

## Yuan Gao

Professor

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### EDUCATION:

B.S. Chemistry, Nan Kai University, China, 1981

M.S. Oceanography (Chemical Oceanography focus), University of Rhode Island, 1990

Ph.D. Oceanography (Chemical Oceanography focus), University of Rhode Island, 1994

### EMPLOYMENT HISTORY:

Rutgers University Newark, Department of Earth and Environmental Sciences, Assistant Professor, Associate Professor, Professor, 2005 – present.

Montclair State University, Department of Earth and Environmental Studies, Associate Professor, 2003-2005.

Princeton University, Program in Atmospheric and Oceanic Sciences, Research Scientist, 2000-2003.

Rutgers University New Brunswick, Institute of Marine and Coastal Sciences, Postdoctoral Associate, Assistant Research Professor, Associate Research Professor, 1994 – 2003.

### RESEARCH AREAS:

Atmospheric aerosols and precipitation, air-sea chemical exchange, urban air pollution.

### CURRENT RESEARCH PROJECTS AS PRINCIPAL INVESTIGATOR:

“Quantifying atmospheric iron properties over West Antarctic Peninsula,” sponsored by NSF Antarctic Ocean and Atmospheric Sciences Program, \$356K, 2014-2018.

“Collaborative Research: GEOTRACES Arctic Section: Sampling and analyses of atmospheric deposition,” sponsored by NSF Chemical Oceanography Program, \$329K, 2014-2018.

“Rutgers Newark Urban Air Quality Observatory Initiative,” \$60K, 2017-2018, Rutgers University Newark Chancellor’s Seed Grant Program.

### SELECTED PUBLICATIONS AS LEAD AUTHOR:

Gao, Y., P. Mukherjee, and R. Jusino-Atresino, The air-coastal sea chemical exchange: A case study on the New Jersey coast, *Aquatic Geochemistry*, DOI 10.1007/s10498-015-9285-8, 2016.

Gao, Y., G. Xu, J. Zhan, J. Zhang, W. Li, Q. Lin, L. Chen, and H. Lin, Spatial and particle-size distributions of atmospheric dissolvable iron in aerosols and its input to the Southern Ocean and coastal East Antarctica, *JGR-Atmospheres*, **118**, 12,634-12,648, DOI: 10.1002/2013JD020367, 2013.

Gao, Y., J.R. Anderson, and X. Hua, Dust characteristics over the North Pacific observed

- through shipboard measurements during the ACE-Asia Experiment, *Atmospheric Environment*, **41**, 7907-7922, doi:10.1016/j.atmosenv.2007.06.060, 2007.
- Gao, Y., S-M Fan, and J.L. Sarmiento, Aeolian iron input to the ocean through precipitation scavenging: A modeling perspective and its implication for natural iron fertilization in the ocean, *JGR-Atmospheres*, **108**, 4221, doi:10.1029/2002JD002420, 2003.
- Gao, Y., Atmospheric nitrogen deposition to Barnegat Bay, *Atmospheric Environment*, **36 (38)**, 5783-5794, 2002.
- Gao, Y., Y.J. Kaufman, D. Tanre, D. Kolber, and P.G. Falkowski, Seasonal distributions of aeolian iron fluxes to the global ocean, *Geophysical Research Letters*, **28**, 29-32, 2001.
- Gao, Y., R. Arimoto, R. A. Duce, M. Y. Zhou, L. Q. Chen, X. Y. Zhang, G. Y. Zhang, and Z. S. An, Temporal and spatial distribution of dust and its total deposition to the China Sea, *Tellus*, **49B**, 172-189, 1997.
- Gao, Y., R. Arimoto, R. A. Duce, L. Q. Chen, M. Y. Zhou, and D. Y. Gu, Atmospheric non-sea-salt sulfate, nitrate, and Methanesulfonate over the China Sea, *Journal of Geophysical Research*, **101**, 12,601-12,611, 1996.
- Gao, Y., R. Arimoto, M. T. Zhou, J. T. Merrill, and R. A. Duce, Relationships between the dust concentrations over eastern Asia and the remote North Pacific, *Journal of Geophysical Research*, **97**, 9867-9872, 1992.

#### **SELECTED PUBLICATIONS BY STUDENTS WITH GAO AS PRIMARY ADVISOR:**

- Jusino-Atresino, R., J. Anderson and **Y. Gao**, Ionic and Elemental Composition of PM<sub>2.5</sub> Aerosols over the Caribbean Sea in the Tropical Atlantic, accepted with minor revision, *Journal of Atmospheric Chemistry*, DOI 10.1007/s10874-016-9337-5, 2016.
- Mukherjee, P. and **Y. Gao**, Efficiency of Organic Ligands in Adsorptive Dissolution and Photo Reductive Dissolution of Hematite, *International Journal of Environmental Science and Technology*, **13 (5)**, DOI 10.1007/s13762-016-0975-6, 1195-1206, 2016.
- Xu, G. and **Y. Gao**, Characterization of marine aerosol and precipitation through shipboard observations on the transect between 31°N-32°S in the west Pacific, *Atmospheric Pollution Research*, **6**, 154-161, 2015.
- Zhan, J., and **Y. Gao**, Impact of summertime anthropogenic emissions on atmospheric black carbon at Ny-A°lesund in the Arctic, *Polar Research*, **33**, 21821, <http://dx.doi.org/10.3402/polar.v33.21821>, 2014.
- Xu, G., **Y. Gao**, Q. Lin, W. Li, and L. Chen, Characteristics of water-soluble inorganic and organic ions in aerosols over the Southern Ocean and coastal East Antarctica during austral summer, *Journal of Geophysical Research – Atmospheres*, **118**, 13,303-13,318, DOI: 10.1002/2013JD019496, 2013.
- Roberts-Semple\*, D., F. Song, and **Y. Gao** Seasonal characteristics of ambient nitrogen oxides and ground-level ozone in metropolitan northeastern New Jersey, *Atmospheric Pollution Research*, **3 (2)**, 247-257, doi: 10.5094/APR.2012.027, 2012.
- Song, F., and **Y. Gao**, Size distributions of trace elements associated with ambient particular matter in the affinity of a major highway in the New Jersey-New York metropolitan area, *Atmospheric Environment*, **45**, 6714-6723, 10.1016/j.atmosenv.2011.08.031, 2011.

#### **SELECTED MAJOR UNIVERSITY SERVICES:**

Interim Chair, Chair, Department of Earth and Environmental Sciences, Rutgers University Newark, 2015-2017.

Member of Rutgers University Newark Chancellor's Research Advisory Committee, 2015-present.