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News

NETZSCH–GEFTA AWARD 1985 FOR PROF. DR. EBERHARD GMELIN, STUTTGART

Presented in Bratislava, Czechoslovakia, 19 August 1985 (8th ICTA '85)

Dr. Gmelin (right) receiving the NETZSCH–GEFTA Award from Dr. Emmerich.

The Nominating Committee of the Gesellschaft für Thermische Analyse e.V. (GEFTA) has selected Prof. Eberhard Gmelin, Stuttgart/Germany for the NETZSCH–GEFTA Award 1985.

Dr. Eberhard Gmelin was born on 26 July 1937 in Mainz, F.R.G. After attending primary school in Ingelheim am Rhein, partially during the war years, and after the final examination in 1956, he studied physics at the University of Mainz. In August 1962 he completed the diploma examination with the best possible grade.

From 1962 to 1968 he was employed both as teacher and scientist. Dr. Gmelin then studied for his doctorate with Professor L. Weil at the University of Grenoble, France in the "Centre National de Recherches Scientifiques sur les Trés Basses Temperatures". During this time as a scientific assistant he received a stipend from the French government and the "Deutsche Akademische Austauschdienst" and also from the "Association pour le Developpement de la Recherche". Until leaving the Institute for Low Temperatures in Grenoble, Dr. Gmelin worked as a post doctoral fellow in the Faculty of Natural Science of Grenoble University.

He then worked as a scientist at the Physics Institute of Würzburg University; in 1969 he was appointed lecturer and received the "venia legendi" for experimental physics.

Dr. Gmelin became a scientist at the Max-Planck-Institute for solid-state physics in October 1971. He is head of both the service department "low temperature" and the low temperature laboratory of Max-Planck-Institute for solid-state research. In addition he has a private lectureship at the Würzburg University. Dr. Gmelin was appointed apl. professor at the University of Würzburg in November 1976. His main fields of work since the time in Grenoble are calorimetry and cryogenics.

During his work in Würzburg and later in Stuttgart Dr. Gmelin has tried to involve himself more intensively with semi-conductor physics. He admits himself that this change has never been total. After short breaks he always returns to calorimetry and cryogenics: measurements of specific heat, thermal conductivity, cryostat design, gas liquification, thermometry, adiabatic demagnetisation, magnetism and electronic transport phenomena. His scientific research is mainly specific heat of cubic alkaline earth oxides, particularly the behaviour of helium in BeO.

Measuring the specific heat of irradiated and then tempered BeO samples (λ-point) at 1–4 K and by the use of gas chromatography and electron microscopy it was possible to produce a complete helium balance and diffusion behaviour for each phase in the sample.

He has also had considerable success in simplifying calorimetric methods, improving the measuring systems and in the automation of time consuming measurements. A feature of this work is a reduction of the necessary sample masses required for the measurement.

The aim is to produce a system similar to modern, commercial DSC

systems for extremely low temperature ranges (liquid helium) which will also give laymen the opportunity to carry out calorimetric measurements at the lowest temperatures.

Ten people are currently working at Stuttgart Institute for Low Temperature in the field of cryogenics. One of the most efficient helium liquifiers in Germany is installed here. The annual production is currently 120000 l liquid helium (a commercial value of 1.5 million DM). The co-operation in this area includes not only the three Max-Planck-Institutes in Stuttgart, but also the University of Stuttgart, various other German universities and particularly German industry.

The working group led by Dr. Gmelin has applied for several patents in this field which has led to the development of instruments by different companies.

Currently Prof. Gmelin is studying the thermal anomalies of ferro-electrical materials at low temperatures. Further aims of the research are the determination of lattice energy and phase transitions of argyrodites and "plastic crystals".

Almost 90 published papers and innumerable lectures show the extent of the scientific and technological work of Professor Gmelin.

Professor Gmelin has been a member of the Gesellschaft für Thermische Analyse (GEFTA) since 1980.

Many of you know that Prof. Gmelin takes much pleasure in explaining in a simple, understandable way to laymen, i.e., non-scientific people, e.g., skilled workers, young people and technicians, the problems of research and modern technology. Within the "VDI (Verein Deutscher Ingenieure)" he advises and helps with training and refresher courses.

In 1965 Dr. Gmelin married the medical technician Edith Fehlinger from Rüsselsheim am Rhein. The couple have two sons: Christian Ulrich and Jens-Eric.

Dr. Gmelin prefers to spend his remaining free time at home, working in his garden or reading modern literature; historical and art history books fill his shelves. Dr. Gmelin loves to travel and combines this with an intensive study of the history and culture of the country visited.

We should not forget to mention that because of his time spent in Grenoble he is an exceptionally good skier and loves the mountains.

The NETZSCH–GEFTA Award, sponsored by NETZSCH-Gerätebau GmbH, Selb/Bayern, is awarded annually to a person in recognition of his distinguished record in the thermal analysis field. Outstanding merits in instrumentation and organization in this field are also recognized with this Award.

We present Prof. Eberhard Gmelin, Stuttgart/Germany with the 1985 NETZSCH–GEFTA Award not only for his outstanding success in the fields of calorimetry and cryogenics, but also for his exceptional efforts in popularizing science and technology in this field.

The NETZSCH-GEFTA Award carries with it an honorarium of DM 3000.00.

We congratulate Prof. Eberhard Gmelin.