

DENISE L. MAUZERALL

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PROFESSIONAL EXPERIENCE

Princeton University

Professor of Environmental Engineering and International Affairs (2011-present)

School of Public and International Affairs and Civil and Environmental Engineering Department

Associate Professor of Environmental Engineering and International Affairs(2009-2011)

Associate Professor of Public and International Affairs (with tenure),

Woodrow Wilson School of Public and International Affairs (2006 - 2009)

Assistant Professor of Public and International Affairs, Woodrow Wilson School (1999- 2006)

Affiliate faculty, Geosciences Department (1999 - present)

Affiliate faculty, Atmospheric and Ocean Science program (2003 - present)

Affiliate faculty, High Meadows Environmental Institute (formerly PEI) (1999 - present)

Affiliate faculty, Civil and Environmental Engineering Department (2003 - 2009)

Affiliate faculty, Andlinger Center for Energy and Environment (2008 - present)

Affiliate faculty, Center for Contemporary China (2019-present)

Stanford University, Visiting Scholar (January – March 2016)

National Center for Atmospheric Research, Boulder, CO

Visiting Scientist, Atmospheric Chemistry Division (Summer 1999)

Post-doctoral Fellow, Advanced Study Program (1996-1998)

United States Environmental Protection Agency, Washington D.C.

Program Manager, Global Change Division, Office of Air and Radiation (1989-1990)

Environmental Consulting

Chief Environmental Engineer, Bruce Company, Washington D.C. (1988-1989)

Chemist, ICF Technology Inc., Washington D.C. (1985-1987)

EDUCATION

Harvard University

Ph.D., Atmospheric Chemistry, Earth and Planetary Science Department, 1996

Dissertation: Influence of fossil fuel combustion and biomass burning on tropospheric ozone.

Advisor: Daniel J. Jacob

M.A., Atmospheric Chemistry, Earth and Planetary Science Department, 1992

Stanford University

M.S., Environmental Engineering, 1988

Brown University

Sc.B., with honors, Chemistry, 1985

University of Sussex, exchange student, 1984

HONORS & PROFESSIONAL SERVICE

Executive Advisory Board, Institute for Advanced Sustainability Studies, Potsdam, Germany (2017-present)
Founding Co-Editor in Chief, *Sustainable Horizons* journal 2021-present
Editorial Board, *Advances in Applied Energy* journal 2020-present

Highly cited paper (top 1% of citations for given field in July/August 2021) noted for:

- Air pollutant emissions from Chinese households: A major and underappreciated ambient pollution source, *PNAS*, 2016 (for Geosciences).
- Managing Nitrogen for Sustainable Development, *Nature*, 2015, (for Environment/Ecology)
- Global crop yield reductions due to surface ozone exposure: 1. Year 2000 crop production losses and economic damage, *Atmospheric Environment*, 2011, (for Geosciences)

Highly cited paper (top 1% of citations for given field in December 2020) noted for:

- Air pollutant emissions from Chinese households: A major and underappreciated ambient pollution source, *PNAS*, 2016 (for core collection).
- Managing Nitrogen for Sustainable Development, *Nature*, 2015, (for core collection)
- Global crop yield reductions due to surface ozone exposure: 1. Year 2000 crop production losses and economic damage, *Atmospheric Environment*, 2011, (for core collection)

Highly cited paper (top 1% of citations for given field in July/August 2019) noted for:

- Air pollutant emissions from Chinese households: A major and underappreciated ambient pollution source, *PNAS*, 2016 (for Geosciences).
- Managing Nitrogen for Sustainable Development, *Nature*, 2015, (for Environment/Ecology).
- Energy and Human Health, *Annual Review of Public Health*, 2013 (for Social Sciences).
- Global crop yield reductions due to surface ozone exposure: 1. Year 2000 crop production losses and economic damage, *Atmospheric Environment*, 2011, (for Geosciences).

Highly cited paper (top 1% of citations for given field in Sept/Oct 2018) noted for:

- Air pollutant emissions from Chinese households: A major and underappreciated ambient pollution source, *PNAS*, 2016 (for Geosciences).
- Vehicle Emissions as an Important Urban Ammonia Source in the United States and China, *Env Sci and Tech*, 2017 (for Environment/Ecology)
- Managing Nitrogen for Sustainable Development, *Nature*, 2015, (for Environment/Ecology).
- Global crop yield reductions due to surface ozone exposure: 1. Year 2000 crop production losses and economic damage, *Atmospheric Environment*, 2011, (for Geosciences).
- Energy and Human Health, *Annual Review of Public Health*, 2013 (for Social Sciences).

