

Postdoc position in the field of Laser-Plasma Acceleration and applications

The Intense Laser Irradiation Laboratory group at Istituto Nazionale di Ottica, Consiglio Nazionale delle Ricerche, located in Pisa, Italy, carries out research in the field of laser-plasma interaction at ultrahigh intensity. It operates a TiSa-based, ultrashort/ultraintense laser system, featuring a 220 TW and a 15 TW beamline. Among the main research topics, laser-driven plasma acceleration of particles is investigated, as well as the development of secondary radiation sources. Specifically, applications of these particle/photon beams are also being developed, in particular for material and health sciences.

A postdoc research position is currently available at CNR, to work on *Laser-driven particle acceleration and applications in material science and medicine*.

The position is available in the framework of a project aimed at studying the response of new materials to high flux of energetic particles (funded by ENI SpA) and the project "iFAST - Innovation Fostering in Accelerator Science and Technology" (funded by the EU).

Duties and responsibilities

In collaboration with the lab staff, the research fellow is expected to:

- Participate to the conceptual and technical design, preparation and realization of laser-driven acceleration experiments aimed at the production of high-quality and/or high-flux particle beams.
- Design and implement the experimental setup for particle acceleration experiments, including beam transport and flux measurements, aimed at applications, including studies of radiation damage and hardness, as well as elemental analysis via Particle Induced X-ray Emission (PIXE).

Education and experience

The successful candidate is expected to possess the ability to lead team work in the lab and to be effective throughout all the stages of research work, from design to publication and dissemination. Previous experience in laser-driven particle acceleration and/or ultrashort/ultraintense laser optics is considered an asset.

Duration and salary

The position is expected to be funded for 2 to 3 years. The initial salary is of €19489 (net/year) and will increase of about €1700 (net/year) after each year.

For further informations, feel free to contact us at the following addresses:
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