

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/276360845>

# A Tribute to Mario Molina

ARTICLE *in* THE JOURNAL OF PHYSICAL CHEMISTRY A · MAY 2015

Impact Factor: 2.69 · DOI: 10.1021/acs.jpca.5b03247 · Source: PubMed

---

READS

42

5 AUTHORS, INCLUDING:



V. Faye Mcneill

Columbia University

68 PUBLICATIONS 1,041 CITATIONS

SEE PROFILE



Kim Prather

University of California, San Diego

295 PUBLICATIONS 9,781 CITATIONS

SEE PROFILE

## A Tribute to Mario Molina



As guest editors of the Mario Molina Festschrift in *The Journal of Physical Chemistry A*, we are delighted to introduce you to a series of papers authored in honor of Professor Mario Molina by his friends, colleagues, and students. 2015 is an appropriate year to publish this issue, as it marks the 20-year anniversary of the Nobel Prize in Chemistry awarded to Mario J. Molina together with Paul J. Crutzen and the late F. Sherwood (Sherry) Rowland “for their work in atmospheric chemistry, particularly concerning the formation and decomposition of ozone”. Mario’s special issue closely follows an All-Star symposium celebrating his 70th birthday that was held in La Jolla, California. We are grateful to the many authors, including many of the symposium attendants, who contributed papers to Mario’s special issue. *The Journal of Physical Chemistry* is a most appropriate venue for a Mario Molina special issue as it boasts some 57 of his papers, of which 31 have been cited 31 times or more, and of which 8 have been cited 100 times or more. One of Mario’s signature scientific achievements, the elucidation of ClO dimer production pathways from ClO radicals, was published in the *Journal of Physical Chemistry* in 1987 and has been cited more than 500 times.

Mario Molina is a remarkable person, scholar, and scientist whose impact has been felt globally in several arenas of science, engineering, and policy. Mario is also the first Mexican American to be awarded a Nobel Prize in the sciences. His Nobel lecture and his biography are available at [http://www.nobelprize.org/nobel\\_prizes/chemistry/laureates/1995/molina-facts.html](http://www.nobelprize.org/nobel_prizes/chemistry/laureates/1995/molina-facts.html). Instead of presenting here a long list of Mario’s accomplishments, awards, and service, which are many and have been documented in many other biographies of Mario though the years including his Nobel lecture and biography, we have decided to highlight just a few of his many accomplishments, some of which are not always covered in his biographies.

Besides being a creative and brilliant chemist, Mario possesses a unique talent for communicating about science to policymakers and the public. Since his prescient calculations, performed in collaboration with his postdoctoral advisor, F. Sherwood Rowland, and published in 1974, gave us the first glimpse of the eventual role of chlorofluorocarbons (CFCs) in ozone depletion, he has tirelessly worked at communicating scientific results to those in power in order to catalyze positive change. His testimony has influenced policy from the Montreal Protocol to urban air quality in Mexico City. A recent example of this work was his role as chair of the AAAS panel on climate science, which authored the 2014 report “What We Know: The Risks, and Response to Climate Change”. The target audience of this report is the public, and, according to the *New York Times*, the report is “sharper, clearer and more accessible than perhaps anything the scientific community has put out to date.”

When you listen to the recent interview by Adam Smith, the chief scientific officer at Nobel media, that is available at [http://www.nobelprize.org/nobel\\_prizes/chemistry/laureates/1995/molina-interview.html](http://www.nobelprize.org/nobel_prizes/chemistry/laureates/1995/molina-interview.html), you will find that Mario is also an inspiration to people everywhere. He works tirelessly on public outreach, takes it most seriously, and makes time for it on his dense schedule. Many of us former students from the MIT years remember the students from grade-school coming to visit the laboratories of the 13th floor in the Ida Green building, surrounding Mario as he explained to them how an ozone generator worked.

Mario has also clearly had a major impact on the global academic atmospheric chemistry community. Besides leading the way with groundbreaking research on topics from ice chemistry to organic aerosol oxidation, and spearheading one of the largest collaborative field experiments in our community’s history (MILAGRO 2006, which involved hundreds of scientists from around the world to characterize the air of Mexico City), he has left a lasting legacy in the community thanks, in part, to the large number of alumni from his research group who have gone on to academia, industry, and government positions of prominence, and are following his example.

As you peruse this issue, you will see that it contains papers by scientists who are working in a broad, interdisciplinary field. There are exciting new findings regarding gas phase oxidation pathways, investigations elucidating the structure of molecular clusters, and contributions in the area of aerosol particles, their phase transitions, and their surfaces. We hope you will join us in celebrating Mario’s achievements by enjoying this collection of papers.

V. Faye McNeill

Columbia University

Kim Prather

University of California, San Diego

**Special Issue:** Mario Molina Festschrift

**Published:** May 14, 2015



**Franz Geiger**

Northwestern University

**Alan Bertram**

University of British Columbia

**Rainer Volkamer**

University of Colorado