Science Advisory Board, U.S. Environmental Protection Agency, chartered member (2014-2017)

Executive Committee, Andlinger Center for Energy and Environment, Princeton University, (2018-present)

Executive Committee, Program in Technology & Society: Energy Track (2017 – present)

Executive Committee, Chadha Center for Global India, Princeton University (2019 – present)

IMPACT award, Princeton Office of Sustainability, Princeton University (2016)

Advisory Board, PANDA, Partnership with chiNa on space DAta, European Commission project (2013-2016)

Science Advisory Board, U.S. Environmental Protection Agency, Advisory Council on Clean Air Compliance (2010-2013)

Executive Committee, Princeton Institute for International and Regional Studies (2011-2015)

Advisory Board, ECLAIRE, Effects of climate change on air pollution impacts and response strategies for European ecosystems, European Commission project (2011-2015)

Assistant Editor, New Directions, *Atmospheric Environment* (2011-2012)

Editorial Board, *Atmospheric Environment* (2008-present)

Executive Committee, Cooperative Institute for Climate Science, Princeton University and NOAA Geophysical Fluid Dynamics Laboratory (2006 - 2017)

Science Steering Committee, International Geosphere Biosphere Program (IGBP), Analysis, Integration and Modeling of the Earth System (including human impacts) (2005 - 2010)

Intergovernmental Panel on Climate Change (IPCC) contributing author.
The IPCC shared the Nobel Peace Prize with Vice President Al Gore (2007)

National Research Council / National Academy of Science, Committee on Air Quality Management in the United States. (2/2001- 4/2004)

NASA New Investigators Program grant (2002-2006)

Advanced Study Program Postdoctoral Fellowship, NCAR. (1996-1998)
Provided 2 years of unconstrained research funding.

AAAS Congressional Science Fellowship (declined) (1996)

NASA Graduate Student Fellowship in Global Change Research (1993 - 1996)
Provided stipend, research and travel funds for 3 years of doctoral research.

Invited participant, Atmospheric Chemistry Conference for Emerging Senior Scientists (ACCESS) and Gordon Conference in Atmospheric Chemistry (June 1995)

Harvard University Certificate of Distinction in Teaching (1992 - 1993)

Harvard University Levinson Teaching Award nomination (1993)

Graduate Student Fellowship, U.S. Dept. of Education, tuition and stipend (1991 - 1993)

Stanford University School of Engineering Fellowship, tuition. (1987 - 1988)

Elected to Sigma Xi (1985)

Sc.B. awarded with departmental honors, Brown University (1985)

TEACHING

Princeton University

WWS594s *Climate Change: Science and Policy* (Spring 2014, 2015, 2018, 2020, 2021, F2021)

CEE/ ENV334 /WWS475 *Global Environmental Issues* (Spring 2010, Spring 2011, Fall 2012, Fall 2013, Fall 2014, Fall 2016, Fall 2017, Fall 2018, Fall 2020, Fall 2021)

WWS402-S04 *Policy Task Force: Sustainability at Princeton University: Lessons for Campus and the World* (Spring 2017)

WWS591e	<i>Policy Workshop: State Policies on Hydraulic Fracturing</i>	(Fall 2014)
WWS591g	<i>Policy Workshop: Climate Change: Methane Mitigation Strategies</i>	(Fall 2012)
WWS591e	<i>Policy Workshop: Post Copenhagen Climate Change Initiatives: Fast Action Mitigation Strategies</i>	(Fall 2010)
WWS350	<i>The Environment: Science and Policy</i>	(Spring 2013)
WWS594S	<i>Introduction to Science, Technology and Environmental Policy: Energy and climate policy analysis</i> (with Frank von Hippel)	(Spring 2011)
FRS136	<i>Science and Policy of Global Environmental Issues</i>	(Spring 2010)
WWS/ENV334	<i>Global Environmental Issues</i>	(Spring 2009)
FRS136	<i>Living in a Polluted Greenhouse</i>	(Spring 2009)
WWS591e	<i>Policy Workshop: Integrating Clean Air and Greenhouse Gas Mitigation Strategies in Future Environmental Policy: A Focus on Black Carbon</i>	(Fall 2008)
WWS 402d	<i>Development of Policy Initiatives for the Sustainable Use of Energy at Princeton University</i>	(Spring 2007)
WWS 591a	<i>Policy Workshop: Climate Change, State Initiatives, and Coastal Hazards: Mitigation and Adaptation Strategies for New Jersey</i>	(Fall 2006)
WWS 402e	<i>Sustainable Development – Can We Do It?</i>	(Spring 2003)
WWS402e	<i>Air Pollution, Climate Change and Energy: How China Matters</i>	(Spring 2001)
WWS402f	<i>Air Pollution in India and China: Thinking Globally, Acting Locally</i>	(Spring 2000)
WWS475	<i>Global Environmental Issues</i>	(Spring 2003, Spring 2005, Fall 2005)
WWS584	<i>The Use of Science in Environmental Policy</i>	(Fall 2004, Spring 2006, 2010)
WWS586e	<i>Global Environmental Issues: Science and Policy</i>	(Spring 2005)
WWS588	<i>Issues in Science, Technology and Environmental Policy</i>	(Spring 1999)
WWS589	<i>Methods in Science, Technology and Environmental Policy</i>	(Fall 1999, 2000 & 2002)
WWS591d	<i>Environmental Diplomacy</i> (with Daniel Reifsnnyder)	(Fall 1999)

