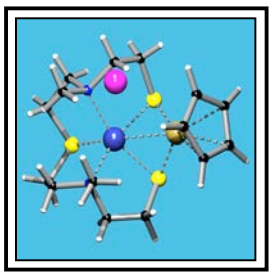
The Zürich Crystallography School

Bring Your Own Crystals



University of Zürich

August 5-17, 2007

The first ever Zürich Crystallography School was intended for masters and Ph.D. students in chemistry and crystallography from all over Europe, particularly those who do not have ready access to crystallography courses at their own institution. The impressions given below by one of the students says it all...

Tony Linden, Hans-Beat Bürgi, School Directors

A Student's Perspective

The Zürich Crystallography School 2007

Hosted by the University of Zürich and organized by PD Dr. Anthony Linden and Prof. Hans-Beat Bürgi, The Zürich Crystallography School took place for the first time in August, 2007. Interested in crystallography, twenty participants, mainly PhD students from all over Europe, came together to attend this two-week class.

The course started Sunday evening with a nice get-together, so people got a chance to get to know each other and every student received a folder with all the documents and teaching material for the next two weeks. As you could download the course material beforehand, you were able to prepare yourself and get a rough idea of what's to come.

Starting with the main principles of diffraction, growing crystals and how to mount them, to discussing difficulties and problems and finally solving and refining your own crystal structures during the practical work, the course covered all topics. So no matter whether you were already experienced or not, the course covered both basic and advanced skills and provided new and more in-depth insights into the subject. Therefore, everyone was able to profit and gain plenty of new knowledge about crystallography. Determining your crystal structures, you learned both “which button to push” but more importantly “why”.

The first week was dominated by theory whereas during the second week the morning and afternoon sessions were split into a theoretical and a practical part. For the practical work, the twenty participants were divided into ten groups of two people each, depending on their previous knowledge, so every group consisted of one more and one less experienced student.

The lectures were hosted in a modern classroom and the practical exercises took place in a fully equipped computer-room. One computer was provided to each group, but you were welcome to bring your own laptop. During the time of the course, internet access to the University WLAN was provided and could also be used over the weekend. The nine tutors, who have been working in this field for years, supervised the ten groups during all the tutorials and exercises, so the students profited from intense supervision and support while trying to solve their structures.

With access to four different types of diffractometers on offer, every student got the chance to set up a crystal measurement on a machine similar to the one their own group is using. Each evening, the class ended with a short summary of the day where students got the chance to comment on the day's lectures or to mention things they noticed.

I would like to emphasize the extraordinary commitment of all of the tutors. Even though many of them lived close enough to go home in the evening, they all joined the evening dinner to have discussions or simply pleasant conversations. They worked unsocial hours no matter whether it was to prepare the lectures, to help us deal with difficult crystal structures or give us an extra maths-refresher in a nice evening get-together. Not just the organization of the course was absolutely flawless, but also the social gatherings like the excursion to the PSI

with the synchrotron and SINQ or the two barbecues we had. With a big dinner on the last evening, the course concluded with a little surprise for the students: they received a certificate for their attendance and a great book about crystal structure refinement (Müller et al. Crystal Structure Refinement, a Crystallographer's Guide to SHELXL – donated by the IUCr and OUP).

It was a total of 90 hours of crystallography, two weeks of really hard work for both the students and the tutors, but believe me it was absolutely worth it! I think all of them did a great job and I honestly hope some more courses like this one will follow so other people interested in crystallography will get the chance to attend this really great course, too, and to go home and not just be satisfied with the massive amount of knowledge they gained during these two weeks, but with the inspiration to improve themselves in this art.

Last but not least, I'd like to use this opportunity to thank all the sponsors of this course who made this great experience possible and affordable. Thank you.

Julia Rinck, Karlsruhe