



Figure 1. Calcite crystal in scalahedron form and a wooden model made by Haüy to illustrate his "stacked bricks" theory of crystal shape. Haüy with a calcite crystal and a Carangeot contact goniometer. © Muséum de Grenoble ; © Collection des Minéraux – UPMC Paris ; © Musée de Minéralogie – Mines Paris.

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MS48. Teaching and outreach of crystallography

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MS48-O1 Passing the baton of knowledge: The Zurich School of Crystallography

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Universities have largely dropped formal crystallography courses from their curricula, even though the technique is important in so many fields of research and Nobel Prizes are regularly awarded to scientists who have used crystallography or diffraction techniques at some point in their ground-breaking work. In the absence of the availability of formal training or access to an expert within an institution, how does a young person doing a PhD, for example, in chemistry, acquire the knowledge to competently carry out crystallographic analyses on the synthesised compounds? Hand-me-down knowledge from more senior group members can be one way, but often leads to partial basic knowledge that only covers the cases encountered, or the person learns how to get results by pushing buttons without really understanding what happens behind those buttons and how to get the best possible data or recognise when things are not going according to expectation.

A number of successful crystallography schools have sprung up over the years with the aim of offering courses and training for those who do not have access to such courses at their home institutions. The Zurich School of Crystallography, inaugurated in 2007, is one such school. The school focuses on teaching the essential theory and hands-on practical aspects of small-molecule crystallography over 13 days. Two special features of the school are that there is one tutor dedicated to every two participants for the duration of the course, and we encourage participants to send us crystals of a compound of current interest in their own research, so that they go home with a completed structure ready to publish. The participants also visit the Swiss Light Source synchrotron and the neutron spallation facility of the Paul Scherrer Institute to get a taste of "big science".

This presentation will describe the philosophy and strategy behind The Zurich School of Crystallography with examples of our experiences of what works well, what sometimes does not work quite as well, and the organisational challenges and successes. The close-knit collegiate atmosphere of the school leads to a convivial learning environment and some participants of earlier schools are still active and even leaders in crystallography today.

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