Harvard University, Harvard College, Teaching Fellow

Environmental Science and Public Policy, Profs. M.B. McElroy and W. Clark (Fall and Spring 1993)
Atmospheric Chemistry, Department of Earth and Planetary Science, Prof. D.J. Jacob (Spring 1992)
The Atmosphere, Undergraduate core program, Professor M.B. McElroy (Fall 1991)

Brown University, Department of Chemistry, Teaching Assistant

Honors Chemistry. First year honors course, Professor P. Rieger (Fall 1983)

Princeton Doctoral Students (primary adviser)

Xiaoping Wang (Ph.D. WWS 2004), now World Bank staff.
 Junfeng Liu, (Ph.D. WWS 2006), now Associate Professor with tenure, Peking University, China
 Eri Saikawa, (Ph.D., WWS, September 2010), now Associate Professor, Emory University
 Shiri Avnery, (Ph.D., WWS, 2012), founder Thistle Co.
 David Kanter, (Ph.D., WWS, 2014), now Associate Professor, New York University;
 Wei Peng, WWS, PhD 2016, now Assistant Professor, Penn State University
 Yue Qin, WWS, PhD 2017, now Assistant Professor, Peking University, Beijing, China
 Xiaoyuan (Charles) Li, CEE, PhD 2018, consultant Energy and Environmental Economics Inc., San Francisco, CO
 Junnan Yang, (PhD WWS 2019), now Boston Consulting Group, China
 Yixin Guo, WWS, (PhD WWS 2019), now joint post-doc at Peking University and IIASA, Vienna Austria
 Xu Chen, (PhD SPIA 2020), now post-doc Princeton University
 Zhongshu (Josh) Li, (PhD SPIA 2020), now Boston Consulting Group, China
 Liqun Peng, WWS, G5
 Shangwei Liu, WWS, G4
 Xiangwen Fu, WWS, G4

Rohit Gupta, WWS, G3
Malini Nambiar, WWS, G3
Yujie Wu, SPIA, G2
Ned Downie, G1
Jieyi Lu, G1

Princeton Doctoral Students (committee member and/or PEI-STEP adviser)

Shardul Agrawala (PhD, WWS, 1999), now climate change administrator, Environment Directorate, OECD, Paris, France.
Shangping, Xu (PhD, CEE 2004, PEI-STEP certificate student), now Associate Professor of Geosciences, University of Wisconsin – Milwaukee.
Yan Zhang, (PhD, CEE, September 2010, PEI-STEP certificate student), now engineering technology entrepreneur.
Brian Ellis (STEP-PEI fellow 2010-2012) Associate Professor, University of Michigan
David Miller, (PhD CEE, 2013), now Environmental Defense Fund postdoctoral fellow
Megan Konar, (PhD CEE, 2012). Now Associate Prof., Dept of Civil and Environmental Engineering, University of Illinois
Carole Dalin, (PhD, CEE, 2014, PEI-STEP certificate student), now Associate Professor, Institute of Sustainable Resources, University College London
Matt Reid, (PhD, CEE, 2014, PEI-STEP certificate student), now Assistant Prof, Cornell Univ.
Mary Kang, (PhD, CEE, 2014, PEI-STEP certificate student), now Assistant Prof, McGill Univ
Xinwo Huang, (PhD, CEE, 2016, PEI-STEP certificate student)
David Pal, (PhD, CEE, 2016, PEI-STEP certificate student)
Cynthia Gerlein, (PhD, CEE, 2017; PEI-STEP certificate student), now Project Scientist, Lawrence Berkeley National Lab
Ryan Edwards, (PhD CEE, 2018; PEI-STEP certificate student), now AAAS Fellow, US Congress
Da Pan, (PhD CEE, 2020 PEI-STEP certificate student), now post-doc Colorado Univ – Fort Collins
Yiheng Tao, G6, CEE, PEI-STEP certificate students
Glen Chua, G4, AOS program, HMEI-STEP certificate student

Postdoctoral Fellows

Vaishali Naik (post-doc 2003-2006, associate research scholar 2006-2007). Now: Project Scientist, Geophysical Fluid Dynamics Laboratory, Princeton, NJ
Jason West (research associate, 2004-2006), Professor, Environmental Science and Engineering Department, School of Public Health, University of North Carolina, Chapel Hill, NC.
Monika Kopacz, (post-doc 2009-1010) Program Manager, Climate Program Office, NOAA.
Yuanyuan Fang (post-doc 2010-2012), statistician, Bay Area Air Quality Management District, San Francisco, CA
Dan Westervelt, post-doc 2013-2015, Associate Research Scientist, Lamont-Doherty Earth Observatory, Columbia University
Xin Zhang, post-doc 2012-2015, Now Associate Professor, University of Maryland Center for Environmental Science
Hongxun Liu, research associate 2018-2020, Now: Associate Professor, Xi'an Jiaotong University, Xi'an China
Disha Sharma, post-doc 2019-present
Mingwei Li, post-doc 2019-present
Mi Zhou, post-doc 2021-present
Jing Liang, post-doc 2021-present

