

DAAD RISE Professional Report

As my future goal is to join the R&D department in an industry, I have been actively seeking for gaining some industrial experience before finishing my doctorate. I came to know about the DAAD RISE Professional program which offers an opportunity to do an internship in German companies and research institutes. I applied for the DAAD RISE internship program and after being interviewed I got selected to pursue my internship at Schott AG in Mainz for three months. Schott was founded more than 130 years ago and is well-renowned for the manufacture of special glass and glass-ceramics. The company is committed to innovation and developing the products used in advanced optics, lighting and imaging, home appliances, pharmaceuticals, electronics, automotive and aviation industries. After getting an acceptance call from DAAD, I started gathering the required documents from DAAD and Schott to apply for the visa. It took around 2-3 working days for getting my visa approved from the German consulate in Toronto (Canada). My company provided me some useful links such as www.wg-gesucht.de, www.immobilienscout24.de for searching accommodation in Mainz. But it's difficult to find the house with affordable rent. I would recommend booking the Airbnb for a few days and once you reached Germany then book the appointment to visit the house or apartment. You can also contact the local universities as they will also arrange accommodations for foreign students in the semester vacations, often in an apartment sharing community. My company employee assisted me in opening the German bank account and registering my stay in Mainz.

On the first day at Schott, I was warmly welcomed by my supervisor Dr. Yakup Gönüllü and Dr. Jovana Djordjevic-Reiß. Afterward, Dr. Yakup introduced me to other scientists, engineers, and technicians in his group. I steadily began my research work at the Schott lab and also discussed the project details with my supervisor. As I always aimed to broaden my knowledge and gain as much as possible, I requested my supervisor to allow me working on different projects. Based on my interest, he assigned me one more project apart from the DAAD research project. Therefore, I worked on two projects: 1. Synthesis of dye solution to coat the large area customized glass for industrial production using the Dip-coating method. This type of coated optical filter glass was designed to facilitate the transmission of certain light wavelengths and is highly useful for laser applications. 2. Installation and optimization of the Ultrasonic Atomization spraying system for developing highly transparent and uniform anti-reflection coatings. The material was designed and the film thickness was optimized to reduce the reflection in the visible light wavelength range. Further, the chemical, physical and optical properties of the coated films were also studied in detail. I am impressed by the Schott team commitment to innovation and research using a multidisciplinary approach for improving living conditions worldwide. For me, the culture of Schott AG is unique compared to what I have seen in some other companies. The research staff in the lab was very friendly, helpful and easily approachable. I didn't feel anytime like a newcomer in the lab. Moreover, my supervisor is very kind-hearted and always available to discuss the new ideas and assist me in figuring out the experimental issues. My supervisor also organized the tour to the main Schott glass production plant for me. I liked and enjoyed the safe and reliable working environment along with a motivating atmosphere at Schott AG.

My typical working hours at Schott is from 9 am to 5:30 pm. After leaving the company, I use to spend time with friends and my landlord. I often cook the food with my landlord and enjoy the dinner with them. The landlord always informed me about the festivals happening around the Rhine river in Mainz. During the weekend, I spared some time to explore other beautiful areas of Germany. I participated in the DAAD RISE Professional meeting held at

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Heidelberg and got the opportunity to interact with other aspiring researchers from different countries and disciplines. It was a pleasure and good experience to meet the extremely diligent DAAD staff and chat with them. I had such a memorable time and a fun experience with new friends in Heidelberg. We also visited the BASF SE research labs in Ludwigshafen and networked with BASF scientists. Viewing the biggest chemical company in the world was like a dream come true for me.

Through this internship, I get aware of the challenges to develop and translate the synthesis methods from the laboratory to the production scale. It was a rewarding experience with an ideal mixture of industrial research, networking, and social activities. This opportunity helped me to explore German culture, learn their language, and develop personal and professional skills. I would like to express my gratitude to DAAD RISE team, my academic supervisor at University of Waterloo Prof. Vivek Maheshwari, all Schott colleagues and lab-mates especially Dr. Yakup Gönüllü, Dr. Jovana Djordjevic-Reiß, and Dr. Eveline Rudigier Voigt for giving me the opportunity and for wonderful experience in Germany.

“I agree that my report and accompanying pictures may be used by the DAAD in printed materials, presentations, and on websites in order to inform funding organizations, sponsors, and students about the RISE program.”

Yours Sincerely,

Rohit Saraf

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