

MEMORIAL FOR ROLF NÜESCH



Professor Rolf Nüesch passed away on Christmas Day, 2006. Rolf was president of the DTTG, which is the clay minerals group of Germany, Austria and Switzerland. He was the director of the Institute for Technical Chemistry, Water and Geotechnology Section at the Forschungszentrum Karlsruhe, Germany, and a full professor of applied mineralogy. Born in Switzerland in 1954, he received his PhD at ETH Zurich in 1991 with a thesis on the mechanical behavior of Opalinuston. He took his position in Karlsruhe in 1999, where he established the divisions of environmental microbiology and nanomineralogy.

As a scientist, Rolf was highly creative and observant. For example, he noticed the formation of tiny bubbles and white spots when aluminum plates, used as XRD mounts for clays, were left to soak in water. He analyzed the bubbles and spots, found hydrogen gas and bayerite, and thereby discovered that clay could catalyze the corrosion of Al metal. He directed much of his research toward solving societal problems. Some of his ideas, at first sight, seemed strange, but he had the courage and persistence to carry them through. For example, he found a method for transforming anhydrite to gypsum in the quarry; the method involved using saline suspensions and reworking deposits with explosives and heavy machinery. He worked on a project to prevent scale formation in pipes by using intermittent magnetic fields - over 250 communities in Germany and Switzerland now rely on this system. He worked on improving the durability of construction materials for buildings and roads; on recycling phosphorous for agriculture; on prevention of ground water pollution from contaminated sites using bioleaching, biosorption, biomineralization, and bentonite liners; and on the delamination of kaolinite to develop a polymer-clay nanocomposite for use as a diffusion barrier.

As an administrator, Rolf was remarkable for his kindness. He was sometimes being frustrated by administration, but was noted for his determination to find creative and humane solutions. He had a way of listening to all ideas and of finding a compromise that opened new opportunities. He loved to discuss and to argue, never taking personal offense, and he enjoyed good jokes.

Rolf is sorely missed by all who knew him, and our sympathy and love are extended to his wonderful family: to his wife, Ruth Haas, and to his children Fabian, Simon, Sarah, and Stefan.

Peter Weidler and Dennis Eberl