Senior Thesis Advisees:

Maha Qasim (CEE/WWS, 2007)

Susan Lyons (WWS, 2008)

Lyra Hass, (Politics, 2008)

Robert Weiss, (WWS, 2009). **Peter W. Stroh '51 Prize for best environmental thesis, as nominated by any department and the Richard H. Ullman Prize for best Woodrow Wilson School thesis on US foreign policy at Princeton.**

Virginia Maloney, (WWS, 2010).

Brooks Barron, (WWS, 2011). American Public Perception of Climate Change. **Peter W. Stroh '51 Environmental Thesis Prize.** The Princeton Environmental Institute (PEI) awards the Stroh Prize annually to a senior from any department who has written the best thesis on an environmental topic.

Lily Fu (WWS, 2011) Clearing the Air: Reducing air pollution from the electric power sector in China.

Kayley McGrath (WWS, 2012) Integrating renewable energy into the United States' electric grid: Identifying and removing the barriers to sustainable generation

Caroline Jo (WWS, 2013), **T.A. Barron Environmental Leadership Prize.** Leveraging private interests for the public good: Foreign actors and non-institutionalized citizen activism in China's environmental governance

Andrew Calof (CBE, 2014), A feasibility analysis of Princeton University investing in a waste-to-energy facility.

Bianca DiGiovanni (CEE, 2015) Spatial variations in New Jersey air quality: Implications for environmental justice.

Samuel (Ren) Scott (WWS, 2015) The German example: How the United States can learn from the rapid expansion of the German solar energy program.

Alex Bi (CEE, 2017), Spatial optimization of concentrating solar power productivity in China: A statistical and modeling approach

Emily Chen (CEE, 2017), Modeling the effect of air pollution on hospitalizations in Sao Paulo City (2000-2010).

Olivia Davis (WWS, 2018), Shedding a Light on U.S. Federal Solar Energy Policy: Contrasting the Obama and Trump Administration' Initiatives, Impacts and Motives in the Search for a Bipartisan Solution.

Mark Goldstein (WWS, 2018), **Woodrow Wilson Senior Thesis Prize** for a thesis of unusual merit, and the **Princeton Environmental Institute book prize in Social Sciences** for "Climate Change in American National Parks: Impacts, Management, Communication, and Public Perception."

Charles Kalvaria (CEE, 2018), Storm Surge, Zoning Law, and Environmental Policy: Protecting New Orleans and Houston

Stuart Pomeroy (WWS, 2018), Winds of Change: Opportunities for Offshore Wind-Energy Integration and Development in the Northeast United States.

Cadee Qiu (WWS, 2018), An Inconsistent Truth: China's Domestic and Export Policies on Renewable and Coal Energy Technologies

Naomi Cohen-Shields (CEE, 2020), Mapping Air Pollution Across China: An Analysis of Fine Particulate Matter (PM_{2.5}) and Surface Ozone Pollution (2014 – 2019) with Correlating Provincial Socioeconomic Levels (2018). Environmental Studies Book Prize, W. Taylor Thomas Jr. Prize, <https://environment.princeton.edu/news/naomi-cohen-shields-senior-thesis-explores-who-benefits-as-china-cleans-its-air/>

Junior Paper Advisees:

Advised as part of the Spring 2017 WWS junior task force:
Sustainability at Princeton University: Lessons for Campus and the World.

Cecilia Shang
Olivia Davis
Colton Hess
Pleasant Garner
Stephen Bork
Anthony Sgro
Adam Bradley
Stuart Pomeroy

ADMINISTRATIVE RESPONSIBILITIES AT PRINCETON

Princeton University Research Board	(Fall 2020 – Spring 2024)
Faculty Chair, Presidential CO ₂ Emission Reduction Criteria Committee	Fall 2015
Director / Acting Director, WWS Science, Technology and Environmental Policy (STEP) program	(1999–2000; Spring 2010, 2013-2014; 2017-2018)
Director of Graduate Studies, WWS Doctoral Program	(2012-2015; 2016-present)
Chair, STEP Doctoral Program	(1999 – 2001; 2008-present)
STEP seminar series convener	(1999-2001; 2002-2003; 2004-2007; 2008-2011; 2012-2015; 2016-present)
Princeton Resources Committee	(2014-2017)
WWS Faculty Council, ex officio	(2012-present)
Princeton Committee on Sustainability	(2008 – present)
Princeton Sustainability Steering Council	(2013-present)
Andlinger Center for Energy and Environment, Corporate Affiliates Advisory Council	(2012-)
Executive Committee, Andlinger Center for Energy and Environment	(2018-2021)
Executive Committee, Princeton Institute for International and Regional Studies	(2011-2015)

