

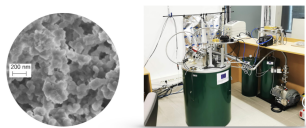
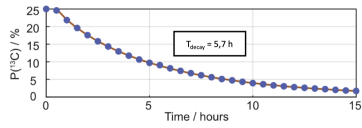
Postdoctoral ‘project leader’ position at CRMN Lyon

Hyperpolarization Transport for Metabolic Imaging


A postdoctoral ‘project leader’ position is available working in the group of Prof. Sami Jannin (hmrlab.eu) on a project funded by the European Research Council, at the Very High Fields NMR Center (crm-n-lyon.fr) in the city of Lyon, France.

Profile. We are seeking candidates with a Ph.D. who enjoy synergistic teamwork and are eager to learn how to lead an ambitious project at the frontier of Hyperpolarization, instrumentation, and MRI.


We generate hyperpolarization that lasts for hours combining our state-of-the-art polarizer and our polarizing matrices





We acquired a compact transport cryostat that can hold for hours at 4.2K




Your goal is to transport to the MRI facility and demonstrate preclinical metabolic imaging






StG Grant Hp4all



PoC Tryp



Grant: TransHyp

Project Description. The project aims to apply hyperpolarization transport to metabolic imaging by MRI. In this new hyperpolarization approach, low-temperature DNP experiments are performed with a state-of-the-art polarizer,^{1,2} using novel hyperpolarizing materials that are synthesized in our team, and that can extend the lifetime of hyperpolarized MRI tracers to hours or even days.^{3,4}

The selected candidate will have a leading role in the project and supervise students. He will in particular:

- Implement the most advanced DNP methodologies and perform experiments with available hyperpolarizing matrices (HYPOPs).
- Participate in the modification of the existing DNP probe to sustain the magnetic field during sample transfer.
- Use a compact standalone cryostat to transport the hyperpolarized sample to the MRI facility.⁵
- Participate in preclinical metabolic imaging experiments.

Facilities. The Center for Very High Field NMR is one of the world’s leading magnetic resonance laboratories, located in the great city of Lyon. The center has state-of-the-art NMR spectrometers (up to 1 GHz) and two state-of-the-art dissolution-DNP machines.

Contract. Flexible starting date, 3-year secured funding, including healthcare and other benefits (net income commensurate with experience).

How to apply. Get directly in touch with sami.jannin@univ-lyon1.fr for further details on the position and submit your application via e-mail including a brief research statement explaining your background and motivation, your CV, and optionally contact information of 2 references.

Publications.

Google Scholar [link](#).

 https://twitter.com/Sami_HMRLab

1. Elliott, S. J. *et al. Prog. Nucl. Magn. Reson. Spectrosc.* **126–127**, 59–100 (2021) <https://doi.org/10.1016/j.pnmrs.2021.04.002>.
2. Elliott, S. J. *et al. J. Magn. Reson. Open* **10–11**, 1–12 (2022) <https://doi.org/10.1016/j.jmro.2022.100033>.
3. El Daraï, T. *et al. Nat. Commun.* **12**, 4695 (2021) <https://doi.org/10.1038/s41467-021-24279-2>.
4. Ji, X. *et al. Nat. Commun.* **8**, 13975 (2017) <https://doi.org/10.1038/ncomms13975>.
5. Capozzi, A. *Sci. Rep.* **12**, 19260 (2022) <https://doi.org/10.1038/s41598-022-23890-7>.

