

## **18-month Post-Doctoral Position in Microfluidics and Macromolecular Crystallography**

We are seeking a highly motivated researcher for a 18-month post-doctoral position to develop microfluidic devices for microcrystallisation and serial X-ray crystallography experiments.

The position is part of the MicroCrys project, which will optimise the existing microchip manufacturing process, finalise the chip thermoregulation system and automate the crystallisation process via microdialysis. The post-doctoral student will also validate the equipment on test cases, with the objective to transfer the technology to the market. MicroCrys is funded by Linksum, a Société d'Accélération du Transfert de Technologies (SATT) in Grenoble Alpes which is a major player in the economic development of innovation. The selected candidate will carry out his/her research activity in the team dedicated to the MicroCrys project within the Synchrotron group (<https://www.ibs.fr/research/research-groups/synchrotron-group/>) at the Institut de la Biologie Structurale in Grenoble, France. The starting date should be before October/November 2021.

### **Your task/mission:**

- Microfabrication and optimisation of the microchip manufacturing process.
- Optimization of crystallization protocols for various protein targets used in microdialysis crystallization experiments in microfluidic chips.
- Development of new crystallization screens.
- *In situ* X-ray diffraction experiments at SOLEIL and ESRF synchrotrons using on-chip generated crystals.

### **Your experience/skills:**

- Design of patterns and masks.
- Manufacture of the microfluidic mould: photolithography, soft lithography.
- Integration of complex functions is desired (thin film deposition, plasma etching, monolayer self-assembly).
- Experience in macromolecular crystallisation and/or X-ray crystallography will be an advantage.

### **Your profile:**

- PhD in Physical Chemistry (soft matter), Chemical Engineering, Macromolecular Crystallography.
- Open-minded, with a strong interest in (structural) biology and multi-disciplinary problems.

### **How to apply:**

- Send inquiries with your CV and a short research summary to [monika.spano@ibs.fr](mailto:monika.spano@ibs.fr)

### **Relative references:**

N. Junius, S. Jaho, Y. Sallaz-Damaz, F. Borel, J-B. Salmon and M. Budayova-Spano (2020) *Lab Chip* **20**, 296-310.

N. Junius, E. Vahdatahar, E. Oksanen, J. L. Ferrer and M. Budayova-Spano (2020) *J. Appl. Cryst.* **53**, 686-698.