Chair, WWS Scholars in the Nations Service, program review committee	(2012-2014)
Woodrow Wilson School Faculty Council	(Fall 2009–Spring 2010)
Woodrow Wilson School Senior Thesis Prize Committee	(1999, 2000)
Masters of Public Policy, Admissions Committee, WWS	(1999, 2000, 2010, 2011)
Masters of Public Affairs Admissions Committee, WWS	(2002, 2003, 2005, 2006)
University Committee on Libraries and Computing	(2002 - 2005)
University Committee on Course of Study	(2008 – 2011)
Woodrow Wilson School undergraduate committee	(2006, 2007, 2010, 2011)
Scholars in the Nations Service – selection committee	(2006, 2008, 2010, 2011)
Faculty fellow, Mathey College	(2003 - present)
WWS/CEE faculty search committee	(2007-2008)
Andlinger Center Director search committee	(2007-2009)
Co-chair, WWS/SEAS joint graduate degree exploratory committee	(2009)

PROFESSIONAL ACTIVITIES

Co-Editor in Chief

Sustainable Horizons

Editorial Board

Atmospheric Environment

Advances in Applied Energy

Journal Referee

Science;

Nature;

Nature – Climate Change;

Nature- Sustainability;

Proceedings of the National Academy of Science;

Journal of Geophysical Research - Atmospheres;

Geophysical Research Letters;

Environmental Research Letters;

Atmospheric Environment;

Environmental Science and Technology;

Annual Review of Energy and the Environment;

Environmental Management;

Science of the Total Environment;

Global Environmental Change;

Journal of Atmospheric Science;

Journal of Atmospheric Chemistry;

Atmospheric Chemistry and Physics;

The Royal Society, Proceedings B.

PLOS One

Grant Reviewer

National Aeronautics and Space Association (NASA);

National Oceanographic and Atmospheric Administration (NOAA);

*National Science Foundation (NSF);
U.S. Environmental Protection Agency;
Research Grants Council of Hong Kong.*

Book Reviewer

*National Academy of Sciences/ National Research Council;
Prentice-Hall;
Princeton University Press.
The Royal Society, London, U.K.*

Conference Session Chairperson / Convener

Scientific Steering Committee, AGU-JING conference, American Geophysical Union and Chinese Academy of Sciences, Xi'an, China, October 2018

Convener: Coordinating Air Pollutant and Greenhouse Gas Mitigation Strategies: Co-benefits for Air Quality, Health and Climate, American Geophysical Union, San Francisco, CA.

December 2016

Chair: Hydraulic Fracturing – Potential Implications for Climate Change and America's Energy Future, Moderator. Synergize 2012, Andlinger Center Corporate Affiliates Program,

November 12, 2012.

Convener: Black carbons role in global to local air quality and climate change, American Geophysical Union, San Francisco, CA.

December 2010

Chair: Measurement and Modeling of Atmospheric Aerosols for Climate and Air Quality Applications, Asia Oceania Geosciences Society, Hyderabad, India.

July 2010

Convener: Interconnections between air pollution, climate change, energy and human impacts – science, technology and policy. International Geosphere Biosphere Program (IGBP), Cape Town, South Africa.

May 2008

Chair: Megacities, Air Pollution over Asia, International Association of Meteorology and Atmospheric Sciences, Beijing, China.

August 2005

Convener: Controlling Emissions of Non-CO2 Greenhouse Gases: Scientific and Policy Challenges, Joint Assembly meeting, New Orleans, LA.

May 2005

Chair: Atmospheric Modeling and Dynamics session, Spring American Geophysical Union meeting, Boston, MA.

May 2001

Chair: Aspen Global Change Institute, Working Group on Air Quality and Climate Change, Aspen, CO.

August 2000

PUBLICATIONS (Peer Reviewed)**H-index Google Scholar: 51; i10-index: 81; citations 11,840****H-index Web of Science: 43.***** or # indicates student or post-doc working in my group****+ indicates corresponding author**

Mauzerall, Denise L.+ [“A conversation on the impacts and mitigation of air pollution.”](#) *Nature Communications* (2021).

#Mi Zhou, Hongxun Liu#, Liqun Peng#, Yue Qin, Dan Chen, Lin Zhang, **Denise L. Mauzerall**+, Environmental benefits and household costs of clean heating options in northern China. *Nature Sustainability*, <https://doi.org/10.1038/s41893-021-00837-w>, 2021.

Y Qin, M Zhou#, D Pan, Z Klimont, DB Gingerich, **DL Mauzerall**, L Zhao, G He, JM Bielicki, Environmental consequences of potential strategies for China to prepare for natural gas import disruptions, *Environmental Science and Technology*, (2021)

#Disha Sharma & **Denise L. Mauzerall**+, Analysis of Air Pollution Data in India between 2015 and 2019, *Aerosol and Air Quality Research*, in press.

