IN MEMORIAM

Emil Wolf

1922-2018

Emil Wolf, one of the last half-century's most prominent and respected figures in optics, died on 2 June 2018 at his home in Rochester, N.Y., USA, aged 95. When praising expertise, we sometimes say a person "wrote the book" on a subject. For Emil, this was the literal truth: *Principles of Optics*, or "Born and Wolf," stands as the authoritative text.

Born in Prague, Czechoslovakia, to Jewish parents in 1922, Emil and his brother made a harrowing escape from their Nazi-occupied homeland in the spring of 1939. His parents, like millions of others, perished in the Holocaust. Emil arrived a penniless 17-year-old refugee in Britain in 1940. Winning scholarships to complete his education, he earned his bachelor's degree in 1945 and a doctorate in 1948, both from the University of Bristol.

His first paper, "On the Determination of Aspheric Profiles," was submitted 1 November 1946, the start of a remarkable 70-year career of scientific contributions that included more than 400 papers. In 1951 he began his association with Max Born at the University of Edinburgh, U.K., which resulted in the 1959 publication of *Principles of Optics*, now in its seventh edition and the most cited textbook in physics. He also authored two other well-regarded books, and founded and edited the *Progress in Optics* series for over 50 years.

In 1954, Emil moved to the University of Manchester, U.K., where he published what he considered his most important contribution, the equations describing the propagation of the optical coherence function. The work brought clarity to a confusing, disjoint world of correlations, coherences, visibilities and interferences. His double wave equations—the Wolf equations—provide a common framework for calculating all classical coherence functions and directly connect them to fundamental laws of physics.

Emil joined the faculty at the University of Rochester in 1959, establishing, with colleagues such as Leonard Mandel, George Sudarshan and Joseph Eberly, what has become the "Rochester School" of coherence and quantum optics. Generations of their students have developed this field into one of today's most important and active areas of fundamental investigation in physical science. Emil personally mentored some 30 Ph.D. students, many of whom have become giants in the field. His dedication to students is recognized in the OSA Outstanding Student Paper Competition named for him.

The move to America also began Emil's long association with The Optical Society. He served as OSA President in 1978; became an Honorary Member in 1987; and received the Ives, Born and Beller medals. His unwavering support and dedication to OSA was demonstrated best, perhaps, by his unparalleled streak of more than half a century of presentations at every OSA annual meeting.



OSA Centennial Booklet

Those fortunate to have known him well will remember him as steadfast and modest, meticulous in his science, unstinting with advice and praise, beguilingly warmhearted, egalitarian and welcoming to all.

At the 2007 OSA annual meeting, one of us, a shy, young Muslim woman of Middle Eastern origin, attended her first FiO to present a paper coauthored with Emil, whom she had met only via email. Her adherence to Islamic dress code brought unwanted gazes and the feeling that she did not belong. After the presentation, she was invited to join the "Wolf pack" for dinner, but she could not sit at a table where alcohol was served.

Her predicament explained, Emil declared it a dry table and made it clear to anyone who wanted to sit with him that the wine would be skipped that night. Emil was including his valued colleague, and that was that. Without fuss or bother, this became the norm thereafter.

Emil Wolf was a great physicist. He was also a great human being.

—P. Scott Carney and Asma Al-Qasimi, University of Rochester

—Daniel F.V. James, University of Toronto

If you would like to make a memorial donation to the OSA Foundation in Emil Wolf's honor, please visit www.osa-foundation.org/give.