

## Anderson Research Group

Chemistry and physics of climate and Earth system change

---

### JAMES G. ANDERSON

#### Principal Investigator



James G. Anderson was born in Spokane, Washington. He earned his B.S. in Physics from the University of Washington and his PhD in Physics and Astrogeophysics from the University of Colorado. He joined the faculty of Harvard University in 1978 as the Robert P. Burden Professor of Atmospheric Chemistry; in 1982 he was appointed the Philip S. Weld Professor of Atmospheric Chemistry.

Anderson served as Chairman of the Department of Chemistry and Chemical Biology from July 1998 through June 2001. He was elected to the National Academy of Sciences, the American Philosophical Society and the American Academy of Arts and Sciences, and a frequent contributor to National Research Council Reports. He is a Fellow of the American Geophysical Union and the American

Association for the Advancement of Sciences Arthur L. Day Prize and Lectureship; the E.O. Lawrence Award in Environmental Science and Technology; the American Chemical Society's Gustavus John Esselen Award for Chemistry in the Public Interest; and the University of Washington's Arts and Sciences Distinguished Alumnus Achievement Award. In addition, he received the United Nations Vienna Convention Award for Protection of the Ozone Layer in 2005; The United Nations Earth Day International Award; Harvard University's Ledlie Prize for Most Valuable Contribution to Science by a Member of the Faculty; and the American Chemical Society's National Award for Creative Advances in Environmental Science and Technology.

The Anderson research group addresses three domains in the physical sciences: (1) chemical reactivity viewed from the microscopic perspective of electron structure, molecular orbitals and reactivities of radical-radical and radical-molecule systems; (2) chemical catalysis sustained by free radical chain reactions that dictate the macroscopic rate of chemical transformation in Earth's stratosphere and troposphere; and (3) mechanistic links between chemistry, radiation, and dynamics in the atmosphere that control climate.

#### CONTACT INFO

Anderson Group/CCB  
Harvard University  
12 Oxford Street,  
Link Bldg.

Cambridge, MA 01238

Tel: (617) 495-5922

Fax: (617) 495-4902

Email:

[anderson@huarp.harvard.edu](mailto:anderson@huarp.harvard.edu)

#### Research Areas

[Feedbacks: Mapping the Greenland Glacial System](#)

[Climate Change & Atmospheric Chemistry](#)

#### Publications

[Scalar Prediction in Climate Forecasting Using Satellite Data](#)

[Pump-enhanced difference-frequency generation at 3.3  \$\mu\text{m}\$](#)

[Validation of the Harvard Lyman- \$\alpha\$  in situ water vapor instrument: Implications for the mechanisms that control stratospheric water vapor](#)

[View the full list](#)



Harvard University  
12 Oxford Street, Link Bldg.  
Cambridge, MA 02138

Fax: 617-495-4902  
[info@huarp.harvard.edu](mailto:info@huarp.harvard.edu)

Copyright © 2012 by the President and Fellows of Harvard College. [Privacy Policy](#)

[Digital Loom](#) | [Login](#)