



## **Emeritus Professor Franz P. Viehböck**

**(1923 –2020)**

**The Vienna University of Technology (TU Wien), the Faculty of Physics and the Institute of Applied Physics mourn the loss of em.o.Univ.Prof. Dr. Franz P. Viehböck.**

We were deeply saddened to learn that the former head of the institute and dear colleague Franz Viehböck passed away on December 11th, 2020, only a few days after his 97th birthday. Franz Viehböck, born in Wachau (Lower Austria) in 1923, studied physics with the minors mathematics and chemistry. He started his studies at in 1945 at the unheated and badly damaged University of Vienna, and received his doctorate 1949. His supervisor was Richard Herzog, and together they developed a new type of ion source for mass spectrometers. Their research resulted in a groundbreaking publication that became instrumental for the development of analytical technique Secondary Ion Mass Spectrometry SIMS. This technique has become an important tool for the compositional analysis of solid surfaces and thin films.

After completing his studies, Franz Viehböck gained several years of industrial experience Austrian industry. As technical director of the Philips incandescent lamp factory in Gmunden, he was involved in the development of the Elix incandescent and gas discharge lamps. In 1958 Viehböck continued his scientific work at the Austrian Society for the Study of Atomic Energy. He spent some time with Prof. Jakob Kistemaker at the FOM Laboratory for Mass Separation in Amsterdam. Franz Viehböck then became the head of the Department for Mass Separation and Mass Spectrometry at the Austrian Reactor Center Seibersdorf. During this time, he designed and built an electromagnetic mass separator for the separation of radioactive isotopes. In 1968, he became head of the Physics Institute in Seibersdorf. During this time he also acquired the *venia docendi* (license to teach) for applied physics at the TU Wien in Vienna.

On October 1, 1970, Franz Viehböck was appointed full professor of experimental physics at TU Wien. He took the chair of the Institute for Experimental Physics II, which he immediately renamed the Institute of General Physics (today's Institute of Applied Physics). Under his leadership, the institute developed into an internationally renowned center for basic research in the field of surface physics and analysis, particle / laser-surface interaction, and ion and plasma physics over the next 17 years. In addition, the development of novel high-precision measuring methods and sensors resulted in numerous industrial collaborations. During the first energy crisis in the 1970s, Franz Viehböck shifted his research to solar thermal energy, photovoltaics and heat pumps; with this he clearly was decades ahead of his time. He conducted extensive measurement programs for alternative heat supply systems, which provided a rational foundation to this important area.

Franz Viehböck has received numerous awards for his scientific achievements, including the Fritz Kohlrausch Prize 1964 of the Austrian Physical Society, the Decoration of Honor for Services to the Republic of Austria in Silver 1969, the Austrian State Prize for Energy Research 1977 and the Cultural Prize of the State of Lower Austria 1978. He also founded the Austrian Society for Vacuum Technology (ÖGV), and headed it for many years as its president.

Franz Viehböck was extremely popular with his coworkers. He was a keen observer of human nature. The members of his institutes he provided with multiple, individualized development opportunities. His mentees enjoyed a high degree of freedom, in return, Franz Viehböck demanded a correspondingly high degree of personal responsibility. In fact, after taking up his position as a full professor, Viehböck's main focus was on promoting his coworkers. When he took over the institute, his quote "Kids, I am already a professor: now I will see to it that you also get ahead" is famous to this day. His management style was in stark contrast to what was common at that time. For example, to the great astonishment of his "old school" professor colleagues, he and his staff maintained the confidential "du". Many of Franz Viehböck's graduates went on to great careers, have been appointed professors, or took on impressive leadership positions in industry and business.

By organizing workshops and conferences (e.g. the 7<sup>th</sup> International Vacuum Congress 1977 in Vienna or the SOS'86 Symposium on Sputtering in Spitz an der Donau 1986) Viehböck's institute became renowned internationally.

After his retirement in September 1987, he withdrew to private life. However, he remained closely associated with the institute over the years. For many years he spent the cold winter months in South Africa. He developed an appetite for buying a house there while he was visiting a former PhD student who was working in South Africa. He was also happy to host his former employees, colleagues and friends at his Southern home. Eventually, he did return to Austria and settled at the edge of the Dunkelsteiner woods. Franz Viehböck was a regular and welcome participant in our institute's Christmas celebrations. In his honor the Institute of Applied Physics launched the "Franz Viehböck Young Investigator Prize" in 2019; this year this prize is awarded for the second time. At the first award ceremony in December 2019, Prof. Franz Viehböck was still able to personally congratulate the winner despite his advanced age.

Franz Viehböck is survived by his three sons. The Institute for Applied Physics, the Faculty of Physics, and the TU Wien extend their sympathies to his relatives, and will continue to honor Franz Viehböck's memory.

Friedrich Aumayr, Ewald Benes, Ulrike Diebold, Martin Gröschl, Wolfgang Husinsky, Johann Laimer, Michael Schmid, Herbert Störi und Wolfgang Werner  
on behalf of all members of the Institute of Applied Physics