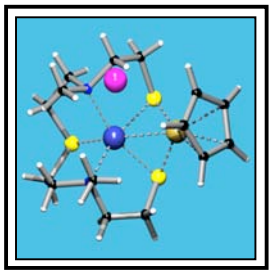
The Zürich School of Crystallography

Bring Your Own Crystals



University of Zürich

June 22 - July 5, 2008

The second Zürich School of Crystallography was intended predominantly for Masters and Ph.D. students, plus postdocs, in the molecular and solid-state sciences, particularly those who do not have ready access to crystallography courses at their own institution. The twenty participants came from Croatia, Finland, France, Germany, Italy, Poland, Portugal, Slovenia, Switzerland and Turkey; 12 young women and 8 young men. The participants unanimously agreed that the School was worthwhile and that they now feel better equipped to determine their own structures. The personal impressions of one of the students are given below.

Tony Linden, Hans-Beat Bürgi, School Directors

A Student's Perspective

THE ZÜRICH SCHOOL OF CRYSTALLOGRAPHY 2008 – THE MEANING BEHIND THE NUMBERS

Crystallography for me is a tool for the investigation of the conformational and host–guest properties of my compounds, as well as an analytical method, alongside NMR and mass spectroscopy, for the confirmation of the structure of my synthesis product. However, determining a crystal structure is a much more complicated task than running a proton NMR measurement, and requires a sufficient amount of training and knowledge before it can be

done reliably. I had some experience in solving crystal structures, but wasn't able to make the connection between routinely done procedures and theory, which was the main reason for me attending the Zurich School of Crystallography.

The course in itself offered an exclusive coverage of crystallography from growing single crystals to collecting and processing data, and finally to solving and validating the structure and reporting the results. During the first few days, the theoretical information provided seemed overwhelming, but when given a chance to put it in use during the practical work, it was easier to see where the theory comes into play when setting up the data collection or finding the correct structure solution. To me, this was one of the best things about the school. Also, I was extremely grateful for having the expertise and helping hand of the tutors at my disposal whenever I was puzzled about something I couldn't figure out on my own. The days were intensive and long, but I felt I had accomplished a lot at the end of each day, which made it worth the effort.

As for the social aspect of the course, I think that the small size of the group made the learning environment intimate and it was possible to get to know everyone involved. It was great to meet people from different areas (and countries) and I especially enjoyed the daily dinners we had at the hotel restaurant and the discussions at the end of the day. Also, I feel that the small size of the group enabled us to have opportunities, such as setting up our own measurement at the diffractometer, which I think made a big difference in learning the whole method and not just the theory.

Before attending the school, I used to check certain values in the .lst file routinely without completely understanding the meaning behind the numbers, but now I feel more confident in evaluating my crystal structure solutions as a whole and not just by looking at the R-value. In every respect, I was very pleased with the school and gained more than I had anticipated.

Kirsi Salorinne, University of Jyväskylä, Finland