



IJMS special issue Eugen Illenberger—Guest editors' foreword

It took three guest editors to cope with the width, the breadth and the sheer number of the expected contributions to a special issue in honour of the 65th birthday of Professor Eugen Illenberger, a theoretician (I.F.), a chemist (P.S.) and a physicist (T.M.). This is clear to anybody who has followed the brilliant scientific career of Eugen Illenberger. The main events of Eugen's life and scientific career are summarized in the preface by Professor Loucas Christophorou published below. Although each author in this volume has his/her own story to tell about Eugen (in particular see the paper by his former students Ilko Bald, Judith Langer, Petra Tegeder and Oddur Ingólfsson), we think it would be appropriate to add some remarks from the perspectives of a personal friend, esteemed colleague and an occasional collaborator from abroad.

Beginning in the productive crucible of the atomic physics school founded by Professor O. Osberghaus in Freiburg (which produced many talented atomic collision scientists in the meantime spread all over Germany) and educated as a physicist, Eugen soon found his way into the chemistry department at the FU Berlin associating with another legendary scientist Professor H. Baumgärtel. Thus having acquired the insight of a chemist and the experimental skill of a physicist he was uniquely equipped to tackle the newly emerging field of high-resolution electron attachment reactions in the 1970s. He built one of the first high-resolution crossed electron beam machines at that time incorporating creatively the recently developed trochoidal electron monochromator (Stamatovic and Schulz 1970). This opened the way to many pioneering high-resolution electron attachment studies, first concerning gas phase molecules, later on in the 1980s coming to include cluster targets produced by supersonic expansion and recently biomolecules. By studying molecular targets deposited on cold surfaces as well Eugen Illenberger was able to span in his more than 200 electron interaction studies the bridge from gas phase via cluster targets all the way to the condensed phase. Since 2004 he is therefore rightfully a member of the editorial board of the European Physical Journal D.

From the beginning Eugen Illenberger attracted bright chemistry students who were willing to cope with the pitfalls of an involved experimental (physics) set-up, he was able to involve a large number of dedicated visitors from all over the world in his own laboratory and he also was part of many extremely productive collaborations in others. One of these, the joint work with Innsbruck also led to the award of a "Honorarprofessur" at this institution in 2005 and in another case he received the Goldmedal of the Faculty of Mathematics and Physics of the Comenius University, Bratislava in 2000. He also wrote a much heralded book together with Prof. J. Momigny, "Gaseous Molecular Ions. An introduction to elementary processes induced by ionization", Steinkopff, Springer, 1992,

which is by now a standard textbook for students who work with negative or positive ions. In addition, he also initiated and very successfully organized conferences, e.g., chairing the important NATO ASI, Linking the Gaseous and Condensed Phases of Matter, Patras, 1993, and taking part from the beginning in the legendary Symposium of Atomic, Cluster and Surface Physics (SASP), which honoured his many contributions and initiatives in atomic collision physics by awarding to him the SASP Erwin Schrödinger Gold Medal in 2002. Attending SASP also allowed Eugen regularly to display his accomplishments as an avid skier despite living in Berlin.

Thus the three of us were quite honoured to be asked to organize this special issue on the occasion of the 65th birthday of Eugen Illenberger and to nobody's surprise the reaction to our invitations to potential contributors was overwhelming. The number and quality of the papers are themselves a testimony to the high esteem in which Eugen Illenberger is held by his colleagues as well as the broad range of Eugen's scientific interests. We have ordered these papers in this special issue in three broad categories, gas phase targets, condensed phase targets and theory. In this context we would also like to thank Elsevier for generously accepting the sheer volume of this special issue, despite a changing editorial policy, and we would like to thank the editors of the International Journal of Mass Spectrometry for the strong support of this project. At the same time we owe special thanks to all contributors, not only for the high quality of their manuscripts but also for keeping the deadlines for submission and revision. Thanks are also due to the many anonymous referees for their quick responses and thoughtful comments.

Finally, we would like to thank Eugen for the many years of successful collaboration and friendship and to wish him heartiest congratulations on behalf of the entire scientific community.

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