

## **ERASMUS+ internship field report**

Field of study: - MSc. Molecular Sciences: Spectroscopy and Simulation (iMOS)

Receiving organisation: - Utrecht University

Supervisors: [REDACTED]

Period: - 01/04/2023 to 30/06/2023

### **How I got the Internship at Utrecht**

In the course work of the iMOS program it is mandatory to do international internship outside Germany. In the 3<sup>rd</sup> semester of the course, a home internship followed by an international internship is required to complete the semester. The home internship was done under the guidance of [REDACTED] at Ruhr University Bochum, Germany in the department of chemistry. I informed him of the significance of the 3<sup>rd</sup> semester abroad internship. I mailed my resume and motivation letter to several of the eminent professors that [REDACTED] recommended, and I was chosen for an internship at Utrecht University in the Netherlands. I was really excited for moving to Netherlands for a short duration of time and exploring the new labs and expanding my network among many other researchers. As soon as I was approved of this internship, I applied for the ERASMUS+ internship grant which did not take too long to appear and within weeks the process was completed, and the grant was approved to me. Everything was on track going smooth then I realised that finding an apartment or room in the Netherlands is quite a task. The secretariate office at Utrecht university provided me with lot accommodation links and sites which were either all filled up or were too expensive. I contacted many people via the facebook but still some were fake or already fill places. The time of the internship was coming closer, and I was fortunate enough to find myself a hostel in Utrecht which was very close to the university. The hostel dorms were not that clean and was difficult to sleep in the night as every day and night new people were coming in and old ones moving out. But the positive side of the hostel was that I made a lot of new international friends, we went to explore the city, game nights in the dorm and had plenty of fun.

### **Accommodation**

After living in a month in the hostel I was lucky to find an apartment for myself an apartment which was far from the university, and I could only commute to the university via bus. The bus and the train services are quite easy and can be tracked using the NS app or the 9292 app. The apartment was kind of cheaper than the hostel but as a foreign student I had to pay for my travel expenses which was tallied. The new place was Amersfoort where I shared the apartment with two other people. Now, I could relax and do my work at the same time.

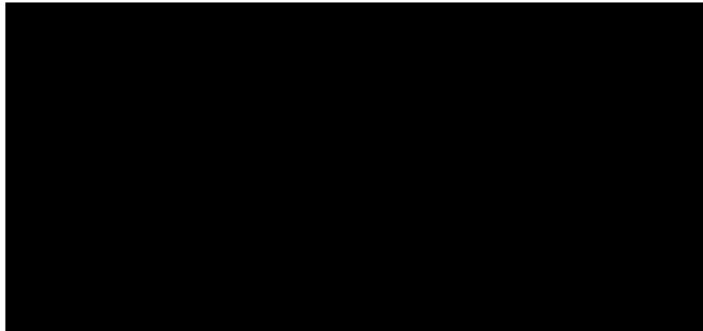
## What did I do at Utrecht University?

I was warmly welcomed by the people at the university. They were very friendly, and the group was very active for activities inside the group. I was fortunate to attend the spring event of the group in which they went for a hiking in **Lage Vuursche** (village in Netherlands) and after the hike went for a mini golf and the spring event was concluded by a quiz and dinner. At the university I was assigned a post doc to work with which was [REDACTED]. She was good and very supportive in letting me do my work peacefully and without any rush. My focus was on the characterization of the catalyst that are being prepared in the labs. I was able to synthesise several catalysts with Ni and NiMo metals on different metal oxide supports. The synthesis of these catalysts took several days as it were prepared using different methods under the directions given by the company which provides the funding. The main aim of this catalyst is the upgrading of pyrolysis oil which is then used as fuels and biomass fuels. These catalysts were then used to study the surface properties which was done by different characterization techniques such as XRD, NMR spectroscopy, CO IR (FTIR), NH<sub>3</sub>-TPD, H<sub>2</sub>-TPR, BET and SEM. These techniques help to determine the structure of the catalysts, the active sites available for reaction, metal ratios of different metals and the pore volume of the catalyst.

## Leisure Time

While I was in Utrecht for my internship, the most famous event which is the Kings Day held during this period. I and my friends attended this event and enjoyed the cultural event. I also travelled to the biggest tulip show of Europe which is an open field with innumerable colourful and different varieties of tulips. As the Netherlands are compatible with English so it was kind of easy for me to walk around and talk with people and make new friends. I made some new Dutch friends through which I was able to learn few greetings in Dutch. I was also able to try a variety of pan cakes which is one of the famous dishes of the Netherlands.







## Conclusion

I had a very good experience in the Netherlands. I was able to learn and explore new things and new opportunities in my field of study. I could expand my international networks by meeting so many new people and colleagues in my field and gain the insights of working in a group and individual research. The most significant thing was that I was able to evaluate my capabilities in my research, and I can probably conclude that this internship helped me develop a wide range of skills. ERASMUS+ internship grant plays an important role for this by financially aiding my research in a foreign land and helping explore brighter opportunities for my future.



This is the building I used to work in. It is an open office model in which the master student are seated randomly, the PhD students have a small cubicles and the post doc researchers have their own offices.

