

Postdoctoral Position in “Protein engineering for biocatalysis”

In the lab of Prof. Xile Hu at EPFL (Swiss Federal Institute of Technology Lausanne; Ecole Polytechnique Fédérale de Lausanne)

Website: <https://lsci.epfl.ch>

(Availability: Immediately to First half of **2026**).

We are looking for motivated and successful candidates to work on the following project:

Enzyme engineering. We seek to develop and apply the latest evolution method for engineering natural enzymes to extend their application towards unnatural substrates or unconventional reaction mechanisms. We also plan to repurpose natural enzymes for abiotic reactivity. Some examples of enzymes/reactions we are working with at this moment are ammonia-lyases, defluorinase, radical-SAM enzymes, and non-heme proteins. Some of the reactions we aim at are enantioselective hydroamination, hydration, C-H methylation, and radical functionalization. Selected publications:

<https://onlinelibrary.wiley.com/doi/10.1002/anie.202511739>

<https://onlinelibrary.wiley.com/doi/10.1002/anie.202422783>

<https://onlinelibrary.wiley.com/doi/10.1002/anie.202406008>

We are looking for candidates with a strong background in biocatalysis, especially those with a background in synthetic biology or molecular biology. The candidate will complete our existing team members who are experts in synthetic chemistry.

The successful candidate should have:

- Practical experience in molecular biology techniques and enzymology (evolution, protein expression and purification, enzyme characterization and engineering, assay design)
- Basic proficiency in protein structure analysis and bioinformatic tools.
- Excellent communication skills, including fluency in English.
- Ability to conduct the project independently, although strong team-work skills are required.

The position is initially for one-year. There is possibility to extend the position for one more year pending the progress and mutual agreements.

For all applications, please send your candidature to Prof. Hu via xilehu@gmail.com. Please include a CV, research interest, and names of two reference providers. In case of a large volume of applications, we can only reply to those who will be further considered for Zoom or onsite interviews. In this case if you do not hear from me within 2 weeks of initial application, please assume that your application is declined. Note that applications that do not meet the requirements stated above (e.g., necessary academic background) will not be replied.