Obituary for Dr-Ing. Theo Fett (1943–2026)

Dr-Ing. Theo Fett passed away peacefully on 13 January 2026 at the age of 82. The ceramics and materials science community has lost an internationally respected scholar whose work shaped the understanding of the mechanical behaviour of ceramic materials over many decades.

For many years, Theo Fett worked at what is now the Institute for Applied Materials – Mechanics of Materials and Interfaces at Karlsruhe Institute of Technology (KIT). His experimental and theoretical contributions to fracture mechanics, particularly in the field of ceramic materials, were widely recognised as pioneering. His scientific approach was marked by exceptional clarity in identifying the essence of complex physical problems and by a rigorous and elegant integration of theory and experiment.

Born on 10 March 1943 in Homberg (Ohm), Theo Fett began his professional life with an apprenticeship as a materials tester. After studying physical engineering and working for several years as an engineer in industry, he sought a deeper theoretical understanding and, in 1974, embarked on the study of physics at Justus Liebig University Giessen, graduating with a Diploma in 1979. This was followed by research appointments at the former Institute for Materials Research of the German Aerospace Center (DLR) in Cologne-Porz and at the Karlsruhe Nuclear Research Centre. In 1983, he was awarded the degree of Doctor of Engineering by the University of Karlsruhe under the supervision of Prof. Dietrich Munz, with a dissertation on fracture-mechanics-based lifetime prediction in ceramic materials.

Even after his retirement in 2005, Theo Fett remained scientifically active. As a highly valued adviser at the Institute for Applied Materials – Ceramic Materials and Technologies, he developed and refined experimental techniques for assessing the lifetime of brittle materials and made fundamental contributions to the determination of crack resistance curves, particularly in the regime of very small crack lengths. He maintained a close and long-standing collaboration with Dr Sheldon Wiederhorn of the National Institute of Standards and Technology (NIST), with whom he published numerous papers on the mechanical properties of glass.

The scope and depth of Theo Fett's scientific achievements are reflected in the two textbooks he co-authored with Prof. Munz: *Mechanisches Verhalten keramischer Werkstoffe* (1989) and *Ceramics: Mechanical Properties, Failure Behaviour, Materials Selection* (1999). Further important contributions arose from his work on the mechanics of ferroelectric piezoceramics, which played a significant role in establishing ceramic materials as reliable structural and functional materials in engineering applications.

Beyond his scientific achievements, Theo Fett was held in the highest esteem for his modesty, integrity and unfailing willingness to support colleagues. Despite his international standing, he consistently placed himself in the background. We mourn the loss of an exceptional scientist and a remarkable human being, whose work and character will remain in honoured memory within the ceramics community.

Prof. Dr. Michael J. Hoffmann
KIT