

Presentation of the Mineralogical Society of America Dana Medal for 2008 to Thomas Armbruster

MARTIN KUNZ

Advanced Light Source, Lawrence Berkeley Laboratory, MS 4R 0230, Berkeley, California 94720, U.S.A.

Mr. President, members of the society, friends and colleagues:

It is with great satisfaction and pleasure that I present Thomas Armbruster as this year's recipient of the Dana medal of the Mineralogical Society of America.

Thomas fits neatly into the prestigious row of names who received this medal before him. But in one respect he is unique: It is the first time that the Dana medal is awarded to a scientist outside the United States of America. And it fulfills my Swiss heart with special joy to see this happening to somebody who is perfectly passable as a bone fide Swiss, although he grew up a few hundred meters outside Switzerland in the picturesque city of Konstanz at the border of Lake Constance. The other reason, why many people think of Thomas as a Swiss, is of course the fact that he lives and works at the University of Berne, first as lecturer, than as professor for mineralogical crystallography. However, Armbruster's path from Germany to Bern was a little longer than just crossing the Rhine.

After his military duties, part of which were done in the state of Texas, Thomas undertook his undergraduate studies in chemistry and mineralogy at the University of Mainz. His Ph.D. thesis was completed in the record time of two years under the supervision of Professor Flörke at the University of Bochum in Germany. I am sure, it was not only the dull and depressing surrounding in the city of Bochum, which led to this fast thesis, but much more Thomas' these days legendary efficiency in scientific research. Before he accepted the position in Bern, Thomas worked as a post-doc with Don Bloss at VPI in Blacksburg, Virginia. This period started one of Thomas' scientific passions, namely host guest interactions in mineral structures and their influence on physical properties of the crystals. He started on ring and double-ring silicates, and subsequently expanded onto framework structures, especially zeolites, where he is now regarded as one of the world authorities on structure and exchange properties of natural zeolites. Needless to say that working with Bloss also engraved a passion for crystal optics into Thomas' soul, very much to the benefit of countless students who still have the privilege of thoroughly learning how to properly use a petrographic microscope and even a spindle stage.

When giving his interview lecture at the Mineralogical Institute of Berne, which at that time was directed by the late Ernst Niggli, Thomas quickly learned that he had to adopt a significant amount of Swissness, if he wanted to stay there. Five minutes before his lecture started, Niggli came up to Armbruster, pointed to the clock tower, which could be seen

through the window, and reminded the young and nervous candidate that in Bern, talks last 45 minutes. If he chooses to speak longer, he will be considered a chatterbox. If he finishes early, one had to assume he has nothing to tell. Thomas gave an entertaining and convincing lecture all the while his eyes fixed on the clock tower. He indeed managed to pull his last transparency from the overhead projector in the very second the clock jumped onto 45... and he got the job.

In Bern, Thomas flourished. Not only did he make himself a master in single-crystal X-ray diffraction, he also expanded into different mineralogical fields while not abandoning his old passions. He worked now also on Mn-minerals with a special interest for Jahn-Teller induced distortions. His interest diversified further as he started working on order-disorder phenomena as well as modular structures. His diverse scientific interests explain why it is now difficult to work on a mineral group where Armbruster hasn't already published. In Bern, the quality of his work was also matched by a breathtaking productivity. Alone in the decade between 1996 and 2006, Thomas published 130 peer reviewed papers, that is 13 publications per year in average, all of them substantial high-quality publications.

His extraordinary productivity at such a high level is even more remarkable if one considers the fact that he is similarly productive in his pastime, namely the breeding of heavy working horses, which mostly involves shoveling horse manure in large quantities. I am not quite sure how he got into heavy working horses. Even in fissures of the Swiss Alps, zeolite single crystals tend not to be too big to be carried in a backpack. In any case, Thomas gained enough knowledge in this field also, that he recently published a book on the breeding of heavy working horses!

What makes Thomas such a productive and successful scientist? Of course, he is a smart guy, but aren't we all? I think it is because of the following characteristics:

Number one: He is a wonderful human being and excellent teacher. This makes collaborating and working with Thomas so much fun that it doesn't feel like work anymore and you just don't want to stop. I think this explains his many fruitful collaborations; this also explains why his students get projects done and published.

Number two: Thomas is a wonderful storyteller. Whoever had the privilege of going on a hike with Thomas in the rural surrounding of Bern will never forget the rest stops in one of the remote restaurants in the Bernese countryside, where Thomas starts telling stories, which may or may not have been funny as they happened, but they are certainly hilarious when Thomas

tells them. This explains why his papers are always well written and understandable: written like a good story.

Number three: Thomas is perseverant and resilient, not only in his approach to work but to life in general. His resilience is exemplified by the tolerance of his digestive tract to class IV spicy food. When I met Thomas, his daily diet consisted of 4 long thin cigars, locally called Cigarillos, 5 mugs of black coffee and some hot-hot peppers. This brought him through a 12 hour day of research and teaching. I am not sure how much his caffeine and tobacco habits changed, but

I heard from reliable sources that he still consumes a liter of Tabasco per month and once—allegedly by mistake—grabbed for the Tabasco bottle instead of the red wine in order to refill his wineglass. His resilience and perseverance explains why he brings basically every project he starts to a publishable and successful end.

All in all, I am very happy to present Thomas Armbruster as this year's recipient of the MSA Dana medal: He is an outstanding mineralogist, a unique character, and a wonderful human being.