

Paul A. Solomon, Senior Research Scientist, in EPA's National Exposure Research Laboratory

Exposure Methods and Measurements Division

[Mailing Address](#)

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Area of Expertise: Paul's areas of expertise and research interests include the development, evaluation, and application of analytical laboratory and particulate matter (PM) field measurement methods, with a focus coarse and fine PM as applied in a range of domestic and international research studies designed to characterize and quantify major, minor, and trace elements and species in air to elucidate source-receptor-exposure relationships and chemical and physical processes occurring in clean and polluted atmospheric environments.

More recently, his interests include the development, evaluation, and deployment of micro air pollution monitors (air pollution sensors) with an emphasis on PM mass, methane, black carbon, and other PM and gaseous components in air. Paul also has a strong desire to ensure that research results are communicated to the scientific, public, and policy arenas through coordination and publication of scientific papers in conferences, and books. Paul has nearly 100 journal publications, about 140 presentations, holds 4 patents in air sampling methods with 5 patents pending and has also organized 26 special journal issues and organized and chaired four major international air quality conferences.

Select Publications:

White, R.M., Paprotny, I., Doering, F., Cascio, W.E., Solomon, P.A., and Gundel, L.A. 2012. Sensors and 'Apps' for Community-Based Atmospheric Monitoring, Environmental Manager, Air & Waste Management Assoc. May, 36-40, plus supplemental material.

Solomon, P.A., Costantini, M., Grahame, T.J., et al. 2012. Air Pollution and Health: Bridging the Gap from Sources to Health Outcomes: Conference Summary. Air Quality, Atmosphere and Health, 5(1), 9-62, DOI: 10.1007/s11869-011-0161-4.

Solomon, P.A., Gehr, P., Bennett, D., Phalen, R., Loyda B. Méndez Rothen-Rutishauser, B., Clift, M., Brandenberger, C., and Mühlfeld, C. 2011. Macroscopic to Microscopic Scales of Particle Dosimetry: From Source to Fate in the Body. Air Quality, Atmosphere, and Health, 5(2), 169–187. DOI 10.1007/s11869-011-0167-y.

Solomon, P.A., Hopke, P.K., Froines, J., and Scheffe, R. 2008. Key Scientific and Policy- and Health-Relevant Findings from EPA's Particulate Matter Supersites Program and Related Studies: An Integration and Synthesis of Results. J. Air & Waste Manage. Assoc. 58(13), S1 – S92, 2008b.

Scheffe R.D., Solomon, P.A. et al. 2009. The National Ambient Air Monitoring Strategy: rethinking the role of national networks. J. Air & Waste Manage. Assoc., 59:579–590.

Snyder, E.; Watkins, T. ; Solomon, P.; Thoma, E.; Williams, R.; Hagler, G.; Shelow, D.; Hindin, D.; Kilaru, V. 2013. The Changing Paradigm of Air Pollution Monitoring. Feature Article, Environ. Sci. Tech. 47, 11369–11377.

View more research publications by [Paul Solomon](#).

Education:

- Ph.D., Analytical and Environmental Chemistry, University of Arizona, 1984
- B.S., Chemistry (Honors), University of Maryland, 1978

Professional Experience:

- Senior Research Scientist, USEPA, ORD, NERL, Las Vegas, NV 2005-present
- Research Scientist, USEPA, ORD, NERL, Las Vegas, NV 2000-2005
- Research Scientist, USEPA, ORD, NERL, Raleigh, NC 1998-2000
- Senior Environmental Scientist, Air Quality Unit, Technical and Ecological Services, Pacific Gas and Electric Company, San Ramon, CA 1988-1989 and 1997-1998
- Senior Environmental Scientist, Department of Research and Development, Environmental, Health, and Safety, Pacific Gas and Electric Company, San Ramon, CA 1990-1997
- Research Scientist, Environmental Engineering Science Department and Environmental Quality Laboratory, California Institute of Technology, Pasadena, CA 1984-1988
- Research Associate, Department of Chemistry, University of Arizona, Tucson, AZ 1978-1984
- Technical and Research Assistant, Nuclear and Analytical Chemistry Division, Department of Chemistry, University of Maryland, College Park, MD 1975-1978

Honors and Awards:

- Fellow AAAR, Elected Fellow to the American Association for Aerosol Research, 2013
- Science and Technological Achievement Awards, Level II (2004, 2006, 2010, 2011), Level III (2013) Honorable Mention (2004)
- EPA Gold Medal (2002)
- EPA Bronze Medals (2004, 2004, 2006, 2012)