

Senior Scientist and Scientific Executive

Conducting, promoting and enabling scientific inquiry and discovery

Accomplished scientist with more than 30 years experience in conducting, planning, leading, and participating in cutting-edge scientific projects.

Managed several multi-institution projects involving research aircraft and state-of-the art scientific instrumentation and numerical models. Interfaced with funding agencies to successfully secure grants for programs. Led groups of scientists in support of institutional mission and goals. Managed program at the National Science Foundation that distributed \$17 million to enable research in atmospheric chemistry. Successfully acquired grants for research group to participate in dozens of observational campaigns. Adept at operating a variety of commercial analytical instruments. Designed, developed, and deployed several research-grade analytical instruments that led to important findings on atmospheric composition.

- Published more than 115 scientific papers in peer-reviewed journals
- Received Ph.D. in Analytical Chemistry; B.A. in Chemistry & Mathematics
- Planned and managed scientific projects. Activities included securing funding for needed facilities, developing interest within the community, and getting commitments from participants and federal funding agencies
- Filled community scientific needs by designing new instruments that led to improved understanding of atmospheric chemistry
- Supported and mentored junior staff members to enable success in their scientific careers

Scientific Project Management • Federal Agency Program Management • Development and Deployment of New Instrumentation • New and Important Scientific Findings From Research • Scientific Leadership and Mentoring • Securing Grants for Scientific Activities • Community and Institutional Service to Enable Scientific Activities and Mission

Professional History

University of Colorado, Boulder, Colorado Senior Research Associate

2013-present

Improved existing instrumentation and developed new techniques to quantify the composition of the troposphere and to improve understanding of atmospheric chemical processes. Advised and mentored undergraduate and graduate students. Provided service within the department and the institution to support educational and scientific activities. Sought to improve communication and collaboration across organizational units.

- Deployed improved instrumentation to study atmospheric composition and chemistry in environments that were poorly understood
- Advised and mentored students and junior faculty
- Worked across organization boundaries to enhance research outcomes

National Science Foundation, Arlington, Virginia**2003-2004****Program Officer**

Managed the Atmospheric Chemistry program that funds a wide variety of research throughout the community. Program provides about \$17 million annually to university professors, national laboratory scientists, and private company researchers. Participated in interagency committees to optimize support of key scientific activities. Served on internal committees to provide guidance to support related scientific activities.

- Managed multi-million dollar grant program to enable community research
- Interfaced with managers of other grant programs to support multi-disciplinary research activities
- Communicated and collaborated with program officers in other federal agencies supporting scientific research to enhanced investments of both organizations
- Contributed to success by assisting in the management and execution of cross-organizational projects

National Center for Atmospheric Research (NCAR), Boulder, Colorado**1983-2012****Senior Scientist**

Conducted and led research in the laboratory, field, and using numerical methods to improve understanding of chemical processes that affect atmospheric composition and air quality. Research included kinetic and spectroscopic studies to determine quantities of relevance to understanding atmospheric photochemistry. Developed and improved instrumentation for measurement of atmospheric composition from ground-based and aircraft platforms. Instruments widely used by members of community. During tenure, positions ranged from prestigious Advanced Study Program post-doctoral fellow through the scientist ladder to the top level of Senior Scientist. Managed and led small to medium groups in day-to-day research activities, and larger groups in field measurement campaigns. Activities included scientific planning and justification, interfacing with upper management and funding agencies, and enabling scientific reporting of results. Scientific service within the organization and the overall scientific community. Well-connected and known within the atmospheric chemistry community.

- Conducted laboratory research related to atmospheric composition and chemistry; many findings and discoveries remain recommended at present
- Developed and improved instrumentation for atmospheric measurements; outcomes led to improved understanding of atmospheric oxidation chemistry
- Managed divisional entities in research activities that helped further understanding of factors controlling reactive species in the atmosphere.
- Planned, organized, and led complex field measurement campaigns. Successfully secured grant support for these activities.