

AWARD LECTURES

NETZSCH–GEFTA–Award 1987 for

The nominating committee of the Gesellschaft für Thermische Analyse e.V. (GEFTA) has selected Prof. Dr Hans-Joachim Seifert, Kassel/FRG to receive the NETZSCH–GEFTA–Award 1987.



Prof. Dr. Hans-Joachim Seifert, Kassel/FRG presented in Jena/GDR, August 26, 1987 (ESTAC '87)

Prof. Seifert was born on November 9, 1930 in Guben/Niederlausitz. He is the eldest son of four children born to Bernhard Seifert, weaver, and his wife Erna.

World War II interrupted his schooling and during this time his family left their homeland and resettled in Hessen.

After completion of high school in 1949 in Wetzlar, Hans Seifert began to study chemistry at the Justus-Liebig-University in Gießen. Upon completion of his undergraduate chemistry studies in June 1955, he started to work on his doctor's degree which was completed in 1957. He conducted his research on vanadium chlorides under the tutelage of Prof. Dr P. Ehrlich.

Because of the prolonged illness of his adviser, Prof. Ehrlich, Dr Seifert did not start to work in industry—as originally planned—but stayed on at the University of Gießen in the position of Assistant. As a substitute for Prof. Ehrlich, he was required to prepare and present lectures and seminars in the field of inorganic chemistry. During this time he supervised the research of both undergraduate and graduate students. The first of Prof. Seifert's doctoral students to complete his work received his degree in 1961. In June 1963 Prof. Seifert completed his postdoctoral thesis entitled "Report on the Chemistry of Halogen Compounds of Light Transition elements in Low Oxidation Levels" in the field of "Inorganic Chemistry" and thereby qualified for the position of Lecturer at the University.

In May 1969 he was appointed Assistant Professor and in June 1970 was promoted to professor. During the years 1970/71 Prof. Seifert served as acting Director of the Institute of Organic (!) Chemistry, and afterwards was the Head of the Chemistry Department for one year. Since 1973 he has been working as Professor of Inorganic Chemistry at the University of Kassel.

His first task at the University of Kassel was to build a program of study for education students, and beginning in 1984, for diploma students as well — a function which required a great deal of academic autonomy at the university. During this time Prof. Seifert was Head of the faculty of natural sciences.

The present direction of research of the 1987 NETZSCH-GEFTA-prize recipient has its origins in his doctoral dissertation:

"Preparative and Structural Chemistry of the Vanadium Halogenides".

Two main fields of interest resulted from this doctoral research:

(1) The first of these was:

Chemistry of transition halogenides in low oxidation levels. This, especially, resulted in investigations of halogen compounds of Ti^{3+} , V^{2+} , W^{4+} , in which the electrolytic reduction in inorganic solvents plays a central roll. Investigations were also conducted in the fields of magnetochemistry, electron spectroscopy and x-ray structure analysis. The results of this research were published in 22 papers between 1961 and 1980.

(2) The second major field of interest was:

The investigation of phase diagrams of quasibinary systems of alkali-metal halogenide/metal-II-halogenide using differential thermal analysis, solution calorimetry and x-ray structure analysis. These studies resulted in 31 publications. Here the design work of Prof. Seifert and

his collaborator Dr G. Thiel was of great importance. It led to the development of measuring cells for DTA and solution calorimetry, and was especially suited to the special properties of anhydrous metal halogenides.

Out of this work, the most important contemporary methods for the measurement of thermodynamic functions of double halogenides were generated. For example, a galvanic cell with conductive diaphragms to measure the Gibbs free energy (ΔG) of solid electrolytes was developed. This work has resulted in 25 publications since 1981.

During the last few years, systems with lanthanum chlorides were investigated separately and new, surprising results concerning the conditions for the existence of their double halogenides were obtained.

Thereby general questions had arisen, which are important for thermal analysis. These questions concerned in particular the determination of the metastability in compounds, the application of DTA, the investigation of comparative temperatures and thermodynamic phase diagrams, as well as the problem of inhibited solid reactions.

In all of these investigations the combination of the previously mentioned working principles with x-ray structure analysis plays an important role, especially with regard to the dynamic high temperature recording technique, which was dealt with by his research team from the beginning.

It is clear that this research program led to the establishment of close contact to thermal analysis and, in turn, to GEFTA. Prof. Seifert participated in the ICTA for the first time at the 4th meeting in Budapest in 1974. His attendance at this meeting resulted in his membership in GEFTA.

A rapid rise within GEFTA led to his presidency of the society from 1977 to 1980, and subsequently to his position of Affiliated Councillor of GEFTA for the ICTA. After serving as vice-president of ICTA between 1982 and 1985, Prof. Seifert was elected president of ICTA at the 8th ICTA-Congress 1985 in Bratislava/ČSSR.

Prof. Seifert has been married to his wife, Tilly, since 1952 and now has 3 grown children: one daughter, and two sons. He is proud grandfather of two grandchildren, now 7 and 4 years of age.

When career, ICTA and GEFTA activities, and the family allow, Prof. Seifert enjoys spending his time on walking tours – if the weather is nice of course. When there is more time, he also enjoys spending his leisure hours reading classic crime novels and historical literature.

The NETZSCH-GEFTA-Award, sponsored by NETZSCH-Gerätebau

GmbH, Selb/Bavaria, is awarded annually to a person in recognition of his distinguished record in the scientific field.

We present to Prof. Seifert, Kassel/FRG, the 1987 NETZSCH–GEFTA–Award not only for his outstanding scientific success, a significant part resulting from experimental and research thermal analysis, but also for his engagement in this field in both the German-speaking and international areas.

The NETZSCH–GEFTA–Award carries with it an honorarium of DM 3000,—

We congratulate Prof. Dr Hans-Joachim Seifert.