

Foreword

Tilmann D. Märk enters the 60th year of his life busier than ever. He is in charge of the Institut für Ionenphysik of the Leopold-Franzens Universität in Innsbruck and supervises most of its activity, a series of student and doctoral theses and the teaching carried out by the institute. Since 2003 he has served at this university as the Vice-Rector for Research, a time-consuming administrative office which includes from time to time representing the Rector in affairs inside and outside of the university. Moreover, after the premature passing of Werner Lindinger, he became, in 2001, the Chief Executive Officer of the successful company, Ionicon Analytic GmbH, an offspring of the institute activity in developing proton transfer reaction mass spectrometry (PTR-MS) and building instrumentation for trace analysis of volatile organic compounds in gaseous systems.

Tilmann Märk was born in Seefeld in Tirol on 29 April 1944 and his life has been closely connected with this land and with Innsbruck in particular. He studied in the Bundesrealgymnasium in Innsbruck and in 1962 at the Leopold-Franzens Universität in Innsbruck. In 1968, he finished his university studies with a Ph.D. in physics and physiology at the Institute for Experimental Physics. From 1969 to 1971 he was a Research Fellow with Professor H. Oskam at the Department of Electrical Engineering, University of Minnesota, Minneapolis. In 1971 he returned to the university in Innsbruck, where he habilitated in experimental atomic physics in 1976. In 1980, he became a Professor and in 1986 an Ordinarius (Full Professor) in Innsbruck. Since 1993 he has been in charge of the Institute for Ion Physics. He has always been involved in the governance of the University of Innsbruck, as a member of the Academic Senate (1976–1978), Chair of the Physics Section, Faculty of Science, and Chair of the Faculty of Science (2001–2003), and finally Vice-Rector for Research (2003). Tilmann Märk has been married since 1977 to Hiltraud Zuegg, they have one son, now a university student, Lukas.

His visits and stays abroad include the FOM Institute in Amsterdam (1979), an important time at the University of Colorado in Boulder (1979–1980, Senior Visiting CIRES Fellow and Fulbright Scholar with Prof. A.W. Castleman) followed by six months at the Pennsylvania State University, State College (Visiting Professor, 1983), Universität Konstanz (Gastprofessor, 1985), University of Beograd (Visiting Professor, 1986). Since 1998 he has been an Adjunct Professor at the Comenius University in Bratislava, Slovakia.

His research interests have been remarkably broad including physics and chemistry of clusters, mass spectrometry, electron and ion physics, plasma physics and chemistry, radiation physics, biophysics and environmental physics and food science. He is an author or leading co-author of more than 500 papers and chapters in monographs, editor of several books, hundreds of contributions to international meetings and a frequent invited speaker at international conferences (more than 200). His awards and distinctions include the Research Award of the City of Innsbruck (1976), Erwin-Schrödinger Prize of the Austrian Academy of Science (1994), Gold Medal of the Comenius University, Bratislava (1994), and the SASP-Schrödinger Award of the Symposium on Atomic, Cluster and Surface Physics (1996), a bi-annual international conference which he co-founded in 1978. He supervised more than 80 Diploma and Ph.D. Theses of students not only from Austria, but also from many other countries, namely Germany, Italy, France, Slovakia, Czech Republic, Poland, Rumania, Yugoslavia, Pakistan, Nepal, Iran, China, Thailand, and South Korea.

Academic activity has been always connected in the personality of Tilmann Märk with his interest in industrial applications of research results. His involvement in the family business (Board Member, President and Vice-President of the Zuegg Companies) demonstrated that he was an able company manager—a quality developed further in his partial and full involvement in the management of several high-tech spin-off science enterprises in Innsbruck (Ionen-technik, 1986; Ionicon, 1998; Ionimed, 2003).

In the mid 1970s three former physics students of Prof. Pahl, two contemporaries, Tilmann D. Märk and Werner Lindinger, and their senior friend, Franz Howorka, started a program in ion physics and chemistry in Innsbruck and, very soon, put Innsbruck on the map of ion physics and chemistry. Their competent and highly qualified work in mass spectrometry and electron and ion impact phenomena became well-known and appreciated in the world community of molecular physics. In addition, through a well-organized and generously supported program for foreign visitors, they were able to invite colleagues and friends as well as students from abroad and establish a remarkably broad and effective network of international collaborations. This was augmented in the late 1970s by establishing a bi-annual international conference, the Symposium on Atomic and Surface Physics (SASP). Within a few years, Innsbruck

became a well-known center of ion physics and in 1994, the Institute of Ion Physics was evaluated by an international evaluation committee as the best Department of Physics in Austria. The unfortunate premature deaths of both Franz Howorka (1990) and Werner Lindinger (2001) placed all the responsibilities of leading the institute on Tilmann Märk, though there is a growing generation of younger colleagues to help him in this task.

Those of us who have had the opportunity of following Tilmann's activity for years were always impressed by his ability to deal with problems quickly, effectively and with calm. His creativity and enthusiasm in formulating scientific goals, taking a detailed interest following the research of students, his experience in evaluating the results, and, especially, his skill of quick formulation and effective writing have been a great stimulation to his students and colleagues. When talking with him about new research, one has to think on Goethe's words "er sieht das Kleine klein, das Grosse gross" (Torquato Tasso, 616). Not so, however, in his attitude to individuals and personal problems. He has a warm personality, a sense of understanding and a desire to help, be it colleagues or students in need. His composed and quiet, though effective and positive attitude in times of crisis is well known. An example from daily life situation:

driving with Tilmann through dense traffic in Innsbruck; suddenly a driver in front makes an unexpected, stupid or arrogant move that endangers others leaving them honking and protesting. Tilmann's reaction: unhurriedly stepping on the brakes, shrugging his shoulders and uttering quietly, "Must be the Föhn!"

Together with many friends and colleagues we wish TDM on the occasion of his 60th birthday all the best for the years to come, in science, university activity and personal life.

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