



Stephen Louis Sass

March 11, 1940 – August 15, 2019

Professor Stephen Louis Sass, who pioneered fundamental studies of crystalline interfaces and made great strides in increasing gender diversity in engineering, died in Ithaca, New York on August 15, 2019. He was 79.

Professor Sass was born on March 11, 1940 in Bronx, New York. He received a bachelor's degree in Chemical Engineering from the City College of New York in 1961 and then carried out graduate studies in the Department of Materials Science at Northwestern University, earning his Ph.D. in 1966. He spent the following year as a postdoctoral researcher at Technische Hogeschool, in Delft, The Netherlands as a Fulbright Scholar. In 1967, he joined Cornell University as an assistant professor, advancing to full professor in 1979. He was elevated to emeritus status in 2008.

Professor Sass was a leader in using transmission electron microscopy to investigate the structure of metals and ceramics at the atomic level. He published more than 130 articles in the refereed literature, which were cited thousands of times worldwide. His careful studies of crystalline interfaces were particularly influential. He worked collaboratively with many of the faculty across the university, and was a Fellow of ASM International, the professional organization of materials scientists and engineers.

He was extremely open-minded and had an infectious enthusiasm for science that sparked conversations and friendships around the world. Professor Sass was an accomplished author, penning the book "The Substance of Civilization: Materials and Human History from the Stone Age to the Age of Silicon". He was also a New York Times Op-Ed contributor, publishing "Scarcity, Mother of Invention" in August 2006. He was dedicated to creating closer connections between Cornell and Chinese universities and travelled to China frequently in that effort. He published another New York Times Op-Ed in January 2014, "Can China Innovate without Dissent?" in which he shared his concern that authoritarian policies can inhibit development of a robust culture of problem-solving.

He served as the Director of Undergraduate Studies in Materials Science and Engineering from 1988-1998 where he began publicizing the excitement of materials science in high schools across the country, an effort that was instrumental in increasing undergraduate enrollment. He also developed a rigorous undergraduate research program which was a significant factor in recruiting women to the field of materials science and which opened doors for more women to participate in research. Professor Sass took great pride in this and alumni of the program considered it a lifechanging experience. He was very pleased by the outstanding subsequent accomplishments of his graduate and undergraduate research mentees. Among the many distinguished awards Professor Sass received, the Stephen H. Weiss Presidential Fellowship in 2002 was a source of special pride, recognizing his sustained and distinguished contributions to undergraduate teaching. He also was the first recipient of the Northwestern University Distinguished Achievement Award for Alumni of Materials Science and Engineering in 2012.

Professor Sass is survived by his wife of 53 years, Karen, his two sons Adam and Erik, and two grandchildren, Carol and Levi. He and Karen were very active in the Friends of the Library, Ithaca Chamber Orchestra, and were avid travelers and music lovers.

Written by Bruce van Dover and Lara A. Estroff