#Chen, Xu, and **Denise L. Mauzerall**+. [“The Expanding Coal Power Fleet in Southeast Asia: Implications for Future CO₂ Emissions and Electricity Generation.”](#) *Earth's Future* 9, no. 12 (2021).

#Zhongshu Li, Kevin Gallagher, Xu Chen#, Jiahai Yuan, **Denise L. Mauzerall**, Pushing out or pulling in? The determinants of Chinese energy finance in developing countries. *Energy Research & Social Science* 86 .

#Tao, Yiheng, Ryan W. J. Edwards, **Denise L. Mauzerall**, and Michael A. Celia. [“Strategic Carbon Dioxide Infrastructure to Achieve a Low-Carbon Power Sector in the Midwestern and South-Central United States.”](#) *Environmental Science & Technology* (2021).

#Peng, Liqun, Feiqi Liu#, Mingwei Li#, Qiang Zhang, and **Denise L. Mauzerall**+. [“Alternative-energy-vehicles deployment delivers climate, air quality, and health co-benefits when coupled with decarbonizing power generation in China.”](#) *One Earth* 4 (2021).

Xu, Ming, Glen T. Daigger, Chuanwu Xi, Jianguo Liu, Jiahui Qu, Pedro J. Alvarez, **Denise L. Mauzerall**, et al. [“U.S.–China Collaboration is Vital to Global Plans for a Healthy Environment and Sustainable Development.”](#) *Environmental Science & Technology* 55 (2021).

#Chen, Xu, Zhongshu Li#, Kevin P. Gallagher, and **Denise L. Mauzerall**+. [“Financing carbon lock-in in developing countries: Bilateral financing for power generation technologies from China, Japan, and the United States.”](#) *Applied Energy* 300 (2021).

Ocko, Ilissa B; T Sun, D Shindell, M Oppenheimer, A N Hristov, SW Pacala, **DL Mauzerall**, Y Xu, SP Hamburg. [“Acting rapidly to deploy readily available methane mitigation measures by sector can immediately slow global warming.”](#) *Environmental Research Letters* (2021)

#Liu, Feiqi, **Denise L. Mauzerall**+, Fuquan Zhao, and Han Hao. [“Deployment of fuel cell vehicles in China: Greenhouse gas emission reductions from converting the heavy-duty truck fleet from diesel and natural gas to hydrogen.”](#) *International Journal of Hydrogen Energy* (2021).

- #Pan, Da, ... **Mauzerall DL**, Zondlo, MA. Methane Emissions from Natural Gas Vehicles in China, *Nature Communications*, 10.1038/s41467-020-18141-0, 2020.
- Hess, Jeremy J., and et al. “[Guidelines for Modeling and Reporting Health Effects of Climate Change Mitigation Actions.](#)” *Environmental Health Perspectives* 128, no. 11 (2020).
- #Chen, Xu, Kevin P. Gallagher, and Denise L. Mauzerall*. “[Chinese Overseas Development Financing of Electric Power Generation: A Comparative Analysis.](#)” *One Earth* 3 (2020): 491-503.
- #Guo, Yixin, Youfan Chen, Timothy D. Searchinger, *Mi Zhou, *Da Pan, ..., Denise L Mauzerall*. “[Air quality, nitrogen use efficiency and food security in China are improved by cost-effective agricultural nitrogen management.](#)” *Nature Food* 1 (2020).
- #Liu, H and *Mauzerall DL, [Costs of clean heating in China: Evidence from rural households in the Beijing-Tianjin-Hebei region.](#)” *Energy Economics*, 10.1016/j.eneco.2020.104844, (2020).
- #Riddick, SN, *DL Mauzerall, MA Celia, M Kang, K Bandilla. [Variability observed over time in methane emissions from abandoned oil and gas wells](#), *International Journal of Greenhouse Gas Control* (2020).
- #Riddick, SN, *DL Mauzerall, MA Celia, G Allen, M Kang, JC Riddick. “[The calibration and deployment of a low-cost methane sensor.](#)” *Atmospheric Environment*, DOI: 10.1016/j.atmosenv.2020.117440, (2020).
- #Li, X, *DL Mauzerall, MH Bergin. [Global reduction of solar power generation efficiency due to aerosols and panel soiling](#), *Nature Sustainability*, (2020).
- #Fu, XW, SL Xiang, Y Liu, JF Liu, J Yu, DL Mauzerall, S Tao, [High-resolution simulation of local traffic-related NOx dispersion and distribution in a complex urban terrain](#), *Environmental Pollution*, 263, DOI: 10.1016/j.envpol.2020.114390, (2020).
- #Gerlein-Safdi, C, G Keppel-Aleks, F Wang, S Frolking, DL Mauzerall. [Satellite Monitoring of Natural Reforestation Efforts in China’s Drylands](#), *One Earth*, <https://doi.org/10.1016/j.oneear.2019.12.015>, (2020).
- #Li, Zhongshu, Kevin P. Gallagher, and *Denise L. Mauzerall. “[China’s global power: Estimating Chinese foreign direct investment in the electric power sector.](#)” *Energy Policy* 136: 1-9 (2020)
- #Kang, Mary, *Denise L. Mauzerall, Daniel Z. Ma, and Michael A. Celia. “[Reducing methane emissions from abandoned oil and gas wells: Strategies and costs.](#)” *Energy Policy* 132: 594-601 (2019).
- #Riddick, Stuart N., *Denise L. Mauzerall, Michael Celia, Neil R. P. Harris, Grant Allen, Joseph Pitt, John Staunton-Sykes, et al. “[Methane emissions from oil and gas platforms in the North Sea.](#)” *Atmospheric Chemistry and Physics* 19, no. 15: 9787–9796 (2019).
- #Peng, Liqun, Qiang Zhang, Zhiliang Yao, Denise L. Mauzerall, Sicong Kang, Zhenyu Du, Yixuan Zheng, Tao Xue, and Kebin He. “[Underreported coal in statistics: A survey-based solid fuel consumption and emission inventory for the rural residential sector in China.](#)” *Applied Energy* 235: 1169-1182 (2019).
- #Qin, Yue, Yuanyuan Fang, Xiaoyuan Li#, Vaishali Naik, Larry W. Horowitz, Junfeng Liu, Noah Scovronick, and *Denise L. Mauzerall. “[Source attribution of black carbon affecting regional air quality, premature mortality and glacial deposition in 2000.](#)” *Atmospheric Environment* 206: 144-155 (2019).
- #Riddick, Stuart N., *Denise L. Mauzerall, Michael A. Celia, Mary Kang, Kara Bressler, Christopher Chu, Caleb D. Gum. [Measuring methane emissions from abandoned and active oil and gas wells in West Virginia](#), *Science of the Total Environment*, 651(2), 1849-1856, February 2019.

