

29th November 2025

Joint PhD position on the Additive Manufacturing of Electrohydrodynamic (EHD) Pumps

The Laboratory for the Chemistry of Materials and Manufacturing (ALCHEMY) and the Soft Transducers Laboratory (LMTS) at EPFL have a **joint PhD student position available on the additive manufacturing of EHD pumps**. The position will be at EPFL Neuchâtel.

Research Context

Electrohydrodynamic (EHD) fiber pumps are flexible millimeter-diameter tubes that noiselessly generate fluid flow when a high voltage is applied. Such pumps enable untethered fluidically-driven soft or wearable robotics. The goals of this PhD are to: a) develop materials and methods for the additive manufacturing of mm- and micro-scale EHD pumps, b) understand the ultimate performance limits of EHD pumps exploiting the new geometries enabled by additive manufacturing and c) explore new applications of these EHD pumps.

Required Candidate Profile:

- MSc. in Materials Science, Microengineering, or other relevant discipline
- Experience with material characterization
- Experience with device fabrication
- Excellent communication skills in English (written and spoken)

Priority will be given to candidates who have expertise in one or more of the following:

- Soft robotics
- Two-photon polymerization

Expected start dates and durations:

The preferred start date will be April/May 2026. The position is fully funded and will run for 4 years.

Application Instructions:

If you are interested in this position, please contact Prof. Daryl W. Yee at epfl.alchemy@gmail.com

The subject heading of your email must be: "2025-ALCH-LMTS: Your Name".

Please attach your CV and a brief statement of your past research experiences and your future research interests (max 2 pages). Please use the research statement to highlight your interest and fit for this position.

Applications that do not adhere to these instructions will be considered incomplete and not receive any response. Applicants that do not have any relevant experience will not be considered.

Timeline:

Review of the applications will begin immediately.

For further information about the position, please contact Prof. Daryl W. Yee or Prof. Herbert Shea.