Open PhD position on the Physics of Xenon hyperpolarization

A PhD student position is available on the Physics of Xenon hyperpolarization: Spin Exchange Optical Pumping (SEOP) and Dynamic Nuclear Polarization (DNP)

The project builds on a well-established and long-standing collaboration between the Laboratory for Functional and Metabolic Imaging at EPFL (Lausanne, Switzerland) and the School of Health Science (Geneva, Switzerland).

The involved research lays across nuclear spin dynamics and biomedical imaging. The main goal of the project is to answer fundamental questions on the spin order transfer mechanisms to enhance the Xenon polarization.

The successful candidate will have a strong interest in nuclear spin Physics and Chemical Physics, be able to work independently in a multidisciplinary team and get acquainted quickly with new methods. We expect him/her to be comfortable in an experimental environment as well as for theoretical developments.

The candidate will have access to a top-notch hyperpolarization laboratory equipped with two DNP polarizers/ESR spectrometers (3.35 T and 5 T), one SEOP polarizer, a multi-nuclei 1 T benchtop NMR spectrometer, a low-field MRI scanner and a 400 MHz NMR spectrometer. Active external collaborations also provide access to clinical and pre-clinical MRI platforms.

With a master degree preferably in Physics or Chemical Physics, the candidate should have good communication skills, experience with programming (MATLAB, Python, C/C++) and experimental Physics.

French speaking proficiency and experience with NMR/ESR is a plus.

The project involves regular travels between Lausanne and Geneva.

Applicants should send by email a CV, cover letter, master final marks, publications on scientific journals if any and three references (with email address) to:

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