

## Professor Fritz Sauter

### A Tribute



Fritz (= German short form of Friedrich) Sauter was born on May 23, 1930 in Vienna and studied there at the University (completing the courses both in chemistry and in biology). He received his Ph.D. in 1957, but had already in 1955 been appointed as a demonstrator at the University of Vienna. He moved in 1963 an Assistant Professor to the Technical University of Vienna (now: Vienna University of Technology). He has since remained at the University of Technology becoming a Dozent (equivalent to Associate Professor) in 1970 and then an “extraordinarius,” equivalent to a Reader, in 1973 and finally a full Professor in 1978.

He headed up the T. U. Department of Organic Synthesis from 1973 until his retirement in 1988. From 1978 he was also Head of the Institute of Organic Chemistry of the Vienna University of Technology.

Fritz Sauter will be remembered for his multifaceted activities, many of which fall into three broad areas. Firstly, he led an active group in Heterocyclic Synthesis. Secondly he had major influence on the development of strong links between Austria on the one hand, and the surrounding countries of Central Europe on the other, with further outreach to many parts of the Middle East. Thirdly, he played a major role in the development of Archaeometry.

### **Activities in Heterocyclic Synthesis**

Over a period of some 40 years, he applied novel ideas to the preparation of many new heterocyclic systems, especially fused rings and spiro systems, synthesizing derivatives of some 100 novel heterocyclic systems. His work in this area is recorded in well over a hundred papers, together with numerous patents. He has described many new rearrangements, novel reagents, and above all was involved in the development of a whole host of new products for pharmaceutical testing. These investigations included numerous international research collaborations with, domestic and international, companies and Universities. A significant proportion of this material has not been published because of patent reasons.

### **Facilitator of International Cooperation and Friendship in Central Europe and the Middle East**

Fritz Sauter's activities to promote friendship and cooperation are deserving of great praise. In Central Europe he founded the "Blue Danube Symposia on Heterocyclic Chemistry". These conferences are held every two years rotating throughout the countries in the Danube basin. They have been outstandingly successful, both at the professional and at the personal level, in bringing together scientists from a multitude of countries that have not always been on good terms with each other in past history.

Equally praiseworthy is his founding of the Ibn Sina (i.e. Avicenna) Symposia on Heterocyclic Chemistry, which have been held in Egypt every two years for the past decade. These symposia attract a wide range of internationally known chemists to Egypt, not just from the surrounding Arab countries, but now also from all over the world.

A very important point was his Chairmanship of the International Congress of Heterocyclic Chemistry that was held in 1999 in Vienna with more than 1200 scientific participants. Fritz secured as the venue for the plenary lectures the imposing Imperial Palace of the last Austro-Hungarian Emperors.

## **Activities in Art and Archaeology**

Fritz Sauter is one of the founders of the “Science of Archaeometry”, which is defined as chemical research in Archaeology. Since 1958, he has published over 50 papers in this area and given numerous lectures, mainly dealing with identification of lipids in prehistoric pottery and of terpenes (pitches) used as glues in European prehistory. Some of the highpoints were the new analytical methods which he developed to identify such substances (e.g., birch bark pitch as agglutinant used to fix flint stone arrowheads to their shafts), the finding of the famous “Tyrolean Iceman’s” equipment to ignite fires, and the identification of milky products in potsherds excavated in ancient Homeric Troy.

## **Lecturing Activities and Honors**

Fritz Sauter is a master lecturer. He is very frequently away on tours which have taken him to most European and many Asian and African countries. He is an Honorary Member of the Slovak Chemical Society and the Egyptian Heterocyclic Society. He holds medals from the University of Brno in the Czech Republic and the Technical University of Bratislava in Slovakia as well as the Kardinal-Innitzer Award from Austria.

## **Fritz Sauter- The Man**

Fritz Sauter is known for his fluency in many languages and for his immense range of interests, reaching from art (he is a collector of old etchings and ancient maps) and archaeology (he has visited most of the famous excavation sites all over the ancient world) to paleontology (in which field he owns a museum-quality collection of specimens).

Fritz Sauter has been and still is an excellent and devoted teacher and friend to a very large number of chemists. These include the numerous former members of his research group but beyond this extend so many chemists, young and old from so many different

countries. All these continue to appreciate with great pleasure his kindness, his insight and his patience.

Fritz Sauter was fortunate to have 44 years of very happy marriage with his wife, Susanne, from 1954 until her final illness in 1998.

It has been a pleasure to write this Tribute to Fritz Sauter. His actions and attitudes helped to inspire the not-for-profit Arkat-USA organization's quest to assist chemists in second and third world countries gain access to the literature both as readers and as authors and to strengthen the bonds of friendship between all peoples of the world! We thank him for his efforts, and congratulate him on his success.

Alan Katritzky

### Selected Publications in Heterocyclic Chemistry

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3. Stanetty, P.; Fröhlich, H.; Sauter, F. Regioselektive Reduktionen von cyclischen Thienospiroanhydriden. *Monatsh. f. Chemie* **1986**, *117*, 69.
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  11. Fröhlich, J.; Sauter, F.; Blasl, K. A Novel Synthesis of 3,3-(spiro)Substituted Azetidines *Heterocycles* **1994**, 37, 1879.
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### Contribution to Houben-Weyl

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