

PhD position at Dept. of Physics of Politecnico di Milano.

Photosynthesis, which provides the primary source of energy for almost all terrestrial life, exploits elegant and sophisticated molecular architectures to capture the sunlight and store it into chemical energy. The goal of this PhD thesis is the study of the primary molecular processes which lie at the basis of photosynthesis, and which occur on an ultrafast (femtosecond to picosecond) timescale. Investigation of such processes is of key importance both for the basic understanding of photosynthesis and in order to devise ways to increase its efficiency (for e.g. biomass production). The experimental activity will exploit advanced ultrafast optical spectroscopy techniques, in particular time-resolved fluorescence and transient absorption spectroscopy, in a close interdisciplinary collaboration with a team of biochemists. Both global and target data analysis methods will be developed to model the photophysical processes.

The PhD candidate will develop specific skills for tackling multidisciplinary problems in the field of ultrafast optical spectroscopy, acquire a strong background in the physics of light-matter interactions, and master the design and application of advanced photonic technologies. Moreover he/she will have the possibility to work on a cutting-edge interdisciplinary project using state-of-the-art technology in a highly motivated research team.

The work will be carried out in collaboration with the group of Prof. Matteo Ballottari at University of Verona and Center for Nano Science and Technology@PoliMi, Istituto Italiano di Tecnologia in Milan.

Starting date: 1 November 2016

Duration of stipend: 3 years

Deadline for applications: around middle of **May 2016** (the call will be published soon at website: <http://www.dottorato.polimi.it/en/looking-for-a-phd/call-for-positions-and-scholarships/>)

For further information about the doctoral program in physics at Politecnico di Milano please check website: <http://www.dottorato.polimi.it/en/phd-programmes/active-phd-programmes/physics/>

For further information about the research project please contact:

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