

Sasha Madronich - CURRICULUM VITAE

Senior Scientist Emeritus, Atmospheric Chemistry Observations and Modeling,
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Employment History:

2022 - Affiliated Scientist, UV-B Monitoring Program, USDA/NREL/Colorado State U.

1997 - Senior Scientist, National Center for Atmospheric Research (NCAR), Boulder, Colorado. Emeritus since 2020.

1988 - 1997 Scientist II and III, NCAR.

1987 - 1988 Senior Research Associate, Atmospheric Sciences Research Center, State University of New York, Albany, New York, and Visiting Scientist, NCAR.

1985 - 1987 Scientist I, NCAR.

1981 - 1985 Chemical Physicist, AeroChem Research Labs., Princeton, New Jersey.

Other academic affiliations: U. Colorado, Texas A&M U., U. Alabama

Education:

1982 Ph. D. (Physical Chemistry) York University.

1978 M. S. (Electrical Engineering) Cornell University.

1975 M. Engr. (Engineering Physics) Cornell University.

1974 B. S. (Engineering Physics) Cornell University.

Research Interests: Atmospheric chemical, physical and radiative processes related to tropospheric air quality, regional and global climate, and stratospheric ozone. Modeling and interpretation of atmospheric observations. Lifecycles of atmospheric chemical compounds, including sources, transformations, and removal processes. Non-linear photochemistry of tropospheric Ox, HOx, NOx and hydrocarbons. Detailed chemical mechanisms and kinetics for the atmospheric oxidation of hydrocarbons and organic aerosol formation. Gas-aerosol-radiation interactions. Ultraviolet radiation in the atmosphere and its effect on the biosphere. Impacts of the export of urban pollution to regional and global scales. Development and evaluation of regional and global chemistry-transport models.

Professional Societies: American Geophysical Union, European Geophysical Union, American Physical Society, American Chemical Society, Royal Society of Chemistry.

Selected Professional Activities: Editorial boards, Climate and Sustainable Engineering section of the Engineering Journal [2025-]; J. of Atmospheric Chemistry [2009-]. Environmental Effects Assessment Panel (EEAP), United Nations Environment Programme [1989-2001; 2009-]. Program committee, Remote Sensing and Modeling of Ecosystems for Sustainability [2025]. Scientific consultant, ICF Consulting [1994-]. Secretary, Atmospheric Sciences Section of the American Geophysical Union [2010-2012]. Advisory committee, DOE Aerosol and Climate Initiative [2006-2011]. Steering committee of Scientific Research on Climate and Chemical Composition in the Yangtze River Delta Region [2006-2010]. Guest editor, Atmospheric Chemistry and Physics, special issue on MILAGRO [2006-2010]. Science steering committee, DOE Atmospheric Sciences Program [2005-2009]. Chair, scientific steering committee for Megacities Impacts on Regional and Global Environments (MIRAGE) [2002-2008]. Chief Scientist, Megacity Impacts on Local and Global Scales, Research Observations (MILAGRO) field campaign [2006]. Guest editor, Atmospheric Environment, special issue on Transport and Air Pollution [2005-2006]. Coordinating lead author, Intergovernmental Panel on Climate Change (IPCC) Special Report on Ozone and Climate [2003-2005]. Organizer, 13th International Symposium on Transport and Air Pollution, Boulder [2004]. Scientific organizing committee, 11th - 14th International Symposia on Transport and Air Pollution [2001-2005]. Scientific advisory group on UV monitoring, World Meteorological Organization (WMO)

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[1994-2003]. Convenor, 1st workshop on MIRAGE, Boulder [2002]. Steering committee for UV Monitoring, U.S. Department of Agriculture (USDA) [1990-2001]. Co-convenor, workshop on Modeling Chemistry in Cloud and Mesoscale Models, Boulder [2000]. Co-convenor, workshop on Mixing and Reactive Turbulence, Boulder [1999]. Convenor, session on UV Radiation Measurements and Modeling, International Radiation Symposium, Fairbanks [1996]. Steering committee, UV Issues, Department of Energy (DOE) [1992-1993]. Technical advisory panel on UV Monitoring, EPA [1992]. Convenor, Global Tropospheric Chemistry Program (GTCP) International Workshop, Boulder, Colorado [1989]. Review panels [EPA 1990, 1996, 2006; USDA 2001; NASA 2012].

Service within NCAR/UCAR: Appointments Review Group [1999-2001, 2007-2009; chair 2001, 2009; charter and bylaws committee, 2010-2011]. Workforce Management Plan subcommittee on Scientific and Research Engineer Appointments [2009]. Head, Theoretical Studies and Modeling section of ACD [1997-2008]. Assistant to the NCAR Director for Scientific Liaison [2002-2003]. Human Resources advisory council [2002]. Jury for Distinguished Achievement/Outstanding Performance award [1999-2001]. Geophysical Turbulence Program [1996-; chair, 2000]. Occasionally acting director ACD/ACOM.

Honors: NCAR Special Recognition Awards [2003; 2012]. Citations for Excellence for Contributions to the Protection of the Ozone Layer, United Nations Environment Programme [1990; 1995; 1998; 2012]. NASA Group Achievement Award for “Intercontinental Chemical Transport Experiment” [2007]. WMO/UNEP Recognition for contributing to the award of the Nobel Peace Prize to the IPCC [2007]. ISI Highly Cited [Geosciences, 1986-2006]. Distinguished Visiting Professor, Academia Mexicana de Ciencias [2001]. NCAR Outstanding Publication Award Nomination [2000]. NOAA Outstanding Publication Award [1998]. The Donnel Foster Hewett Lecturer, Lehigh University [1993]. Editor’s Citation for Outstanding Refereeing, Journal of Geophysical Research [1993]. Cornell National Scholar [1970-1974].

Post-Docs supervised: Bernard Aumont (U. Paris), Bernhard Mayer (U. Munich), Ken Minschwaner (New Mexico Tech. U.), Didier Hauglustaine (CNRS, France), Kathy Lantz (NOAA), Daniel Lack (NOAA), Craig Stroud (Environment Canada), Alma Hodzic (NCAR/ACOM), Zhang-Ho Shon (Dong-Eui U., Korea), Camille Mouchel-Vallon (U. Paris).

Graduate Students: Irina Petropavlovskikh (U. Brussels), Katja Dzepina (U. Colorado), Gerardo Palancar (U. Cordova), Maria-Isabel Micheletti (U. Rosario), Sophie Szopa-Laval (U. Paris), Zhuming Ying (York U.), Peifeng Yu (U. Colorado), Misti Levy-Zamora (Texas A&M U.), Mauro Morichetti (Marche Polytechnic U., Ancona). SOARS interns: Stephanie Rivale, Loraine Calame, Annareli Morales, Summer Sands, Roberto Cancel.

Publications: ≈250; cited over 27000 times, H-index=85 (Google Scholar, 22 May 2025).