

## Prof. Dr. Gerhard Wortmann

18 January 1943 – 2 February 2026

We mourn the passing of Prof. Dr. rer. nat. Gerhard Wortmann, a well-renowned and long-standing member of the worldwide community of Mössbauer scientists.

Prof. Wortmann's scientific work was dedicated to understanding matter under extreme conditions. At the University of Paderborn he established and led the direction of high-pressure solid-state spectroscopy, pursuing the central idea that pressure is a powerful control parameter that reveals the fundamental mechanisms governing magnetism, electronic structure, lattice dynamics, and structural transformations in condensed matter.

A defining feature of his legacy is the methodological strength with which he combined local, high-resolution probes and large-scale research facilities. His group advanced and applied Mössbauer spectroscopy, as well as synchrotron-based techniques such as Nuclear Forward Scattering (NFS) and Nuclear Inelastic Scattering (NIS), often in diamond-anvil cell environments reaching pressures in the megabar regime. These approaches enabled groundbreaking insights into materials ranging from metallic 3d/4f systems and complex magnetic compounds to questions of phonon behavior and phase stability at high pressure.

Particularly influential were his contributions to high-pressure studies of iron and related systems, where phonon and thermodynamic properties at very high pressures connect fundamental solid-state physics to conditions relevant for planetary interiors. Through long-standing collaborations, including work at major synchrotron facilities, he taught generations of students and early-career researchers in a style of experimental physics that combined profound home-laboratory expertise with the opportunities of modern research infrastructures.

As a teacher and mentor, Prof. Wortmann was highly valued for his intellectual clarity, high standards, and his commitment to careful experimental reasoning. He also engaged with broader scientific questions in public lectures, reflecting his conviction that physics should remain connected to curiosity about the natural world.

We remember Gerhard Wortmann with gratitude and respect, as a colleague of integrity, a dedicated academic teacher, and a physicist whose work strengthened the field and our community. Our thoughts are with his family, friends, and all who worked with him.

