

post-doc position @ CNR-INO

via campi flegrei 34 (comprensorio "A. Olivetti), Pozzuoli (NA)

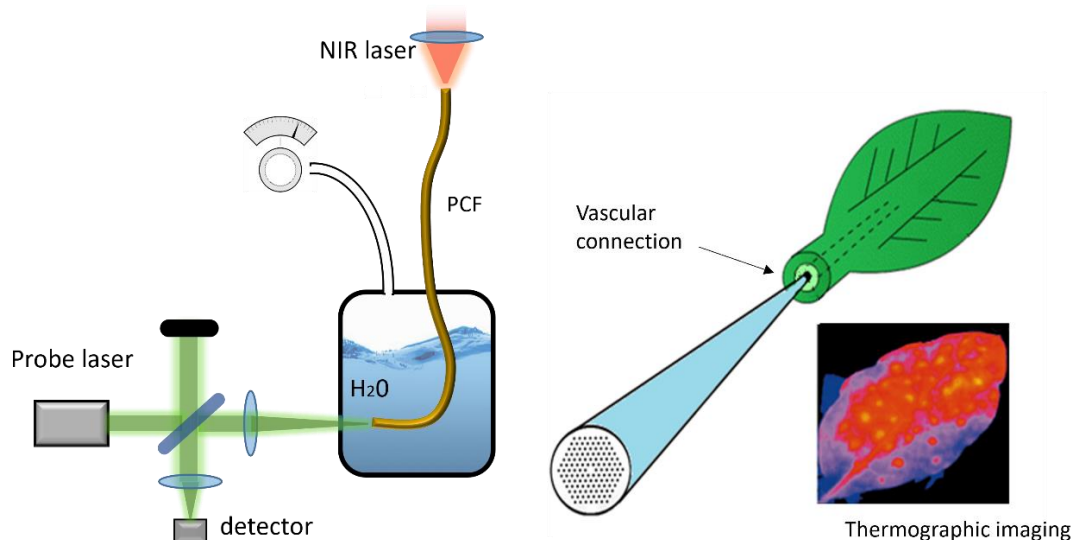
Avviso di selezione n° ASS/INO/006/2024/NA

The position is open to **candidates with a PhD in physics, engineering or chemistry** and has a duration of **17 months, starting from May 2024**.

The research activity, largely experimental, is within the context of the PRIN2022 project ID-SWAP - **Interferometric Detection of Stretched Water Properties**. The project proposes an optical platform inspired to the hydraulic mechanism of vascular plants to generate negative-pressure in water and investigate its physical properties.

The ID SWAP optical system exploits the unique capability of **photonic crystal optical fibers (PCFs)** to trap a liquid in their microchannels while supporting a guided light mode that probes its properties. A water-infiltrated PCF will be integrated in a **Michelson interferometer**. A laser-driven evaporation technique will stretch the infiltrated water to the limits of its cohesive strength, while the interferometer will monitor in real-time its refractive index.

The candidate will study liquid infiltration of photonic crystal fibers, contribute to set up the described interferometer and characterize the metastable water states achievable by laser evaporation. Experience/general knowledge on optics, interferometry and optical fibers, as well as a laboratory-oriented attitude are preferred.



Instructions for applicants: <https://www.urp.cnr.it/node/1492>

For more informations: pietro.malara@ino.cnr.it