

DOCTORAL STUDENT POSITION IN DEVELOPMENT OF OPTICAL INSTRUMENTATION FOR CHIRAL VIBRATIONAL SPECTROSCOPY

BACKGROUND :

Resolving molecular structure is key for pharmaceutical drug development and manufacturing. This can be difficult when working with chiral molecules, which exist in two or more distinct forms with almost identical optical properties but often completely different effects in the body. Raman Optical Activity (ROA) is an optical scattering technique which can differentiate and help to understand this important structural property. The technique – although long known - has been limited in use because of how challenging it is to measure ROA accurately.

ENANTIOS is a new ETH spin-off, founded in 2022 to address these difficulties by providing the pharmaceutical industry with their new measurement technology. They have developed a new system for measuring ROA which reduces the technical challenges of building ROA and related optical instrumentation. Together with ZHAW and UZH, ENANTIOS has received funding for a joint project to expand the use of ENANTIOS` measurement technology to different types of ROA measurements.

THE DOCTORAL PROJECT/ JOB DESCRIPTION :

This position is an exciting opportunity to work with a up -and-coming start up (ENANTIOS) and ZHAW while also earning your doctorate at University of Zurich. The first two years of your work will focus on developing new ROA setups in collaboration with ENANTIOS and ZHAW in the lab of Dr Jan Helbing at the Chemistry Department at the University of Zurich. After the completion of the collaboration, you will have the opportunity to shift focus to the use of the instrumentation for addressing challenges in chiral molecular spectroscopy in one of the leading laser spectroscopy labs.

Your work location will be at UZH Campus Irchel, in close contact with ENANTIOS and ZHAW labs, also in the Zurich area.

YOUR PROFILE:

- Master Degree in Optics, Physics, Chemical Physics , Mechanical Engineering or related field.
- Experience with spectroscopy or building optical set-ups is a plus.
- Enthusiasm for research demonstrated by top performance in a master`s thesis, research project or work in a research lab

HOW TO APPLY:

To apply send a 1-page cover letter, explaining your background and interest in the position and your CV to Dr. Jan Helbing (jan.helbing@chem.uzh.ch).