- #Peng, Wei, Wagner, F., Ramana, MV, Zhai, HB, Small, MJ, Dalin, C, Zhang, X, ***Mauzerall, DL**. "[Managing China's coal power plants to address multiple environmental objectives](#), *Nature Sustainability*, 1, 11, 693-701 DOI: 10.1038/s41893-018-0174-1, 2018.
- #Qin, Y; Høglund-Isaksson, L; Byers, E; Feng, K; Wagner, F; Peng, W; ***Mauzerall, DL**, [Air quality-carbon-water synergies and trade-offs in China's natural gas industry](#), *Nature Sustainability*, 1: 505-11 (2018)
- #Yang, J, #Li, X, #Peng, W, Wagner, F, ***Mauzerall DL**., [Climate, air quality and human health benefits of various solar photovoltaic deployment scenarios in China in 2030](#), *Environmental Research Letters*, 2018.
- #Peng W, #Yang J, Lu X, ***Mauzerall DL**. [Potential co-benefits of electrification for air quality, health, and CO₂ mitigation in 2030 China](#), *Applied Energy*, 2018.
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INVITED SEMINARS AND CONFERENCE PRESENTATIONS

4/29/2021 *Win-win opportunities to improve air quality, decrease GHG emissions, and increase solar PV generation, Nature Conferences: Sustainable solutions for pollution control.* (virtual)

8/2/2021 *Climate Change and Our Future: What We Must Do.* Racing Beach Association, Woods Hole MA.

11/14/2021 *Evaluating opportunities to simultaneously address air pollution and greenhouse gas mitigation in China,* Fung Global Fellows forum, Princeton University (virtual)

12/6/2020 *Evaluating Opportunities to Simultaneously Address Air Pollution and Greenhouse Gas Mitigation in China.* Keynote Talk. International Conference on Applied Energy, (Bangkok, Thailand - Virtual)

Evaluating Opportunities to Simultaneously Address Air Pollution and Greenhouse Gas Mitigation in China. Stanford Natural Gas Initiative, November 4, 2020 (Stanford University - Virtual)

Evaluating Opportunities to Simultaneously Address Air Pollution and Climate Change, 2020 Pujiang Innovation Forum, August 31, 2020 (Shanghai, China – Virtual)

Policy Relevant Science: Linking Strategies to Address Air Pollution, Health and Greenhouse Gas Mitigation, Chadha Center for Global India, Princeton University, March 27, 2020 (Virtual)

Climate Change: Science and Policy Princeton Journeys, National Geographic Endeavor, Antarctica, December 18, 2019.

The World's Most Successful Environmental Treaty: The Montreal Protocol to Protect the Stratospheric Ozone Layer. Princeton Journeys, National Geographic Endeavor, Antarctica, December 14, 2019.

