In December of 1973, Professor F. Sherwood “Sherry” Rowland came home one evening from his lab at UC Irvine. Rowland’s wife Joan asked him how the work was going.

“The work is going very well,” he told her. “But it may mean the end of the world.”

More than twenty years later, in the fall of 1995, Professor Rowland received a call from Stockholm with the news that he had been awarded the Nobel Prize. The award was for Rowland and his post-doctoral student Mario Molina’s ground-breaking work as the first scientists to warn that chlorofluorocarbons (CFCs) released into the atmosphere from common household products like aerosol hairsprays and deodorants were depleting the earth’s vital ozone layer, which protects life on the planet from harsh solar radiation.

While a Nobel Prize would be considered a crowning moment for any scientist, Professor Rowland cites the most satisfying moment of his career as that afternoon in early December 1973, in his lab at UC Irvine when he and Molina looked at one another in a moment of stunned awareness of the consequences of their findings. Ever one for rigorous skepticism, Rowland insisted they replicate every calculation over a period of three days, searching for an error that would invalidate their results. There was no error.

“Mario and I realized this was not just a scientific question, but a potentially grave environmental problem involving substantial depletion of the stratospheric ozone layer,” Rowland said later. “Entire biological systems, including humans, would be at danger from ultra-violet rays.”

The research of Rowland and his group brought worldwide attention to the impact of human-contributed pollution on a planetary scale. It was simply game changing. His work was among the first to directly effect a global shift in policy, preceding the current debate on climate change. He was at the forefront of a movement that reshaped the academy’s approach to scientific research and teaching. And according to the Nobel award committee, Professor Rowland may have “saved the world from catastrophe.”