the art. The objective is to provide clear-cut movies of electron and charge transfer processes with unprecedented time resolution and with the ultimate goal of engineering the molecular response to optimize the light driven processes leading to the desired optoelectronic behaviour.

The research activity is within an ERC-funded project: ERC Synergy Grant TOMATTO – The ultimate time scale in organic molecular opto-electronics, the attosecond, based on the synergic work of three research teams led by Prof. Mauro Nisoli (Politecnico di Milano), Prof. Fernando Martín (IMDEA and Universidad Autonoma de Madrid) and Prof. Nazario Martín (Universidad Complutense de Madrid).

Position requirements:

- PhD in physics, chemistry or a related discipline. The candidate must not have more than 6-years of total post-doctoral experience, in academic institution or private companies. Applications will be considered also from candidates who have completed a doctoral course of studies and for whom the defense has been scheduled.
- Proven experience with ultrafast laser systems and/or high-order harmonic generation and/or attosecond/femtosecond spectroscopy and/or EUV/x-ray instrumentation.
- Good oral and written proficiency in English.
- Ability to work both independently and as part of a team.

Main responsibilities

The main duties involved in the post-doctoral position is to conduct research, comprising: experimental activities on ultrafast lasers and attosecond/femtosecond EUV beamlines, attosecond spectroscopy, data analysis and modeling and manuscript writing. Supervision of master degree projects and PhD students is expected. Teaching may also be included, but up to no more than 20% of working hours. Good and collaborative attitude with other group members is expected, as well as a willingness to take on some practical issues fairly shared among the group members.

Instructions on how to apply

Applications shall be written in English and be compiled into a PDF-file containing:

- CV, including a list of publications
- general description of past research and future research interests (no more than two pages)
- contact information of at least two references
- copy of the doctoral degree certificate, and other certificates/grades that you wish to be considered.

Important: Your academic referees should send us recommendation letters via email to: mauro.nisoli@polimi.it.

Please send applications to: mauro.nisoli@polimi.it

Selected candidates will be contacted for an interview. We regard gender equality and diversity as a strength and an asset.

We offer

The position will start with a renewable 1-year contract. The salary follows European standard scales and will depend on experience and qualifications of the candidate.

Contacts

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Dear colleagues,

We are opening a postdoctoral position (renewable 1-year contract) in experimental attosecond physics in Politecnico di Milano, within an ERC-funded project. Deadline 15 March 2021.
The advertisement is attached.

It would be great if you could forward the advertisement to potential candidates.
Thank you for your collaboration

Best regards

Mauro Nisoli