



Gerhard Betz
(1944 –2020)

With deep sadness we have learned that Prof. Dr. Gerhard Betz passed away unexpectedly on Wednesday, March 18, 2020.

Gerhard Betz was born on October 17, 1944 in Wiener Neustadt, Austria. Some of his ancestors came from what is now Slovenia, where he enjoyed visiting in all the years I knew him.

Gerhard graduated from high school in 1962 in Wiener Neustadt and then studied physics at the University of Vienna, where he also received his doctorate in 1971. The foundation for his later scientific career was laid early on during his dissertation, which he completed at the Seibersdorf Research Centre under the supervision of Franz Viehböck. In his PhD thesis entitled "Sputtering coefficients and angular distributions for polycrystalline materials by medium-energy ions" (Vienna, Univ., 1971), he was one of the first to use computer simulations to study ion-solid state interactions with the then still very basic computing capabilities.

After his dissertation and simultaneously with the appointment of Franz Viehböck as director of the Institute of Experimental Physics II at the Vienna University of Technology (TU Wien), Gerhard took up a position as a university assistant at this institute, where he initially worked mainly in the field of experimental Auger analysis of surfaces. A 2-year research stay (1973/74) in Minneapolis, USA enabled him to significantly deepen his expertise in this field. There he worked with Gottfried Wehner, one of the "fathers" of ion sputtering. Besides Gottfried Wehner, Gerhard's doctoral supervisor Franz Viehböck, as well as Peter Sigmund (Odense) and Vera Yurasova (Moscow) were called sputtering pioneers at that time.

After his return to the TU in Vienna, he worked for several years mainly in the field of surface and material analysis by means of Auger spectroscopy. This is where his excellent reputation in the scientific community developed.

In 1982 he habilitated at the TU Vienna, in 1997 he became Associate Professor for ion physics at the TU Vienna and then was awarded the title of University Professor by the Austrian Federal President.

Since the early 1980s, I was able to work with him for many years in the field of ion-solid interaction, especially in the study of the energy distribution of sputtered particles using laser fluorescence and laser ionization spectroscopy. During this time he also spent several months with Roger Kelly at the IBM Research Center in Yorktown Heights, NY, USA, and with Norman Tolk in Nashville, TN, USA, as part of a research project.

While the focus at that time was on experimental research, Gerhard returned to his special "love", molecular dynamics simulation (MD simulation), in the early 1990s. Building on his doctoral thesis, he developed his own MD code, which led to numerous publications and made him a renowned expert in the field of computer simulation of ion-solid interactions. He particularly enjoyed research stays with colleagues in this field (Barbara Garrison, Pennstate University, USA; Bruce King, Newcastle University, Australia; Sachiko Nakagawa, Okayama University, Japan), which was rapidly developing due to the availability of fast high-performance computers

For many years, I was able to supervise together with him the calculation exercises for the three-semester introductory lecture in physics for students of technical physics. I look back on this collaboration with great pleasure. Gerhard was particularly interested in this course and therefore he continued to supervise it for several years after his retirement.

Besides his professional activities Gerhard was a nature lover and until a few years ago he spent most of his free time on mountains and in the forest. His special interest was mushroom picking, or as we say, "mushroom hunting". He also regularly went directly from the TU to lectures of the mycological society at the University of Vienna or participated in mushroom excursions lasting several days.

We will miss Gerhard and his calm, level-headed nature, but we are grateful for the wonderful time and the many joint activities and will always remember him. In this hour our special sympathy goes to his family.

Wolfgang Husinsky

On behalf of all colleagues of the Institute of Applied Physics at TU Wien