

MARIO J. MOLINA

I was born in Mexico City. I obtained a degree in chemical engineering from the Universidad Nacional Autónoma de México (UNAM) in 1965, and a Ph.D. in physical chemistry from the University of California, Berkeley in 1972. I came to MIT in 1989 with a joint appointment in the Department of Earth, Atmospheric and Planetary Sciences and the Department of Chemistry, and became MIT Institute Professor in 1997. Prior to joining MIT, I held teaching and research positions at UNAM, at the University of California, Irvine, and at the Jet Propulsion Laboratory of the California Institute of Technology.

My main work involves laboratory studies of chemical systems of importance in the atmosphere. In particular, I have conducted research on the chemistry of the stratospheric ozone layer and its susceptibility to human-made perturbations. In 1974 I published together with F. S. Rowland an article in the British magazine 'Nature' describing our research on the threat to the ozone layer from chlorofluorocarbon (CFC) gases that were being used as propellants in spray cans, as refrigerants, as solvents, etc. As a consequence, the production of these gases was eventually banned in developed countries.

More recently I have also been involved with the chemistry of the lower atmosphere, pursuing interdisciplinary work on urban and regional air pollution issues and working with colleagues from several disciplines on the problem of rapidly growing cities with severe air quality problems. I am currently heading a collaborative research and education program based at MIT aimed at addressing the complex and interrelated environmental issues spawned by the world's rapidly growing mega-cities and their impact on the global environment. Mexico City serves as the initial case-study for this program's research and educational activities.