



КОЛОКВИЈУМ ИНСТИТУТА ЗА ФИЗИКУ

У четвртак 20.11.2014. са почетком у 14 часова у сали библиотеке Института за физику, Прегревица 118, Земун, одржаће се колоквијум:

“Spectroscopy and dynamics of molecules of biological interest”

Lorenzo Avaldi

CNR-Istituto di Struttura della Materia, Area della Ricerca di Roma 1, CP10,00015 Monterotondo Scalo,Italy

The understanding that the macroscopic damage can be tracked down to a microscopic scale, where the initial processes involving the elementary constituents are the same as those studied in molecular physics and photochemistry, has been a key development in the field of radiation damage [1]. In recent years we have focused our interest in processes induced in isolated molecules by soft X-ray, where the site and state of the energy deposition are well defined and the following chain of processes are characterized by coincidence techniques [2]. Now in order to address the effects of the increasing complexity of the target and the role played by the ‘environment’ on the properties of the single molecule, a series of studies of the fragmentation induced by low energy ions in homogeneous and hydrated clusters has been undertaken. Moreover exploiting the unique properties of the new Free Electron Lasers an investigation of the photo stability of the building blocks of biological matter, the DNA/RNA basis, has been performed. In the seminar the main achievements of this activity of the Rome group will be presented.

References:

[1] B. Boudaïffa *et al* 2000 *Science* **287** 5458. [DOI:10.1126/science.287.5458.1658](https://doi.org/10.1126/science.287.5458.1658)

[2] P. Bolognesi, P. O’Keeffe, and L. Avaldi, in ”Radiation Damage in Biomolecular Systems ”, G. Garcia Gomez-Tejedor and M.C. Fuss eds., Springer, **165** (2012). [DOI: 10.1007/978-94-007-2564-5_10](https://doi.org/10.1007/978-94-007-2564-5_10)

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