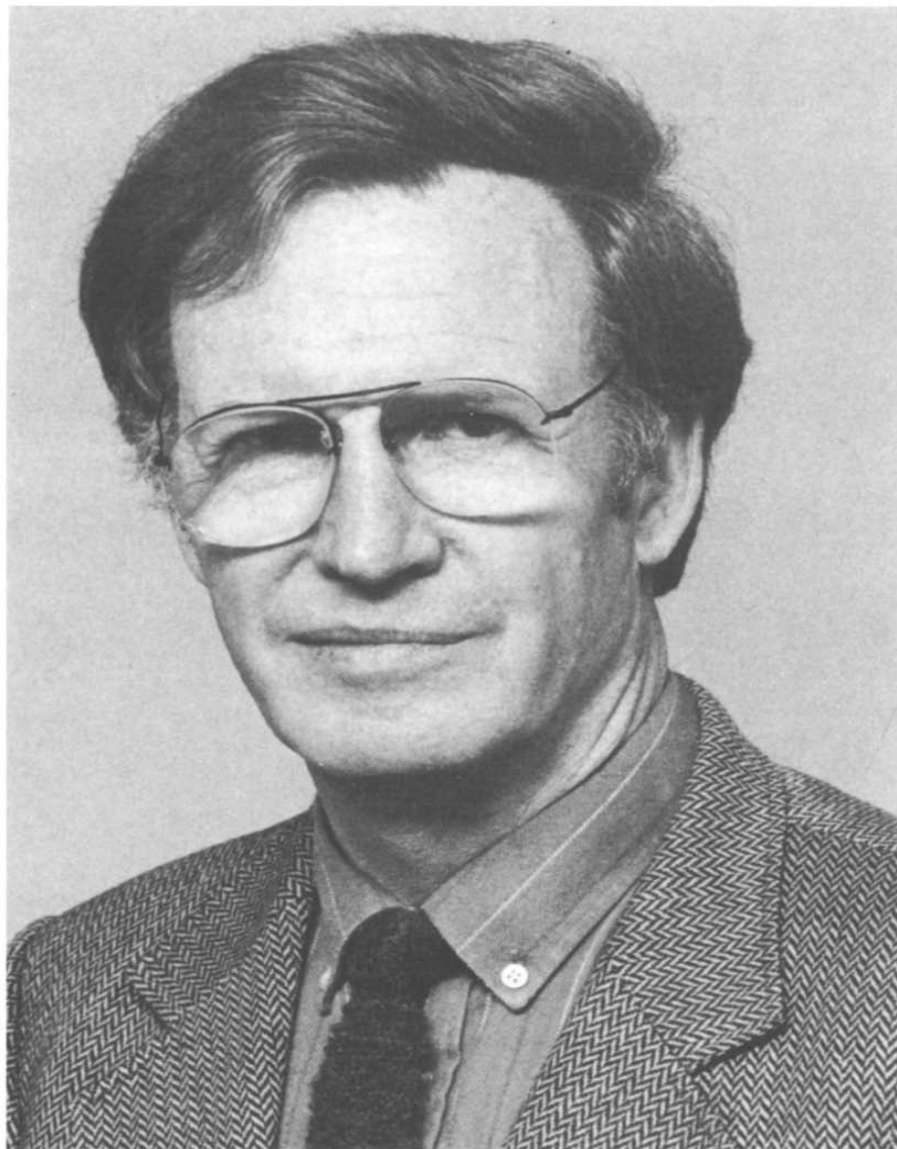


***In celebration of the 60th birthday of
Professor Doctor Dietrich Schulte-Frohlinde***



Professor Doctor Dietrich Schulte-Frohlinde

Dietrich Schulte-Frohlinde was born on December 17th 1924. Like many others of his generation he was drawn into World War II at the early age of seventeen. He was wounded on the Eastern front, sent back again, whereupon he was captured and remained a prisoner for two years until 1947. After his release he completed high school, interrupted for so long, and in 1948 he enrolled in chemistry and philosophy at the University of Heidelberg. His interests leaned towards the physico-chemical aspects of chemistry, and he chose a problem in polarography as the subject for his Diplomarbeit (M.Sc.). He then went on to the Max-Planck-Institut für Medizinische Forschung to take his Ph.D. (1956) under the supervision of Richard Kuhn which must have been both a challenging and stimulating experience. There were no day-to-day discussions; on the contrary, the student had to struggle with his problem for long periods entirely on his own. However, when Richard Kuhn did turn up, his questions were so incisive and his comments so invigorating that they induced fruitful work for months to come. In this stimulating atmosphere his students became mature scientists at a very early age and it should come as no surprise to learn that more than fifty of Richard Kuhn's former students went on to hold chairs all over the world.

Schulte-Frohlinde's Ph.D. work dealt with the photochemistry of stilbenes and ever since he has retained an enthusiastic interest in the complex mechanism of *cis* \rightleftharpoons *trans* isomerization. Much of our present knowledge of photochemical and thermal isomerizations of stilbenes and related compounds is based on his work and that of his collaborators.

In 1960 Schulte-Frohlinde joined the Kernforschungszentrum Karlsruhe where he started a small group which later developed into the Institut für Strahlenchemie (Radiation Chemistry). At first he continued his photochemical studies with work on stilbenes, quinones and diazonium salts, but soon he also became interested in radiation chemistry which at that time was a very new discipline. He was the first to identify the hydrated electron by its absorption and electron spin resonance spectra in frozen solution. After a period of fundamental research on the radiation chemistry of organic liquids he became attracted to the chemical aspects of radiation biology. In 1969/70 he received three enticing offers: a chair in physical chemistry at the University of Freiburg, head of an Institute in the Kernforschungsanlage, Jülich, and successor to G. O. Schenck at the Abteilung für Strahlen-

chemie des Max-Planck-Instituts für Kohlenforschung, now the Max-Planck-Institut für Strahlenchemie. He accepted the latter and the excellent facilities at the Max-Planck-Institut allowed him to continue and even diversify his research interests. The drastic effects of ionizing radiation on living organisms and the central role played by DNA lead to detailed studies on nucleic acids and their constituents. Major contributions have been made in the understanding of radiation-induced DNA strand breakage, which is among the most important radiation-induced lesions in the living cell. It is typical of his style of research that he tackles one problem from many sides. Thus the mechanism of nucleic acid strand breakage has been studied by pulse radiolysis, electron spin resonance, nuclear magnetic resonance, light scattering and product analysis using both intact nucleic acids and many model systems.

His research has found widespread acclaim and in 1984 he was awarded the Weiss medal by the Association for Radiation Research. Recently he has brought his first scientific love, photochemistry, into his DNA research where laser-induced photoionization is now being used to study the so-called direct effect of ionizing radiation.

Even casual acquaintances would not be surprised to learn that Dietrich Schulte-Frohlinde has maintained a life-long love of philosophy and the fine arts; indeed he used to play the cello and the clarinet. His continued pursuit of new knowledge and understanding lead three years ago to him entering the field of radiation biology for the first time, typically without diminishing the amount of effort he continues to expend in his old fields of photochemistry and radiation chemistry. His sheer exuberance and vitality induced a friend to remark that it seems almost fraudulent for him to celebrate his 60th birthday at such an early age.

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