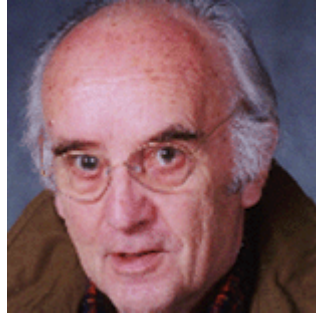


## Alfred Saupe - a pioneer of liquid crystal research



With great sadness the German Liquid Crystal Society and its members bid farewell to Prof. Dr. Alfred Saupe. He passed away in his home in Badenweiler on the 3<sup>rd</sup> of August 2008, aged 83.

The community active in the field of liquid crystal research and its application pays tribute to Alfred Saupe as a pioneer of liquid crystal research.

Alfred Saupe was born in Badenweiler on the 14<sup>th</sup> of February 1925. There he attended primary school and then until 1944 grammar school in Müllheim.

After military service and captivity he passed his A-levels at the Berthold- Gymnasium in Freiburg, Breisgau in 1949. He studied physics at the Albert-Ludwigs-university in Freiburg and wrote his diploma and PhD thesis under the supervision of Wilhelm Maier at the institute of Physics. In 1958 he finished his PhD thesis 'A simple theory of nematic liquid crystals and its application to azoxyanisol' where mean-field theory is used to describe the nematic state in a fundamental way (Maier-Saupe-theory). Until 1965, with the exception of one year at the Fraunhofer Institut für Elektrowerkstoffe in Freiburg (later re-named as Fraunhofer Institut für Angewandte Festkörperphysik, Fraunhofer Institute for Applied Solid State Physics) he stayed at the Institute of Physics in Freiburg conducting liquid crystal research. From 1965 to 1967 he worked with Hans-Joachim Cantow at the Institute for Macromolecular Chemistry in Freiburg studying polymers with NMR-spectroscopy. In 1968 he moved to the Liquid Crystal Institute at the Kent State University in the USA where he got a chair in Physics in 1969. His

main research interests remained always in liquid crystals where he made further important contributions such as the discovery of biaxial lyotropic liquid crystals and their theoretical description, the fundamental idea for the understanding of the structure of blue phases and important experimental results concerning ferroelectric liquid crystals and their electromagnetic characteristics. After his retirement he returned to Germany in 1992. From 1992 until 1997 he was head of the Max-Planck Group of Liquid Crystalline Systems at the Martin-Luther-University in Halle (Saale), leading in studies of electric switching of smectic C\* phases, research into Bent-Core-mesogenes and the application of AFM for the characterization of liquid crystalline surfaces.



At the Berlin Wall, 1989, with Brigitte Saupe (Foto from H. Stegemeyer)



London 1994, from left to right: Alfred Saupe, Geoffrey Luckhurst, Frank Leslie, Martin Schadt, George Gray, Peter Raynes, Cyril Hilsum, John Goodby, Alan Leadbetter, Harry Coles.

For his contributions to liquid crystal research Alfred Saupe received numerous international honours and awards, such as the Nernst-Haber-Bodenstein prize by the German Bunsensociety in 1974, the Humboldt research prize in 1984, the Kent State President's medal in 1992, honorary membership of the International Liquid Crystal Society in 1998 for 'For his pioneering development of fundamental theories and experimental studies of liquid crystals that have contributed significantly to the foundation of the subject.' and the Fréedericksz-Medal of the Russian Liquid Crystal Society in 1999.

With the death of Alfred Saupe we have lost a researcher who together with other theoreticians laid the foundations for the understanding of liquid crystals. He was involved in their theory and experimental development for 40 years and helped to turn them into a commodity in many areas of modern life throughout the world.

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Günter Lattermann, translated by Susanne Klein