

In Memoriam: Wolfgang Sachtler (1924-2017)

<http://nacatsoc.org/news/in-memoriam-wolfgang-sachtler-1924-2017/#more-3345>



The catalysis community mourns the loss of one of its formative and most influential figures, Professor Dr. Wolfgang Max Hugo Sachtler, who passed away on January 8, 2017. Born on November 8, 1924 in Delitzsch, Germany, Professor Sachtler received his PhD from the Technical University Braunschweig (Brunswick), Germany in 1952, in the area of surface science. Upon graduation, he joined the Royal Dutch Shell Laboratory in Amsterdam where he stayed until retirement as Director of Fundamental Research in 1983. From 1963-84, he held a joint appointment as Professor at the National University in Leiden. He was particularly known for his insightful application of surface science concepts to catalysis. While at Shell and Leiden, he advanced the concept of relationship between metal-oxygen bond energy and the selectivity for partial oxidation products in hydrocarbon oxidations, initiated insightful discussions on whether molecular or atomic oxygen is necessary for selective epoxidation of ethylene, applied thermodynamics and experimental measurements to metal alloys to account for the effects of the surface compositions of alloys to their binding of adsorbates, and promoted the description of bimetallic catalysis in terms of ensemble and ligand effects.

He joined Northwestern University in Evanston in 1983 as the V.N. Ipatieff Professor of Catalytic Chemistry and the first Director of the Center for Catalysis and Surface Science, where he continued his prolific and influential professional career. He was a leading figure in the design, synthesis, and detailed investigation of genesis of metallic particles in zeolites, their chemical properties, and catalytic reaction mechanisms. He provided the first evidence of proton-induced cationic metal clusters in zeolite. Later, he broadened his research portfolio to include NO_x abatement by selective catalytic reduction strategies and hydrocarbon conversions catalyzed by strong acids. He was among the first to recognize that trace amounts of alkenes were necessary for the low temperature isomerization of butane over sulfated zirconia. In all, he contributed 440 scholarly publications to the literature.

His work was recognized with the E. V. Murphree Award and the Petroleum Chemistry Award of the American Chemical Society, the Eugène Houdry Award of the North American Catalysis Society, the Rideal Lectureship Award of Faraday Div. Royal. Chem. Soc., R.L. Burwell Lectureship Award of North American Catalysis Society, François Gault Lectureship Award of

European Fed. of Catalysis Societies, German Society Coal and Fuel Science award (DGMK-Kolleg). He was a member of the Royal Netherlands Academy of Sciences.

In addition to his many scientific contributions, many of his friends and colleagues would remember his welcoming and friendly personality and his consistent willingness to help. He offered a very timely helping hand to help professional colleagues as they sought to escape Eastern Europe during the cold war era. He guided various young scientists at Shell and at Leiden who later became leading figures in the field. At Northwestern, he mentored a large number of students and post-doctoral fellows, many of them have taken leadership positions in companies and who would pay him frequent visits, some as recent as late last year.

He is survived by his wife of over 60 years Anne-Lore and by three children and grandchildren.

Harold Kung
Northwestern University

The Northwestern web site also contains a statement celebrating the accomplishments of Professor Sachtler (<http://www.mccormick.northwestern.edu/news/articles/2017/01/emeritus-professor-wolfgang-sachtler-passes-away.html>)

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