

ANN MARIE GROVER CARLTON

Professor and Vice Chair, Department of Chemistry, University of California, Irvine, CA

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HISTORY OF EMPLOYMENT

Vice-Chair, Dept. of Chemistry, UC-Irvine	2020-2021; 2023-pres.
Fellow & Special Government Employee, White House Office of Science & Technology Policy	2021-2023
Professor of Chemistry, University of California, Irvine	2020-pres.
Associate Professor, Dept. of Chemistry, University of California, Irvine	2016-2020
Assistant Professor (promoted with tenure), Dept. of Environmental Sciences, Rutgers University, New Brunswick, NJ	2010-2016
Physical Scientist, U.S. EPA, Office of Research and Development, RTP, NC	2008-2010
Research Physical Scientist, NOAA, Air Resources Lab., Research Triangle Park, NC	2006-2008
Environmental Engineer, U.S. EPA—Region 2, New York, NY	1998-2002

DEGREES

Ph.D., Environmental Science, Rutgers University, New Brunswick, NJ	Oct. 2006
M.S., Bioenvironmental Engineering, Rutgers University, New Brunswick, NJ	October 1999
B.S., Bioresource Eng., Rutgers University-College of Engineering, Piscataway, NJ	May 1995

NARRATIVE OF RESEARCH EXPERIENCE

I am an atmospheric chemist working at the interface of discovery science and societal impact. My research advances understanding of multiphase atmospheric chemistry, with a focus on secondary organic aerosol formation, air quality, and climate-relevant aerosol properties. I have led and co-led large, multi-institutional field campaigns (e.g., SOAS, GOTHAM), integrating observations, modeling, and cross-sector collaboration to address complex environmental challenges. My work bridges research, policy, and application. As a Fellow at the White House Office of Science and Technology Policy, I contributed to interagency climate and environmental initiatives and helped translate scientific knowledge into national strategy. Earlier experience in environmental engineering and disaster response informs my focus on connecting science to real-world systems and decisions. Across these efforts, I emphasize interdisciplinary collaboration and the development of science that is both rigorous and actionable, contributing to improved air quality, climate understanding, and decision-making.

SHORT LIST OF KEY PUBLICATIONS [Google Scholar Profile](#)

†correspondent; *student or postdoctoral advisee; **undergraduate student advisee

1. R.-J. Huang[†] ... **A.G. Carlton** ... M. Glasius (2025) Secondary organic aerosol in urban China: A distinct chemical regime for air pollution studies, *Science*, 389(6763).
2. S. Rosanka^{*†} and **A.G. Carlton**[†] (2025) The Legacy of the Clean Air Act at a Crossroads, *Nature partner journal - Clean Air* 1, Art. No. 16.

3. A.M. Burns*, G.J. Chandler, K. Dunham, **A.G. Carlton**[†] (2023) The Data Gap: Air Quality Networks Miss Air Pollution from Concentrated Animal Feeding Operations, *Environ Sci Technol*, 57(49):20718–20725 **editor's highlight**
4. C. Wiedinmyer[†], ..., **A.G. Carlton**, R. Yokelson (2023) The Fire Inventory from NCAR version 2.5: an updated global fire emissions model for climate and chemistry applications, *Geosci Mod Dev*, 16, 3873–3891, 2023.
5. **A.G. Carlton**[†] et al. (2017), "Synthesis of the Southeast Atmosphere Studies: Investigating Fundamental Atmospheric Chemistry Questions", *Bull Amer Met Assoc* 99(3):547-567.
6. **A.G. Carlton**[†], et al. (2010) Model Representation of Secondary Organic Aerosol in CMAQv4.7, *Environ Sci Technol*, 44:8553-8560.
7. **A.G. Carlton**[†], et al. (2010) To what extent can 'biogenic' SOA be controlled?, *Environ Sci Technol*, 44:3376-3380.

HONORS

Fellow of the American Association for the Advancement of Science	2025
Fellow of the American Geophysical Union	2024
American Association for Aerosol Research Susanne V. Hering Award	2023
AAAS Revelle Fellow in Global Stewardship	2021-2022
AEESP Plenary Lecture at American Association for Aerosol Research	2020
ASCENT Award, Atmospheric Sciences of the American Geophysical Union	2017
Dennis M. Fenton Distinguished Graduate Alumni Award	2017
Rutgers University Board of Trustees Research Fellowship for Scholarly Excellence	2016
U.S.EPA –Science Advisory Board: Level II Science and Technology Achievement Award	2012
U.S.EPA National Honor Award (Gold Medal) for Air Quality Forecasting	2009

PROFESSIONAL SOCIETY MEMBERSHIPS

American Geophysical Union (AGU)
 American Association for the Advancement of Science (AAAS)
 American Association for Aerosol Research (AAAR)
 American Chemical Society (ACS)