Antarctic Ozone Hole: Causes and Solutions. Princeton Journeys, National Geographic Endeavor, Antarctica, December 12, 2019

High level forum on air quality, climate change and human health, Energy Foundation, Beijing, China, November 20, 2019.

Faculty Panel. What does global India mean to me and to the world? M.S. Chadha Center for Global India, Princeton University, November 13, 2019.

Policy Relevant Science: Linking Strategies for Air Pollution and Greenhouse Gas Mitigation. U.S.-China Environment and Sustainability Forum, University of Michigan, October 3, 2019.

Policy Relevant Science: Air quality, Greenhouse Gas and human Health Benefits of Replacement Options for Coal Heating Stoves in China, Civil and Environmental Engineering department, Princeton University, September 27, 2019

Replacement options for coal heating stoves in the residential sector: Air quality, greenhouse gas and human health benefits, plus costs of substitution, College of Environmental Sciences and Engineering, Peking University, June 27, 2019

Replacement options for coal heating stoves in the residential sector: Air quality, greenhouse gas and human health benefits, plus costs of substitution, Co-benefits of a Sustainable Energy Transition workshop, Tsinghua University, June 2, 2019.

Potential Potential Air Pollution, Health and Climate Implications of China's Energy Future, ETH-Zurich, March 12, 2019.

A Planet in Danger: Pulling the Planet back from the Brink. Academic and Administrative Managers Group Meeting, Princeton University, February 6, 2019.

Potential Air Pollution, Health and Climate Implications of China's Energy Future, American Geophysical Union, Chinese Academy of Sciences Joint Meeting, Xi'an, China, October 18, 2018.

A Planet in Danger: Climate Change and Opportunities to Address It, Young Global Leaders, World Economic Forum, Princeton University, July 14, 2018.

Potential Air Pollution, Health and Climate Implications of China's Energy Future, Princeton Environmental Institute, Princeton University, May 1, 2018.

Potential Air Pollution, Health and Climate Implications of China's Energy Future, OGCI Climate Investments, Andlinger Center for Energy and Environment, Princeton University, May 10, 2018.

Potential Air Pollution, Health and Climate Implications of China's Energy Future, Global Development Policy Center, Boston University, April 25, 2018.

Potential Air Pollution, Health and Climate Implications of China's Energy Future, Harvard Kennedy School of Government, April 23, 2018.

A Planet in Danger: Climate Change and Its Consequences for Global Society, Griswold Symposium, Center for Economic Policy Studies, Princeton University, February 10, 2018.

Co-benefits of Air Quality Improvements for Solar PV Electricity Generation, Peking University, Beijing, China, January 26, 2018.

Potential air pollution, health and climate implications of China's energy future, china Energy Modeling Forum, Tsinghua University, January 24, 2018

Potential Air Pollution, Health, Water and Climate Implications of China's Energy Future. Civil and Environmental Engineering Department, Princeton University, September 29, 2017.

Keynote Speaker. Philadelphia Science Rally, Philadelphia, PA, April 22, 2017.

Potential Air Pollution, Health and Climate Implications of China's Energy Future. Carnegie Mellon University, Pittsburgh, PA, April 6, 2017.

Potential Air Pollution, Health and Climate Implications of China's Energy Future. Brown University, Providence, RI, March 3, 2017.

Ask about air pollution. World Economic Forum, Davos, Switzerland, January 20, 2017.

Ideas forum: Climate change mitigation and adaptation panel, World Economic Forum, Davos, Switzerland, January 19, 2017.

Air Pollution and Climate Implications of China's Energy and Agricultural Future, Tsinghua University, Beijing, China, November 4, 2016.

Air Pollution and Climate Implications of China's Energy and Agricultural Future, Peking University, Beijing, China, November 3, 2016.

Nitrogen, Ozone and Water: Key Factors Impacting Sustainable Intensification of Crop Production, Chinese University of Hong Kong, Hong Kong, October 31, 2016

Air Pollution and Climate Implications of China's Energy Future, Chinese University of Hong Kong, Hong Kong, October 31, 2016.

Potential Air Pollution, Health and Climate Implications of China's Energy Future, STEP seminar, Princeton University, November 28, 2016

Environmental Implications of China's Energy and Agricultural Future, Faculty Forum, Woodrow Wilson School of Public and International Affairs, Princeton University, September 20, 2016.

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Climate, Air Quality and Health Implications of China's Energy Future, Carnegie Institute of Science, Stanford, CA, March 21, 2016.

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- Nitrogen, Ozone and Water: Key Factors Impacting Sustainable Intensification of Crop Production, Food Security Group, Stanford University, Stanford, CA, February 22, 2016.
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- Population Growth, Climate Change and the Future of the Planet, Energy Policy Institute, University of Chicago, April 8, 2014
- Climate Change: A Planet in Peril, Nassau Club, Princeton, NJ, April 2, 2014
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- China and the Environment, Office of the Chief Economist, U.S. Department of State, Washington D.C., November 8, 2013
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